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LECTURER PREPARATION GUIDE

Evironmental Risk Management

Action Plan

About this guide

This document prepares you to deliver the 'Environmental Risk Management Action Plan' workshop session. It provides strategic context, slide-by-slide talking points, facilitation tips for interactive slides, discussion questions, and background knowledge on all six risk categories. The session sits within the broader ECOMARINAS workshop and connects regulatory knowledge to practical marina action.

Format	Lecture + interactive exercises	**Duration**	45–60 minutes (within workshop)
Audience	Marina managers, harbour masters, staff, municipal reps		

Document Contents

Section 1: Learning Objectives & Audience Profile

Learning Objectives

By the end of this session, participants will be able to:

- Explain what an Environmental Risk Management Action Plan (ERMAP) is and why small marinas need one
- Use the Likelihood × Severity risk matrix to assess and prioritise environmental risks at their own marina
- Identify the six key environmental risk categories and the most common control measures for each
- Describe what environmental inspectors look for and why documentation is as important as physical infrastructure
- Outline the three implementation phases and commit to at least one immediate action
- Connect the ERMAP framework to ECOMARINAS certification indicators

Audience Profile

What they bring to the room	What they need from this session
Practical experience running Baltic marinas	A clear, usable framework — not abstract theory
Varying familiarity with ISO 14001 and EU regulations	Plain-language risk management they can apply immediately
Concern about inspection risk and regulatory compliance	Prioritised, proportionate actions matched to their scale
Limited time and budget for environmental management	Low-cost, visible, first-step improvements
Attendance at a full-day workshop (some fatigue likely)	Energising, interactive content with concrete takeaways

> **Presenter Tip**
> This session falls within the broader ECOMARINAS workshop. Participants have already heard about the regulatory landscape and best practices from earlier sessions. Position ERMAP as the 'connective tissue'

— the structured framework that turns all those regulatory requirements and best-practice ideas into a prioritised action plan specific to their marina.

Section 2: Presentation Structure & Timing Guide

The presentation contains 16 slides. Recommended timing within a 45–60 minute workshop slot:

Slides	Topic	Time	Activity Type
1	Title slide	1 min	Welcome, introduce session
2	Strategic context — ERMAP purpose	4 min	Data presentation (97% stat)
3	Risk scoring methodology	5 min	Explain L×S matrix, walk through levels
4	Risk Category 1: Wastewater	4 min	Matrix walk-through + good practice
5	Risk Category 2: Hazardous Liquids	4 min	Matrix walk-through + good practice
6	Risk Category 3: Water Quality	4 min	Matrix walk-through + good practice
7	Risk Category 4: Invasive Species	4 min	Matrix walk-through + good practice
8	Risk Category 5: Plastic Pollution	4 min	Matrix walk-through + good practice
9	Risk Category 6: Additional Risks	4 min	Matrix walk-through + good practice
10	What inspectors look for	4 min	Key message — 4 elements
11	Roles & responsibilities	3 min	Diagram walk-through
12	3-phase implementation roadmap	4 min	Signposting frame
13	Interactive: poll — biggest challenge	5 min	Audience engagement activity
14	90-day action plan exercise	8 min	Hands-on workshop exercise
15	ERMAP → ECOMARINAS certification link	3 min	Connection slide
16	Three takeaways — closing	2 min	Commitment + call to action

Timing Flexibility

If the workshop is running late, slides 4–9 can be compressed to 2–3 minutes each by presenting only the risk level column and the good practice callout, skipping the full matrix walk-through. The interactive slides 13 and 14 should be protected — they generate the most participant value.

Section 3: Slide-by-Slide Speaker Notes

Slide 1: Title

> **Core Message**
> This is not a compliance lecture. It is a practical framework for turning environmental risks into manageable, prioritised action — however large or small your marina.

Suggested opening:
"Every marina in this room already manages environmental risks — whether you have a written plan or not. What the ERMAP gives you is a structured, scored, prioritised approach so that when you leave today, you know exactly which risks matter most and what to do about them first."

