

Modernised ADRIREP system

List of changes to EMSA's Integrated Report Distribution (IRD) service and to national/local systems of ADRIREP

1.0

Date: 17/10/2022

Document History

Version	Date	Changes	Prepared	Approved
0.1	13/10/2022	First draft based on the business and technical requirements	EMSA	
1.0	17/10/2022	Feedback from EUREKA Consortium	EMSA	EUREKA stakeholder group on the modernisation of ADRIREP (4th meeting)

Table of Contents

1. Objective	2
2. EMSA’s Integrated Report Distribution (IRD) service	2
2.1 Background	2
2.2 High-level requirements	2
2.2.1 Interface for electronic ship reporting developed and hosted by EMSA	2
2.2.2 Platform for requesting ship access to interface for electronic ship reporting	3
2.2.3 Central repository of all reports provided by ships to ADRIREP CST	3
2.2.4 System for sharing MRS reports between CST in ADRIREP	3
2.2.5 System for reporting MRS reports to SSN by non-SSN participating countries	4
3. National/local systems of ADRIREP CST	4
3.1 ADRIREP countries with IT systems	4
3.2 ADRIREP countries without IT systems	5
3.3 ADRIREP countries not interacting with the ships	5
4. Implementation plan	5
4.1 Phase 2A	5
4.2 Phase 2B	6

1. Objective

The objective of this document is to present:

- a. the list of changes required in the EMSA’s Integrated Report Distribution (IRD) service as well as in the national/local systems of ADRIREP CST;
- b. the implementation plan for modernisation of ADRIREP system.

2. EMSA’s Integrated Report Distribution (IRD) service

2.1 Background

Within the framework of the “Interoperability Project”, EMSA developed a new “Integrated Reports Distribution” (IRD) pilot service using existing back-end services from the SSN Ecosystem to retrieve data and prepares and distributes to Member States’ coastal stations reports on ships sailing in their areas of interest. During the project the concept of ship-to-shore MRS/VTS reporting by electronic means was approved and additional features were added to the IRD.

The EMSA’s IRD is currently in the transition stage from proof of concept to an operational service. There are various technical and operational/legal actions which need to be executed by EMSA together with Member States participating in the “facilitation of ship to shore reporting” working group. During Phase 1 of EMSA’s Technical Assistance, the EUREKA Consortium agreed to base the technical solution for modernised ADRIREP system on EMSA’s IRD. Such implementation requires several changes to the EMSA’s IRD.

2.2 High-level requirements

The following high-level technical requirements were defined for EMSA’s IRD during Phase 1 of TA:

- a. Interface for electronic ship reporting developed and hosted by EMSA;
- b. Platform for requesting ship access to interface for electronic ship reporting;
- c. Central repository of all reports provided by ships to ADRIREP CST;
- d. System for sharing MRS reports between CST in ADRIREP;
- e. System for reporting MRS reports to SSN by non-SSN participating countries¹.

The EMSA’s IRD was designed as a system to facilitate ship reporting by making data already available in SSN to a ship and not as a repository for VTS or SRS. Taking this into account only point a. of the above listed requirements is currently available while all others will have to be developed.

The below sections provide list of technical requirements to be implemented at the EMSA’s IRD level:

2.2.1 Interface for electronic ship reporting developed and hosted by EMSA

The ships participating in ADRIREP system shall submit reports by electronic means using the EMSA’s IRD interface.

The changes/developments will include:

- solutions in IRD to specify the type of report (i.e. predefined types of the report: First Report, Progress Report and Final Report);
- solutions in IRD to select/classify MRS reports by ships;
- additional attributes under the message designators.

¹ Implementation of this feature must be assessed and approved by the HLSG before granting the specific access to the non-SSN participating EUREKA countries.

2.2.2 Platform for requesting ship access to interface for electronic ship reporting

A dedicated website/application will be created when a ship representative creates a request for access to the interface for electronic reporting (i.e. request form to get access to IRD ship data provider interface).

