

Green Marine
Europe
Environmental
Program

2023



Performance
Indicators for
Shipyards

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1. GREENHOUSE GASES AND AIR POLLUTANTS

OBJECTIVE: Reduce greenhouse gas (GHG) and air pollutant emissions.

LEVEL 1
Monitoring of regulations
LEVEL 2
<p>2.1 Implement policies and communications that discourage idling of vehicles and other equipment powered by Internal Combustion Engines.</p> <p>2.2 Promote sustainable transportation practices by employees. Examples: Incentives for public transport, carpooling, reorganization of business travel, installation of bicycle racks, installation of electric vehicle charging stations, etc.</p>
LEVEL 3
<p>3.1 Complete an annual report on total GHG emissions. <u>Note:</u> Include Scope 1 at minimum, and Scope 2 is recommended, as defined by the GHG Reporting Protocol. See Annex 1-A.</p>
LEVEL 4
<p>4.1 Complete a detailed inventory of total air pollutants emitted within the boundary of the participant’s footprint within the last five years. Inventory should include key criteria air pollutants, such as NO_x, SO_x, VOC, and PM. <u>Note:</u> Participants that are in nonattainment areas or that have potential “hotspots” should place a priority on an inventory of their relevant criteria air pollutants. Refer to the WHO, air quality and health.</p> <p>4.2 Adopt a performance plan for air emissions resulting directly from the participant’s activities. In the plan, define reduction measures and establish targets to be carbon-neutral by 2050. <u>Note:</u> See Annex 1-B.</p>
LEVEL 5
<p>5.2 Achieve an annual average reduction in GHG intensity of $\geq 2.4\%$ based on a 2008 inventory baseline, or other annual average reduction based on another baseline year. <u>Note:</u> An annual average reduction percentage based on a year other than 2008 can be calculated by subtracting the baseline year from 2050, and dividing 100 by the remainder.</p>

2. SPILL PREVENTION AND STORMWATER MANAGEMENT

OBJECTIVE: Prevent spills and leaks of pollutants and manage stormwater to minimize contamination into the environment (water and land).

NOTE: The term ‘location’, as mentioned in levels 4 and 5 for criteria related to stormwater management, refers to any given delimited area on the participant’s owned or leased property where stormwater can potentially be contaminated based on activities and operations and/or known data (as identified in the Water and Land Pollution Prevention Plan under criterion 3.2). A location could also be outside the participant’s owned or leased property in some specific cases (e.g. floating dry dock).

LEVEL 1
Monitoring of regulations
LEVEL 2
Implementation of at least 60% of the applicable criteria
<p>2.1 Perform vehicle and machinery fueling, lubrication, and maintenance in an adequately equipped designated area from a tributary (e.g., catch basin, ditch, storm drains) unless the area is covered by or is part of a permitted and properly operating stormwater management system. If these requirements cannot be met, alternative pollution prevention measures must be taken (e.g., watertight lids, rubber rugs, retention pans).</p> <p>2.2 In areas draining to surface water, use, inspect and ensure proper maintenance of secondary containment for stationary devices and equipment that can potentially leak or which need to be resupplied periodically (e.g., generating sets, compressors). Use a risk-based approach to determine the adequate volume of each secondary containment to contain anticipated spills or leaks. All employees using such devices and equipment must be aware of the procedure to follow (what to do, who to contact) in case of a spill or leak (e.g., proper signage visibly posted directly on devices and equipment, internal emergency number, annual employee training).</p> <p>2.3 Implement inspection and maintenance procedures for all devices and equipment (e.g., tanks, generating sets, compressors, landscaping equipment) that could potentially leak liquid contaminants into the environment (e.g. drainage system, natural receiving environment).</p> <p>2.4 Regularly inspect nearshore water and property to identify any illicit discharge. If such a discharge is identified implement corrective measures as soon as possible to stop contamination from the source or inform the entity responsible or any other relevant entity if the contamination is not under the control of the participant.</p> <p>2.5 Check for visible sheen on, colour and odour of water collected in secondary containments and excavation pits or extracted from monitoring wells. If there is a doubt about its quality, the water must be sampled, analyzed for contaminants of concern, and managed appropriately or treated prior to being discharged into the environment.</p> <p>2.6 Always have at key locations a spill kit containing all the necessary material to adequately respond as soon as possible to accidental discharges. Ensure the relevant staff is competent to use these kits (e.g., through appropriate training, an annual refresh of response procedures, various information and communication tools) and that any contaminated material is disposed of by an authorized firm.</p> <p>2.7 Implement good housekeeping practices to ensure surfaces near storm drains such as, wharves, driveways, loading and unloading areas, blasting areas, or any other pathways to surface waters are clear of pollutants (e.g., solid wastes, grit, dust, paint or paint residues).</p> <p>2.8 Prevent the uncontrolled discharge of wash water that could contain oils, chemical products (e.g., detergents, solvents), or residues/suspended solids into the environment via treatment or containment, for example.</p>
LEVEL 3
<p>3.1 Implement all applicable best practices of level 2.</p> <p>3.2 Adopt a Water and Land Pollution Prevention plan that covers all sites that the participant operates on. <u>Note:</u> See Annex 2-A.</p> <p>3.3 Keep a record of all accidental discharges of pollutants into the environment that occur on the participant’s operated property and report such incidents to the relevant authorities, if applicable.</p> <p>3.4 Keep a registry of all owned and leased fixed, portable, and mobile (e.g., forklifts, mobile cranes) hydraulic equipment operated near the shore. At least for each owned equipment, assess the technical feasibility as well as modernization and maintenance costs of switching from conventional to inherently and readily biodegradable, non-toxic, and non-bioaccumulative lubricants (e.i. EU Ecolabel lubricants).</p>

