STANDARD TWINNING PROJECT FICHE

1. Basic Information

1.1 Publication notice reference: EuropeAid/ 137-845/IH/ACT/HR

1.2 Programme: Transition Facility IPA/2013/24986 (Annex of C (2013) 8057 final)

1.3 Twinning Number: HR 14 IB EN 02

1.4 Title: Chemicals and hazardous substances monitoring improvement and integration of Seveso database into Croatian Environmental Information System (CEIS) as the unique Central Seveso Information System (CRO SEVESO)

1.5 Sector: Environment / Environmental protection and climate change

1.6 Beneficiary country: Republic of Croatia

2. Objectives

2.1 Overall objective:

The overall objective is to strengthen the capabilities and efficiency of the Republic of Croatia in the field of environmental protection and mitigation of climate changes by improving management, monitoring and more precise reporting on chemicals, emissions, hazardous substances and accidents as well as to upgrade and integrate the current Seveso databases with Geographic Information System (GIS) within Croatian Environmental Information System (CEIS).

2.2 Project purpose:

The purpose of the project is to improve and harmonize climate change mitigation capabilities and chemical pollution and hazardous substances monitoring of the Croatian Agency for the Environment and Nature (CAEN).

2.3 Contribution to Accession Treaty/ Relevant national documents:

Accession Treaty
Following the signature of the Accession Treaty on December 9th 2011 by 27 Member States and the Republic of Croatia and its ratification procedure in the Member States, Croatia joined the European Union (EU) on July 1st 2013. As one of the EU Member States, Croatia is obliged to follow the EU reporting obligations in the field of environmental protection.

National Environmental Strategy
The main goal of the Strategy (OG 46/02) is preserving the environment in Croatia by improving legal, financial and institutional frame for environmental management on local and national level; by strengthening competencies; by integrating nature protection into other sectors (e.g. agriculture, forestry, tourism, etc.) in order to reduce environment pollution; by implementing comprehensive monitoring and unique IT system and by raising public awareness on environmental issues.

National Environmental Action Plan
National Environmental Action Plan (OG 46/02) has been envisaged as a process of setting goals

and efficient enforcement of environmental protection in Croatia. It sets guidelines for long-term environmental management, taking into consideration the overall economic, social and cultural development. Furthermore, it sets the basis for harmonization of economic, technical, scientific, educational, organizational and other measures, i.e. measures encompassing enforcement of international obligations aimed at nature protection. Some of the most important priorities are waste disposal, air quality, etc. It is also very important to establish comprehensive monitoring and unique information system, to improve management of natural resources and protected areas, as well as to strengthen the capacities of employees working in the field of nature protection.

According to the above stated documents Croatia has obligation to:

- Build the capacity for comprehensive and systematically monitoring of the state of the environment;
- Collect and process the environmental information and make them available to all stakeholders;
- Implement the use of modern communication technologies and standards in line with European requirements, providing access to information about the environment of Croatia, allowing them to communicate, exchange and allow the use of cartographic support;
- Develop routines for processing the collected environmental data and their evaluation (modelling, prediction and visualization);
- Associate with the European Environment Agency (EEA) and the European Environment Information and Observation Network (EIONET);
- Collect and process information about the environment of Croatia used for preparation of European environmental reports;
- Establish a system for exchange of all information about chemicals;
- Establish comprehensive programs for the preventive, immediate and remedial activity in relation to cases of chemical accidents;
- Establish national activities on reducing the risk of persistent organic pollutants.

This Twinning project, financed under the Transition Facility Program - Measure 3.1 Support in the area of environment and climate change, supports the implementation of the EU *acquis* in the area of environment and climate change through building of the institutional capacities related to management, monitoring and reporting on chemicals, emissions, hazardous substances and accidents in the Republic of Croatia with the final objective to protect the environment and mitigate climate changes.

3. Description

3.1 Background and justification:

The overall objective of better monitoring of chemicals and reporting on chemicals and dangerous substances together with their quantities in the Republic of Croatia will be achieved with improvement and upgrading of the current Seveso databases in the CAEN (Register of Establishment in which Dangerous Substances are Present and the Register of Reported Major Accidents - databases REDS/RRMA) and integrating REDS/RRMA databases into CEIS. At the same time, capacities of all involved competent authorities and others stakeholders will be improved through workshops of this project. Stronger capacities will lead to better knowledge in collecting, maintaining and validating of data which results in better quality of data in a whole.