The changes/developments will include:

- creation of a website to register request for ship account to IRD requiring the following information using request form available on the website: Requestor (Ship captain/Ship Agent/Representative of company), Ship's company name, E-mail, Phone, Ship's IMO, Ship's MMSI, Ship's call sign, Ship's name, Ship's flag, Port of destination;
- solution to send automatically e-mail to the requestor confirming that the request was registered successfully;
- storage of all registered requests in the database. Apart from the information listed above there will be also information about request ID, date and time of the request and its status (i.e. Registered/ In Progress/ Granted/ Declined);
- feature to send e-mail requesting creation of new user to the responsible authority of country of the port of destination.

2.2.3 Central repository of all reports provided by ships to ADRIREP CST

The ADRIREP reports will be registered/stored by the receiving CSTs:

- i. in the national/local systems of CSTs and then transferred, via S2S, to EMSA's IRD;
- ii. directly in the EMSA's IRD (solution to be used when S2S connection between the national/local system and IRD is not yet maintained).

The changes/developments will include:

- improved presentation of the MRS/VTS reporting tab;
- access to the stored reports provided directly from the ship data provider interface to the authority interface;
- additional sources of reports specifying how and by whom the report was registered;
- updates to the MRS/VTS tab. with new features allowing authority to register reports received from the ship by other means than electronic reporting (e.g. radio);
- a new button "Register report" under the MRS/VTS report tab. for the authorities having a specific role to be created in IdM (e.g. SRS_CST);
- updates to the report's registration form, including additional information about the communication method used and the time when the report was received by the CST;
- functionalities allowing the users (authorities) to update reports or remove them after the registration (also for the system2system interface);
- a new solution allowing the authorities with a specific IdM role to register reports in IRD by sending a message;
- solution to display data received via S2S in the MRS/VTS report tab.
- amendments to logs of the system and administrative interface to track all the above listed operations.

2.2.4 System for sharing MRS reports between CST in ADRIREP

The reports provided by ships will be distributed to other competent shore-based authorities (CSTs) by the CST operator, following the reception confirmation

The changes/developments will include:

- a feature in IRD allowing to share the IRD reports with other CST, by using the following options: e-mail, system to system communication, web user interface;
- a new "push MRS report" service, e.g. by reusing a current push mechanism;
- a new configuration space for each MRS system, containing information about the CSTs with whom the data should be shared, as well as communication channel (S2S, e-mail);
- solutions for various triggers to share the reports: manual, automatic, required;
- amendments to logs of the system and administrative interface to track all the above listed operations.

2.2.5 System for reporting MRS reports to SSN by non-SSN participating countries

EMSA's IRD web user interface will have a feature for non-SSN participating countries to report MRS report to SSN directly from the IRD web user interface (i.e. "Report to SSN" functionality).

The changes/developments will include:

- the connection between IRD and central SSN to send messages (SOAP message);
- updates to the web user interface to add new feature: Send to SSN;
- a new functionality "Send to SSN" in the MRS/VTS tab for the authorities with a specific role that will be added to IRD;
- the message to SSN compilation solution;
- the IRD users DB (i.e. users reporting to SSN);
- amendments to logs of the system and administrative interface to track all the above listed operations.

3. National/local systems of ADRIREP CST

The national/local systems of CST participating in ADRIREP must be updated and integrated with EMSA's IRD. Considering that the countries participating in the ADRIREP system are at the different implementation stage or may have different role in the modernised system the list of changes to national/local system may be different.

The following groups of countries were identified:

- a. Countries having already system in place (Croatia, Italy, Montenegro and Slovenia);
- b. Countries without IT systems in place for ADRIREP data registration (Albania and Bosnia and Herzegovina);
- c. Countries not interacting with the ships but interested in received ADRIREP reports (Greece).

The below sections provide list of changes expected at national/local level for each of the above-mentioned groups of countries.

3.1 ADRIREP countries with IT systems

The ADRIREP reports will be registered/stored by the receiving CST in the national/local systems of CSTs and then transferred via S2S to EMSA's IRD. Considering that there are some changes to the information to be reported by the ships in the modernised ADRIREP (i.e new data elements) the ADRIREP systems currently in place must be updated.