Slide 2: Strategic Context

> **Core Message**
> 97% of the Baltic Sea is affected by eutrophication. Even small marinas at the water's edge are part of that story — and part of the solution.

- Lead with the 97% statistic — pause after saying it. This single number contextualises everything that follows.
- Emphasise the 'even small marinas' framing: participants should not feel that their marina is too small to matter. It is precisely because marinas are at the land-sea interface that they are disproportionately visible and inspectable.
- The right column of the slide lists what the ERMAP covers — use this to signpost the session structure and set expectations.

Slide 3: Risk Scoring Methodology

> **Core Message**
> Risk = Likelihood × Severity. This simple formula allows any marina to score, compare, and prioritise environmental risks without specialist training.

- Walk through the Likelihood scale (1–5) first, giving a marina-specific example for each level. Example: 'A vessel blackwater discharge without pump-out facilities — that's a 4 (Likely). A fuel storage tank catastrophic failure — that's a 2 (Unlikely) but with a Severity of 5.'
- Then the Severity scale. Stress that 'Negligible' means no measurable impact — not invisible. Even contained, localised incidents have consequences.
- Show the four risk level bands (1–6 Low through 20–25 Extreme) and explain what each requires. The key message: High and Extreme risk activities require immediate management action — not next season.

Facilitation Tip

Ask the room: 'Without looking at a document, what do you think your highest-risk activity is right now?' Take 2–3 responses. This primes participants to connect the methodology to their own context before you walk through the six categories.

Slides 4–9: The Six Risk Categories

Presentation Pattern

Each of the six category slides follows the same structure: icon + category name → subtitle (specific sources) → risk matrix table → good practice callout. Maintain a consistent pace of approximately 4 minutes per slide.

For each category, use this three-step flow:

- Name the highest-risk item in the matrix (the red HIGH row) and briefly explain why the combination of Likelihood and Severity makes it critical.
- Point to the most surprising or counterintuitive finding — e.g., for Hazardous Liquids, the fact that 56% of Baltic marinas lack spill prevention systems and the most common reason is 'Not Necessary.'
- Read the Good Practice callout aloud as a concrete, actionable summary. These are the specific steps participants can take.

Key points for each category:

Category 1 — Wastewater

Vessel blackwater discharge scores L4×S5 = HIGH (score 20). This is the single highest-risk item in the entire ERMAP. The combination of high likelihood (many boats have full holding tanks) and maximum severity (pathogen contamination, eutrophication) makes pump-out infrastructure the most important single investment a marina can make.

Category 2 — Hazardous Liquids

Fuel transfer to vessels scores L4×S5 = HIGH. Link this to the benchmarking data from the earlier session: 56% of marinas have no spill prevention systems. Connect the inspection readiness message:

inspectors ask 'What happens if something spills right now?' Staff uncertainty here is itself a compliance failure.

Category 3 — Water Quality

Three HIGH-risk items: surface runoff, fuel spills, and in-water hull cleaning. The in-water hull cleaning row (L4×S4) is often unexpected for participants — emphasise that biocides from antifouling paint released during cleaning can persist in enclosed marina sediments for years.

Category 4 — Invasive Species

Two HIGH-risk items: hull fouling (L4×S4) and equipment transfer (L4×S4). Connect to the 37% 'Not Necessary' mindset from the benchmarking data. The hull check-in protocol (a visual inspection form at berth registration) is the lowest-cost, highest-impact single intervention available.

Category 5 — Plastic Pollution

Visitor littering scores HIGH (L4×S4). This is often the most visible and most manageable risk category. The national variation data is relevant here: 71% of Lithuanian marinas have no plastic reduction measures vs. 86% of Swedish marinas that do. Ask the room what explains this gap.

Category 6 — Additional Risks

Management deficiencies score MEDIUM–HIGH (L3×S4). This is the most underappreciated risk category. A marina with perfect physical infrastructure but no written procedures, no staff training records, and no environmental policy is still highly vulnerable in an inspection — and to actual incidents.