LEVEL 4

4.1 Implement a documented Preventive Inspection and Maintenance program for vehicles and equipment, containers and tanks, and any associated conveyance systems (e.g., conveyor, aboveground piping, transfer hoses) used exclusively for the participant's direct activities and which might release discharges into the environment (fuel, lubricants, etc.).

Note: See Annex 2-B.

AND fulfill one criteria option that exceeds the participant's regulatory requirements: 4.2 OR 4.3 OR 4.4-4.6

4.2 Develop and adopt a Stormwater Management plan.

Note: See Annex 2-C.

OR

4.3 Participate and/or support local or regional environmental education programs relating to water quality that facilitate community and stakeholder engagement and demonstrate measurable improvements year on year. Improvements could be measured in terms of, for example, outreach (e.g., how many people are being reached with the programs, how are the programs expanding over time) and/or training (e.g., how many training sessions/year, follow up interview feedback on outreach and usefulness of training).

OR

In at least one of the participant's locations where stormwater has a potential to be contaminated as defined in the note below the objective (for shipyard operators, this means one or more locations within each shipyard participating in the Green Marine program):

4.4 Collect and treat stormwater using an appropriate stormwater treatment system.

Note: Stormwater treatment must be adapted to the contaminants present (e.g., catch basins, bioswales, oil separators, hydrodynamic separators, or any other type of simple or complex treatment system).

4.5 Inspect and maintain stormwater treatment systems on a regular basis or according to the manufacturer's specifications to ensure good performance of the systems.

4.6 Sample and analyze treated stormwater routinely to ensure the proper functioning of treatment equipment and infrastructure. Samples must be collected following a recognized/approved procedure and analyzed by an accredited laboratory.

LEVEL 5

5.1 Have secondary containment in place for all fixed and portable outdoor above ground storage tanks and containers (permanent and in transit). This requirement applies to all hazardous products.

Note: Secondary containment includes any measure preventing a spill or a discharge from a primary storage tank or container from entering the environment. The chosen measure(s) and its/their capacity for secondary containment must be able to address a discharge resulting from the most typical failure mode. Acceptable measures include:

- Impervious dikes, berms, or retaining walls;
- Curbing;
- Drainage system;
- Weirs, booms, floating barriers;
- Spill diversion or retention ponds;
- Drip pans or retention pans;
- Sumps or collection systems;
- Double-walled tanks;
- Any other equipment, material, and/or resources to contain the spill or discharge.

5.2 Perform a spill response exercise on a regular basis (at least annually in case of a tabletop exercise, at least every two years for a simulated site-specific drill, including the post-mortem of a spill incident).