REDS/RRMA was developed by the Croatian Environmental Agency (CEA)[1] according to the Environmental Protection Act (OG 110/07), Regulation on the Prevention of Major Accidents Involving Dangerous Substances (OG 114/08) and Ordinance on the Registry of Installations in which Dangerous Substances are Present and the Register of Reported Major Accidents (OG 113/08). With the mentioned legislation the Seveso II Directive (1996/82/EC) and Directive 2003/105/EC were transposed into the Croatian legislation.

On 1 July 2013, the Republic of Croatia became a member of the European Union. By the new Environmental Protection Act (OG 80/13, 78/15) the Regulation on the Prevention of Major Accidents Involving Dangerous Substances (OG 44/14; hereinafter: the Regulation), and the Ordinance on the Registry of Installations in which Dangerous Substances are Present and the Register of Reported Major Accidents (OG 139/14; hereinafter: the Ordinance), were adopted. The Regulation transposed all annexes from Seveso III Directive and operators got grace period to adapt their documentation.

Other legislation that implemented certain provisions of the Seveso directives was the Law on Protection and Rescue (OG 174/04, 79/07, 38/09, 127/10) through the Ordinance on the Methodology for Preparing Risk Assessment and Protection and Rescue Plans (OG 38/08, 118/12), replaced by the new Ordinance (OG 30/14, 67/14).

The competent authorities (CA) for Seveso directives implementation in Croatia are Ministry of Environmental and Nature protection (MENP), National Protection and Rescue Directorate (NPRD), Croatian Agency for the Environment and Nature (CAEN), while the cooperating institutions are institutions of the local and regional government and Ministry of Construction and Physical Planning (MCPP), Ministry of Health and Croatian Institute for Toxicology and Antidoping (CITA). For more details on roles and responsibilities of the project stakeholders please refer to the point 4. Institutional framework of the Twinning fiche.

Data from REDS/RRMA are used for producing national reports (yearly report on data from REDS/RRMA) and for obligatory reporting towards the EU (databases of the European Commission – JRC, E-SPIRS and E-MARS; three-year reports on progress of implementation of the Seveso Directive in Croatia). Data from REDS/RRMA are also used for preparing documents in the area of rescue and protection of people, environmental and material goods (prepared by public institutions and counties with NPRD as competent authority).

Improved REDS/RRMA are planned to be integrated first into CEIS, together with other databases - especially Environmental Pollution Register (EPR; database for Pollutant Release and Transfer Register), Inventory of the Emissions of Greenhouse Gases (INES; database for climate changes) and Inquest register for Integrated Pollution Prevention and Control (IPPC). Secondly, REDS/RRMA are planned to be integrated with databases of the Ministry of Health and other institutions which contain data about chemicals and accidents, such as the NPRD.

Additionally, according to the new Environmental Protection Act (OG 80/13, 78/15), the CAEN should develop database for domino-effects. The CAEN has developed domino-effects part in the current REDS/RRMA database during 2014/2015, based on all additional data for domino-effects, while with this project this part is planned to be additionally strengthened.

[1] Croatian Environmental Agency (CEA) was integrated with the State Institute for Nature Protection (SINP) in September 2015 into Croatian Agency for the Environment and Nature (CAEN).

Furthermore, within this project, Geographic Information System (GIS) shall be upgraded to capture, manage, analyse, and display all forms/data of geographically referenced information.

One of the main benefits of GIS relevant to this project is a possibility to link data sets together by common locational data (such as addresses). By creating a shared database, one CAEN department can benefit from the work of another; also data can be collected once and used many times. The CAEN staff will be allowed to view, understand, question, interpret and visualize all information in central database in ways that reveal relationships, patterns, and trends in the form of maps, reports and charts. Thus, the CAEN staff will be enabled to answer questions and solve problems by looking at data in a way that is quickly understood and easily shared - on a map.

GIS is also important to fulfil CAEN's obligations towards the general public. Through public access to all GIS environmental information, general public will have information on state of the environment in their neighbourhood, in the part of dangerous substances, major accidents, accidents, domino-effects, etc.