Section 4: The Six Risk Categories — Background Knowledge

Legal Framework Behind Each Category

Risk Category	Primary Legal Framework	Marina Obligation
Wastewater Management	MARPOL Annex IV · Water Framework Directive (2000/60/EC) · Port Reception Facilities Directive (2019/883/EU)	Provide functional pump-out · prohibit direct discharge · connect sanitary facilities to treatment
Hazardous Liquids	National fuel storage regulations · REACH (chemical substances) · Marine Pollution Bulletin standards	Secondary containment · written spill procedure · staff training records
Water Quality Protection	Water Framework Directive · Marine Strategy Framework Directive (2008/56/EC) · HELCOM recommendations	Monitor key indicators · restrict in-water hull cleaning · manage wash-down runoff
Invasive Species	IAS Regulation (EU) No 1143/2014 · HELCOM recommendations · national biosecurity requirements	Hull inspection at check-in · Clean-Drain-Dry protocols · report sightings to authority
Plastic Pollution	Port Reception Facilities Directive · Marine Strategy Framework Directive · national waste regulations	Segregated collection · dedicated points for boating-specific plastics · awareness signage
Additional Risks	ISO 14001:2015 · national fire safety regulations · EU Energy Efficiency Directive	Fire prevention plan · shielded lighting · written environmental policy · EMS adoption

The Risk Matrix in Context

The four risk levels in the ERMAP are not arbitrary — they correspond to different management responses:

Score	Level	What This Means for Marina Management
1–6	LOW	Manage through existing routine procedures. No immediate investment required. Monitor to ensure conditions do not worsen.
6–12	MEDIUM	Implement specific mitigation measures — signage, procedures, staff briefing. Budget for infrastructure improvement within 6–24 months.
12–20	HIGH	Immediate operational controls required. Priority for Phase 1 roadmap actions. Inspectors will focus here.
20–25	EXTREME	Urgent corrective action — operational restrictions or emergency response planning may be required. Regulatory breach risk is highest.

Section 5: Facilitating the Interactive Slides

Slide 10: What Inspectors Look For — The Four Elements

> **Core Message**
> Most penalties in Baltic marinas are not for active pollution events — they are for missing documentation. This is the single most important practical message of the entire session.

The four elements (Procedures, Training Records, Visual Order, Staff Awareness) are presented as four equal pillars. Facilitate a brief discussion around each:

- Procedures: Ask — 'How many of you have a written spill response procedure posted at your fuel dock right now?' The show of hands is the discussion opener.
- Training Records: Ask — 'When did you last record a staff environmental briefing? Do you have the date, topic, and attendee signatures?' This is the most commonly missing document in Baltic marina inspections.
- Visual Order: Tell participants that an inspector forms an impression within the first two minutes of a site visit. A clean, labelled, organised marina signals compliance before a single question is asked.
- Staff Awareness: Tell the group: 'Inspectors regularly ask junior staff directly — not the manager — "What do you do if there's a fuel spill?" Staff who hesitate signal that training has not been delivered. Staff who answer confidently signal genuine compliance culture.'

Slide 13: Interactive Poll — Biggest Challenge

This slide presents six options (A–F) representing the six risk categories. It can be run as a Kahoot activity, a show-of-hands poll, or a quick sticky-note exercise.

- If running as Kahoot: set up the six categories as options before the session. The poll takes 2–3 minutes and results immediately identify where to focus the action plan discussion.
- If running as show-of-hands: ask participants to raise their hand for the category that causes the most headaches at their marina. Allow multiple hands per person.
- Use the results: whatever wins the poll, spend a disproportionate share of the action plan exercise time on that category. This is the highest-value customisation available within the fixed session format.

Slide 14: 90-Day Action Plan Exercise

This is the most important practical moment of the session. Allow 6–8 minutes minimum.