Fulfill the following 3 criteria in the majority of the participant's locations where stormwater has a potential to be contaminated as defined in the note below the objective:

5.3 Collect and treat stormwater via an appropriate stormwater treatment system.

Note: stormwater treatment must be adapted to the contaminants present (e.g., catch basins, bioswales, oil separators, hydrodynamic separators, or any other type of simple to complex treatment system).

5.4 Inspect and maintain stormwater treatment systems on a regular basis and/or according to the manufacturer's specifications to ensure good performance of the systems.

5.5 Sample and analyze treated stormwater routinely to ensure the proper functioning of treatment equipment and infrastructure. Samples must be collected following a recognized/approved procedure and analyzed by an accredited laboratory.

AND fulfill one criterion that exceeds the participant's regulatory requirements: 5.6 OR 5.7

5.6 Develop and adopt a Storm Water Management plan.

Note: See Annex 2-C.

OR

5.7 Carry out or participate in a research and development project or demonstration for a spill management or stormwater treatment technology within the last three years.

5.8. Implement sustainable measures to reuse stormwater for shipyard operations or to reduce the quantity of stormwater generated on site and discharged into the aquatic environment.

3. WASTE MANAGEMENT

OBJECTIVE: Increase waste diversion and reduce at source the waste arising from administrative activities and site operations. Use of sustainable material, reduce and manage waste.

LEVEL 1

Monitoring of regulations

LEVEL 2

Implement at least 51% of criteria listed in level 2:

2.1 Equip offices, workspaces, and facilities with recycling bins, including for used batteries, cartridges, and fluorescent light bulbs, and make sure they are strategically located and appropriately labeled.

2.2 Install clear signage for waste disposal on shipyard property.

2.3 Provide training and/or educate staff on established garbage management procedures and hierarchy (Reduce, Reuse, Recycle, Valorize – as in to add value), including procedures for handling and disposing of hazardous waste.
Note: the 9R hierarchy should be included as a best practice.

2.4 Encourage the use of 1) reusable, 2) recyclable and 3) biobased domestic and catering material (e.g., reusable dishes, repairable electronic equipment, etc.).

2.5 Encourage staff to adopt sustainable paper use practices (e.g., reduce overall printing and copy paper consumption, double-sided printing, use post-consumer recycled paper, reuse and recycle paper) in parallel to sustainable use of digital means.

2.6 Promote and encourage users, contractors, and/or clients to reduce, reuse and recycle for instance, participate to actions for re-use of off-cuts and no-longer-need-equipments.

2.7 Gather information from the local service provider/waste hauler in order to have a better understanding of the relative costs and the environmental benefits related to the disposal of waste, recycling, and organics.

2.8 Eliminate or limit the use of plastic straws, plastic bottles, single-use coffee cups, and any other similar items in the administrative office.

LEVEL 3

3.1 Implement all applicable best practices listed at level 2.

AND, fulfill one of the following 2 criteria:

3.2 Produce an annual inventory of all waste being generated during the participant's direct activities (administrative and/or site operations).

OR

3.3 Conduct a Waste Audit every three (3) years to identify the types and amount of waste being generated during the participant's direct activities (administrative and/or site operations).

Note: The inventory or audit does not include waste generated from demolition or construction projects.

Note: See Annex 5-A.

LEVEL 4

4.1 Adopt an environmentally preferable purchasing policy (administrative and site operations) that encourages sustainable purchasing practices (e.g. products using less packaging, reusable/ recyclable/compostable products, products with postconsumer recycled content.)

4.2 Conduct a Waste Audit every three (3) years to identify the types and amount of waste being generated during the participant's direct activities (administrative and/or site operations).

Note: The waste audit does not include waste generated from demolition or construction projects.

Note: See Annex 5-A.

4.3 Based on the results from the waste audit, adopt and implement a Waste Management and Reduction plan that describes the participant's waste management practices and procedures, including all applicable best practices of levels 2 and 3. The plan must also define measurable waste reduction, recycling, and/or diversion rates and identify practices and strategies to achieve these rates.

Note: Each participant defines its own "normalizer" to take into account fluctuations in activities (e.g., per capita, per ton, per vessel, etc.).

Note: See Annex 5-B.