The changes/developments will include:

- updating of local/national databases to store all data elements specified in the Business requirements document;
- updating of the forms used for report registration at national/local level to include new data elements;
- S2S connection between national/local system and EMSA's IRD to:
 - send reports received and registered at national/local level to EMSA's IRD;
 - receive reports from EMSA's IRD that were sent by the ship using interface for electronic reporting;
 - receive reports from EMSA's IRD that were shared by other CSTs participating in ADRIREP;
 - provide "Authority Response" from national/local to EMSA's IRD for the reports sent by the ship using interface for electronic reporting.

When the technical developments will be completed the countries need to coordinate with EMSA to carry out the Commissioning Tests (similarly to SSN procedures).

Apart from the above listed technical development it is also required to:

- update the operational procedures to include changes foreseen in the modernised ADRIREP;
- organise training for CST operators.

3.2 ADRIREP countries without IT systems

The ADRIREP reports will be registered directly in the EMSA's IRD. This solution is to be used by the countries which do not have IT systems in place allowing them to register ADRIREP data at the national level.

For those countries there is no need for IT developments since all the work will be done in EMSA's IRD as specified in section 2 of this document. CST will have possibility to register and consult ADRIREP report via the web user interface of EMSA's IRD. In addition, for the reports provided by ships using interface for electronic reporting and those shared by other CST, it will be possible to receive them via e-mail.

The following tasks will have to be completed for those countries:

- create the operational procedures for CST operators;
- set-up working stations for CST operators with access to EMSA's IRD;
- organise training for CST operators;
- execute communication tests with the ships².

3.3 ADRIREP countries not interacting with the ships

Greece will not interact with the ships (i.e. no CST for ship reporting) but will have access to the Final Reports for the ships leaving the area of the ADRIREP system (south from the latitude 40° 25'.00 N). The reports will be shared by EMSA's IRD using the e-mail or system to system communication. In addition, since EMSA's IRD will act as a central repository all reports may be consulted using web user interface of the IRD.

Greece will receive reports via e-mail. This solution does not require any technical development. E-mail is automatically sent by EMSA's IRD to e-mail address(es) identified by Greece.

At a later stage, Greece will assess the possibility of establishing S2S connection with EMSA's IRD and integrate reports in the national/local system by:

- updating of local/national databases to store all data elements specified in the Business requirements document;
- S2S connection between national/local system and EMSA's IRD to receive reports from EMSA's IRD that were shared by other CSTs participating in ADRIREP.

When the technical developments will be completed Greece needs to coordinate with EMSA to carry out the Commissioning Tests (similarly to SSN procedures).

Apart from the task mentioned above it is necessary to:

- create the operational procedures for authorities receiving ADRIREP reports;
- organise training for authorities receiving ADRIREP reports.

4. Implementation plan

The list of changes presented in this document can be divided into two main areas: technical developments and administrative and operational activities (updating of the procedures, training, operational testing, etc.). Considering that the technical developments which are financed by the EUREKA project must be completed by end of July 2023 (extended end date of the project) it is proposed to divide Phase 2 of TA into two parts.

4.1 Phase 2A

The Phase 2A of TA will be focused on EUREKA budget execution for the technical developments in EMSA's IRD and in the national/local systems. The analysis made by EMSA showed that it will be possible to complete the technical developments for the above listed high-level requirements a, c, d and e by the end of July 2023.

The high-level technical requirement referred to point b (Platform for requesting ship access to interface for electronic ship reporting) cannot be executed by EMSA under the IRD framework as it is not linked to the IRD

² The on-site meetings with Albania and Bosnia and Herzegovina should take place to assess if the necessary infrastructure and procedures are in place to operate as a CST in the modernised ADRIREP.

system. This requirement could be developed as a standalone application however, EMSA does not have in place any framework contract which can be used to create such platform by July 2023. Taking into account actions that need to be completed (i.e. drafting of technical specification, budget assignment, tendering procedure, design and development, testing and validation, implementation of technical solution) this platform can be created by the end of 1st quarter of 2024 and the estimated cost is 20.000€.