Facilitation steps:

- Ask each participant (or pair, if working in tables) to write their marina name at the top of a notepad or the provided template.
- Work through the three columns (Infrastructure, Monitoring, Operations) one at a time. For each column, read the four options aloud and ask participants to tick the one they will implement before the end of the season.
- After all three columns are completed, ask 2–3 participants to share their commitments. This creates social accountability.
- Collect the completed cards/sheets if possible — they provide valuable data for ECOMARINAS follow-up and demonstrate workshop impact.

> **Key Instruction**
> Tell participants clearly: 'Each of the items in this exercise costs under €500 and requires no external contractors. If you tick one box per column, you will have completed three measurable environmental improvements before the next inspection season.'

Section 6: The 90-Day Action Plan — Facilitation Detail

Category	Action	Why It Matters	Cost/Effort
Infrastructure	Install differentiated bins (hazardous, plastic, organic)	Addresses highest-inspection-frequency waste finding. Visible to both inspectors and boaters.	Low — bins + labels
Infrastructure	Invest in pump-out station accessibility	Accessibility (not just presence) determines usage. Easy approach = legal discharge.	Medium — design + signage
Infrastructure	Spill kits at fuel dock and maintenance area	Required evidence for inspectors. Cost < €100. Absence = automatic compliance gap.	Very low — purchase only
Infrastructure	Secondary containment where missing	Regulatory requirement for fuel and chemical storage. Bund trays cost €50–200.	Low — trays + brackets
Monitoring	Start basic water quality log	Baseline data protects marina if incident occurs nearby. Weekly visual check.	Zero — form + 10 min/week
Monitoring	Hull check-in protocol at berth registration	Simplest invasive species intervention. Form at reception desk. Staff training = 30 minutes.	Zero — form design only
Monitoring	Incident/near-miss reporting form	Required for ISO 14001 and ECOMARINAS certification. Records near-misses before they become incidents.	Zero — form + process
Monitoring	Pump-out usage log	Demonstrates compliance to inspectors. Shows trend over time.	Zero — logbook
Operations	Laminated spill response card at fuel dock	Single most impactful documentation improvement. Inspectors look for this first.	Very low — design + print
Operations	Staff environmental briefing — documented	Date, topic, signatures. Satisfies inspector training records requirement immediately.	Zero — 30 min meeting

Operations	Review waste fee structure	Incentivise delivery; perverse fees that charge for disposal incentivise at-sea dumping.	Zero — policy decision
Operations	Clean-Drain-Dry signage at marina entrance	Addresses invasive species pathway. Multilingual. Visible to all arriving vessels.	Low — print + post

Section 7: Discussion Questions

For Use During the Session

- Looking at the risk matrix for your primary marina activity — fuel handling, waste management, or vessel maintenance — what is the single highest-scoring risk? Have you already addressed it with a written procedure?
- The ERMAP defines 'management deficiencies' as a MEDIUM–HIGH risk. Do you have a named Environmental Coordinator at your marina? If not, who effectively performs that role today?
- The good practice measures for each risk category include monitoring. What environmental data does your marina currently collect? How is it used?
- Phase 1 of the implementation roadmap takes 0–6 months and costs very little. What is the single biggest obstacle — other than money — to completing Phase 1 actions at your marina?

For the Action Plan Discussion

- Which of the three action plan categories (Infrastructure, Monitoring, Operations) is strongest at your marina right now — and which is weakest?
- If you could implement only one action from the entire list before the end of this season, which would it be and why?
- Who at your marina needs to agree before you can implement the infrastructure changes? How will you make the business case to them after today?