4.4 Adopt and implement formal procedures for reducing, reusing, recycling, and valorizing and/or properly disposing of waste generated during construction, excavation and demolition work (e.g. cement, concrete, bricks, gypsum, wool, asphalt, wood, steel, and other metals, etc.). These procedures must be included in all construction, demolition, and excavation projects.

LEVEL 5

5.1 Demonstrate continual achievement in waste diversion and reduction at source in line with the objectives established in the Waste Management and Reduction plan.

4. COMMUNITY IMPACTS

OBJECTIVE: Reduce potential community exposure and negative impacts due to nuisances (e.g., noise, dust, light) caused by the participant's activities and operations.

NOTE: In the context of this indicator, the community includes all people in close proximity to the participant (e.g., employees, nearby tenants, residents, Indigenous Peoples, local businesses, people using nearby recreational areas).

LEVEL 1
Monitoring of regulations
LEVEL 2
<p>Implementation of the majority of applicable criteria:</p> <p><u>Noise:</u></p> <p>2.1 Impose speed limits on vehicles in sensitive zones.</p> <p>2.2 Adopt operational procedures or take measures limiting the use, or reducing the impact of warning signals, without compromising safety (e.g., use strobe light during nighttime operations, use lynx alarm, adapt the height or direction of the device, adjust the frequency of the signal).</p> <p>2.3 Take measures to reduce the noise emanating from shipyard operations (e.g., sandblasting, heavy machinery operations).</p> <p>2.4 If technically possible, limit idling of vehicles and equipment.</p> <p>2.5 Have a documented process (e.g., purchase policy) for selecting less noisy equipment when buying new equipment.</p> <p><u>Dust:</u></p> <p>2.6 Adopt dust control measures sitewide (e.g., watering, wet brushing, sweeping, maintenance of pavement, landscaping).</p> <p><u>Housekeeping:</u></p> <p>2.7 Take measures to avoid garbage and recycling dispersion by wind and wildlife (ex. covers, fencing) and to reduce odor emanations.</p> <p><u>Traffic/congestion:</u></p> <p>2.8 Implement measures on traffic management in and out of the shipyard property to avoid local congestion (e.g. signboard, traffic coordinator or checker, incentivize more efficient commuting, work from home).</p> <p><u>Light:</u></p> <p>2.9 Direct lights so they only illuminate the necessary zone in order to protect neighbours from direct lighting.</p> <p>2.10 Switch off bothersome lighting at a specific time if there are no operations underway.</p>
LEVEL 3
<p>3.1 Adopt a plan for managing community issues, which formally incorporates all applicable best practices, set out in level 2. <u>Note:</u> See Annex 3-A.</p> <p>3.2 Have in place a procedure to verify sound levels of operations on a regular basis (at least annually).</p> <p>3.3 Have a procedure for evaluating environmental and social aspects of new projects and activities if there is uncertainty around the potential for environmental and social impacts and where mitigation measures are not known to be effective and established. <u>Note:</u> Not applicable to projects that are subject to an environmental assessment under existing regulation. <u>Note:</u> See Annex 3-B.</p> <p>3.4 Establish and implement a nuisance mitigation plan during works and/or operations.</p>

LEVEL 4

Implementation of the **majority** of applicable criteria:

Noise:

4.1 Conduct near real-time monitoring of noise and/or air emissions (dust and/or odours) in the problem areas (e.g., areas located close to residences, subject to frequent complaints or particularly exposed to wind, etc.) and have a data monitoring process in place.

4.2 Create noise barriers using a sustainable approach (e.g., vegetated buffer zone or barriers built with recycled material, etc.).

4.3 Install silencer, muffler, timer, or another device to reduce noise from noisy equipment or cover with sound-insulating material.

Dust:

4.4 Implement mitigation measures (e.g., canvas, tarpaulins, curtains, or other equivalent control barriers) during spray painting and blasting operations to prevent the dispersal of dust and aerosol particles by the wind.

4.5 Collect and confine spent abrasives and debris (after blasting to dock-bottom/yard grounds) to avoid dispersion by wind and stormwater (e.g., cover piles or use covered containers).