Considering that the implementation of point b requirement is not crucial and therefore not blocking for the proper functioning of the modernised ADRIREP, this requirement can be implemented in Phase 2 – part 2. Until implemented, the functionality will be provided using alternative method (i.e. account will be created after e-mail requests to a dedicated list of contacts).

Croatia and Italy confirmed that the technical developments at national/local level will be completed before end of July and their system will be integrated with EMSA’s IRD. No feedback was received from Montenegro and Slovenia.

The indicative implementation plan following time plan for the EMSA’s IRD technical development is the following:

Planned date	Action
November 2022	Phase 2 of the TA approved by the EMSA’s AB
December 2022	SLA between EMSA and the EUREKA Consortium signed
November – December 2022	Drafting of technical specification for the IRD technical developments as well for the technical developments at national/local level.
January 2023	EUREKA budget assigned for IRD developments for EUREKA project and transferred to EMSA.
January 2023	Signature of the specific contract with the fixed scope for IRD developments for the EUREKA project
January 2023	Draft of System Interface Guide (SIG) available for EUREKA Consortium
February – May 2023 ³	Execution of the specific contract for IRD developments: <ul style="list-style-type: none"> - Design documentation ready in March 2023 - Developments completed in May 2023
May – June 2023	Installation of new version of IRD in EMSA and testing activities
June – July 2023	Installation of IRD in Production and IRD ready for integration with the national/local systems of ADRIREP CST

The estimated cost for technical developments in EMSA’s IRD is around 60,000 €, in the Croatian system is around 59,500€ and in the Italian system is around 50,000€.

4.2 Phase 2B

This part will focus on the preparation of ADRIREP CST to work in the modernised SRS system and on testing the technical solutions between the CSTs and ships navigating in the region. In addition, EMSA will work with EUREKA participants on the submission to IMO proposing amendments to ADRIREP system. Phase 2B will start in August 2023 and will last until end of 2024. Phase 2B will include the following activities:

a. Integration

Due to the fixed narrow deadlines of phase 2A there will be not much time available to integrate and test the IRD developments by August 2023. This activity will take place between August and December 2023 between EMSA and the countries that will establish system2system communication with EMSA’s IRD (Italy, Croatia, Montenegro and Slovenia). In addition, there will be tests of the web user interface of EMSA’s IRD.

b. Training

Once the technical developments in IRD are concluded, EMSA will organise training sessions for the EUREKA participants. EMSA will train the users of the ADRIREP Authorities on how to use and benefit from the new functionalities.

³ EUREKA participants should start the technical developments at national/local as soon as possible (preferably in parallel with the technical developments of the EMSA’s IRD).

c. Operational tests

As the objective of the modernisation of ADRIREP is to prove that the technical and administrative solutions to simplify reporting can be implemented and be of benefit to ships and coastal station operators, the operational tests with coastal stations and the shipping industry (shipping companies, ship operators) need to be planned. These operational tests will be used to verify quality, availability and reliability of the technical solution. The feedback from the end users will be used to improve or adjust the solution before it is submitted to IMO for approval.

d. Operational procedures

After the completion of the testing activities, EMSA and the EUREKA participants need to work together to create/update the operational procedures in the CST participating in the ADRIREP system. The procedure should be aligned and harmonised as much as possible between different CST participating in the system.

e. Development of the platform for requesting ship access to interface for electronic ship reporting

EMSA will develop and host a platform for requesting ship access to interface for electronic ship reporting. Based on the initial EMSA assessment, the estimated cost for developing such platform is around 20,000 €. Before the end of Phase 2A, the states participating in the EUREKA Consortium will assess options on how to cover the cost of 20,000 € required for the platform development.

f. Submission to IMO

After the completion of the testing activities, ADRIREP countries need to work together with EMSA and Commission on the submission to IMO proposing modernisation of ADRIREP system. This submission will be prepared based on the documents agreed in Phase 1 of the TA and will include results of the technical and operational tests.

European Maritime Safety Agency

Praça Europa 4
1249-206 Lisbon, Portugal
Tel +351 21 1209 200
Fax +351 21 1209 210
emsa.europa.eu