Section 8: Connecting ERMAP to ECOMARINAS Certification

The ERMAP is not a standalone document — it is the evidential and operational foundation for ECOMARINAS certification. Each risk category maps directly to a certification indicator:

ERMAP Risk Category	ECOMARINAS Indicator	Evidence the Certification Assessor Will Check
Wastewater Management	Wastewater & sewage management	Pump-out maintenance log · discharge prohibition signage · staff awareness of prohibition
Hazardous Liquids	Hazardous substances management	Written spill response procedure · spill kit inspection record · staff training record
Water Quality Protection	Water quality monitoring	Weekly monitoring log · annual report · incident register
Invasive Species Prevention	Biodiversity & habitat protection	Hull inspection form template · Clean-Drain-Dry signage evidence · sighting report process
Plastic Pollution Management	Waste infrastructure & sorting	Segregated bin evidence (photos) · waste collection records · visitor awareness materials
Additional Risks (Management)	Environmental management system	Written environmental policy · named environmental coordinator · internal audit record

Key Message for Participants

Completing the 90-day action plan exercise today is not just good environmental practice — it directly builds the evidence base needed for ECOMARINAS certification. Every item ticked is a document that an assessor will want to see.

Section 9: Frequently Asked Questions

Q: Does the ERMAP apply to very small marinas (under 50 berths)?

Yes — the ERMAP is explicitly designed for small marinas. The risk categories, matrices, and good practice measures are all proportionate to small-marina scale. ISO 14001:2015 itself applies proportionality: a 40-berth marina does not need the same EMS complexity as a commercial port.

Q: We do not have a dedicated Environmental Coordinator. Does this fail the management deficiencies criterion?

Not automatically. The ERMAP requires clear allocation of environmental roles — not a dedicated full-time position. A harbour master who also handles environmental monitoring, provided this role is documented and training is recorded, satisfies the requirement. The key is having a named person with documented responsibilities.

Q: Our pump-out station is broken at the start of every season due to freeze damage. Is this a compliance failure?

A broken pump-out that is not repaired is a compliance issue. However, a documented winterisation and recommissioning procedure — showing that the marina systematically prepares the station for winter and recommissions it before the season — demonstrates proactive management. Inspectors distinguish between marinas that manage known challenges proactively and those that simply allow infrastructure to fail.

Q: Can we use the ERMAP risk matrices directly in a certification application?

The ERMAP matrices provide an excellent foundation for a certification application. They demonstrate that the marina has systematically identified, assessed, and prioritised environmental risks — which is the core requirement of ISO 14001:2015 and most eco-marina certification programmes. The matrices should be supplemented with the evidence documents listed in Section 8.

Q: How often should the ERMAP be reviewed?

The ERMAP recommends annual review as a minimum. A review should also be triggered by: a significant pollution incident or near-miss; a change in marina operations (new fuel facilities, expanded berthing); a change in relevant national regulations; or the results of an external inspection.

Section 10: Key Terms & Resources

Term	Plain-Language Definition
ERMAP	Environmental Risk Management Action Plan — a structured, ISO 14001-aligned framework for identifying, assessing, and managing environmental risks at marina level.
ISO 14001:2015	International standard for Environmental Management Systems. Provides the risk-based thinking framework that underpins the ERMAP methodology.
Likelihood × Severity	The ERMAP risk scoring formula. Each risk source is rated 1–5 for likelihood of occurrence and 1–5 for severity of environmental consequence. Score = L × S.
Secondary containment	Physical barrier (bund wall, drip tray) designed to contain 110% of the largest container volume in a storage area, preventing spills from reaching water.
Good Environmental Status (GES)	The environmental quality objective for European marine waters under the Marine Strategy Framework Directive (2008/56/EC).
MARPOL Annex IV	International convention prohibition on sewage discharge from vessels within 3nm of coastline. Requires marinas to provide compliant pump-out reception facilities.
HELCOM	Helsinki Commission — governing body of the Helsinki Convention on protection of the Baltic Sea. Sets Baltic-specific environmental standards that supplement EU rules.
EMS	Environmental Management System — a structured organisational framework for managing environmental obligations, monitoring performance, and achieving continuous improvement.
ECOMARINAS indicator	A specific, measurable aspect of marina environmental performance assessed as part of ECOMARINAS certification. Each indicator corresponds to one ERMAP risk category.
Phase 1 actions	Immediate (0–6 month) foundational steps: adopt the ERMAP, assign roles, deliver staff training, install basic infrastructure (spill kits, bins, signage).