Light:

4.6 Install fixtures that optimize lighting and reduce light pollution when replacing fixtures or during new projects.

4.7 Evaluate existing lighting plans and take effective measures to optimize lighting and reduce impacts.

Nuisance mitigation:

4.8 Develop buffer areas (e.g., green corridors, vegetated or recreational areas) between operating site and residential areas through a community-based approach.

4.9 Have a procedure or system in place that optimizes vehicle movements to manage congestion and mitigate other associated issues.

LEVEL 5

5.1 Implement all applicable criteria listed in Level 4.

5. COMMUNITY RELATIONS

OBJECTIVE: Maintain or improve the quality of relations with the various community stakeholders through open and transparent communications.

LEVEL 1
Monitoring of regulations
LEVEL 2
2.1 Make available/post a telephone number of, or redirect calls to, responsible person in charge of receiving inquiries and concerns (including complaints) related to the participant's activities.
2.2 Develop and implement a documented procedure to keep track of and respond to inquiries and concerns (including complaints). As appropriate, dedicate a person to respond and/or be dispatched to the site in a timely fashion, implement and monitor corrective measures and readjust as needed.
2.3 Identify, locate, and update the participant's network of local stakeholders (e.g. employees, tenants, residents, Indigenous Peoples, NGOs, municipalities/towns, governmental and environmental organizations, suppliers).
2.4 Regularly monitor media posts about the participant's activities.
2.5 Communicate information about the participant's activities and operations using at least two communication means. For example: <ul style="list-style-type: none">a) Twitter, Facebook, or Instagram;b) LinkedIn;c) TV;d) YouTube;e) Radio or podcast;f) Webpage with community related content;g) Local newspapers;h) Newsletter; ori) Magazine.
2.6 Incorporate in the applicable policies or value statement of the company the commitment of senior management to maintain and improve the quality of community relations.

LEVEL 3

Fulfill at least three of the following criteria:

- 3.1 Describe each stakeholder or stakeholder group identified in criterion 2.3. For each of them, identify issues and concerns related to the participant's activities, as well as any ongoing and potential future collaboration opportunities.
- 3.2 Develop and implement a documented communication strategy or plan with a focus on responsiveness, transparency, engagement to reach out to the community, and feedback.
- 3.3 Publicly disclose at least one annual report or corporate plan related in part or entirely to social responsibility (e.g. sustainability action plan or annual report, corporate social responsibility report, strategic plan).
- 3.4 Implement or participate at least two community outreach strategies annually (e.g., port or shipyard days, open houses, info sessions, voluntary workshops, visitor or information center, webinars, site tours, school visits).
- 3.5 Participate in social and/or environmental activities or events every year with the community and/or to the benefit of the community (e.g. shoreline clean-up operations, tree-planting campaigns, educational activities, fundraising events, scholarships).
Note: The participant must provide support, whether through financial means, human resources and/or material and equipment.

LEVEL 4

- 4.1 Actively participate in meetings with one or more local community organizations or NGOs to discuss subject matter that contributes to the environmental or social well-being of the community and that is not directly related to the participant's activities (e.g., be a Board member, regularly participate in committee meetings)
Note: Payment of membership is not sufficient to fulfill this criterion.
- 4.2 Hold or actively participate, at least twice a year, in meetings with one or more local community members or groups to discuss subjects directly related to the participant's activities. These meetings can include the implementation and/or participation on a permanent committee open to the local community that meets twice a year (e.g., citizen or liaison committee).
- 4.3 Recognize community relationships within the participant's strategic plan as part of the company-wide culture (e.g. aiming for responsiveness, transparency, engagement, and feedback).
- 4.4 Develop and implement a communication process to regularly inform and allow the community to ask questions and make comments before, during, and after implementing new projects with potential social and environmental impacts. Make public and easily accessible all required steps for the community to ask questions and make comments.
Note: New projects include new services, operations or activities with potential environmental or social impacts.
Note: See Annex 3-B.

LEVEL 5

- 5.1 Evaluate within the last three years the community's perception of the participant. Based on the results, develop and implement measures addressing the concerns raised to improve the relationship with local stakeholders.
Note: See guidelines in Annex 6-B.
- 5.2 Within the last five years, carry out or participate in a co-creation project or initiative in collaboration with one or more local stakeholders.
Note: See guidelines in Annex 6-C.