Croatian Seveso Atlas will be developed from the spatial GIS components. It will cover the Croatian Seveso system in specific areas and provide predefined attribute with spatial analysis and appropriate visual interpretation. Croatian Seveso Atlas will be included as part of the Croatian Seveso web portal.

Following all the above, this project will enhance consistency and harmonization of data between different CAEN databases. In the future, all databases in the CAEN, together with databases from other Croatian institutions, will be connected through the CEIS in one unified Environmental Information System (EIS). This system will be subsequently integrated with similar systems of other Member States and shared within EU to form a wide environmental information system based on Shared Environmental Information System (SEIS) initiative with the main purpose of better environmental protection and adequate response to climate change.

REDS/RRMA contain all relevant data about dangerous chemicals. However, some of the important elements are currently missing, such as tool for Safety Management System (SMS) and Major Accident Prevention Policy (MAPP). Analysis of the current state of databases, especially regarding SMS and MAPP, should be performed and these elements should be improved. Moreover, data in the REDS/RRMA should be properly validated. Validation tool which could be integrated in the databases will help to improve data about chemicals and dangerous substances, such as data for domino-effects, reported major-accidents, accidents and near-misses. Besides better quality of the national safety system, it will result in a higher quality of national reporting and obligatory reporting towards the EU.

Guidelines on risk assessment identify incident scenarios and evaluate their risk by defining the probability of failure, various consequences and potential impacts of those consequences by evaluating acute hazards and alternative risk reduction strategies, and identifying areas for cost-effective risk reduction. Also, they identify and quantify hazards and risks related to the use and storage of hazardous materials; determine hazards/risks due to possible accident scenarios which will lead to fire, explosion or toxic release; recommend measures to be incorporated in the design and operation of the plant to keep hazards/risks as low as possible and to facilitate development of emergency response plans to deal with all possible accident scenarios.

This project will provide support in establishing the unique **Central Seveso Information System** (CSIS) as part of the CEIS with its core functionalities, including all information processing and communications-related hardware and software products supplied, installed, integrated, and made

operational in the CAEN. As the information system for monitoring of chemical pollution and hazardous substances, the CSIS should provide:

- An effective data framework (spatial and alphanumeric) that integrates various spatial and tabular data from other related databases in the CAEN, as well as data from other organizations in charge, for their gathering and maintenance to ensure that needed information is available for use in multiple ways for the benefit of the CEIS;
- An effective and efficient information system that supports a wide range of pollution management planning and other activities in the CAEN based on that information system;
- An integrated spatial information services based upon a distributed network of databases, linked by common standards and protocols to ensure compatibility of the national GIS data (spatial data portal of the CAEN with applications, review and data downloading http://gis.azo.hr/apps.html).

Through establishment of the CSIS and improved reporting capabilities of the CAEN, this project will provide support in achieving the objectives set in the EU acquis, primarily Seveso III Directive (that entered into force on 1 June 2015 in the EU and thus replaced the previous Seveso II Directive - 96/82/EC), and also contribute to the environmental protection, mitigation of climate changes and increased safety of citizens in relation to dangerous chemicals and hazardous substances.

This project will also improve the CAEN capacities and knowledge through various trainings, seminars, workshops and study visit. In particular, study visit is important to achieve the planned project target (establishing of the CSIS as a part of the CEIS, in which all relevant information and data, not only about establishments in which accidents and major accident could appear, but also data about domino-effects and possible impacts on people and environment, MAPPs and SMS, will be hold and maintained), since it is necessary to get first-hand information and to see how the certain system functions in the real environment, where the whole system is completely established, maintained and fully operational. By presenting the specific Seveso IT system of a Member State (conceptual design, specific data structure interfaces and procedures, hardware architecture, software tools for MAPP, SMS and GIS with examples "on site", specific solutions, etc.), the knowledge and experience obtained through the study visit will complement the trainings in the Republic of Croatia.

This Twinning project will assist in upgrading of the current database and building one unique database with all necessary information and data adequate for quick responding and prevention of major accidents, which is the national target and the main task prescribed by the new Croatian Seveso Regulation on the Prevention of Major Accidents involving Dangerous Substances (OG 44/14), which replaced Regulation on the Prevention of Major Accidents involving Dangerous Substances (OG 114/08).

3.2 Linked activities:

Transition Facility "Improvement of Croatian Environment Pollutant Register (Croatian EPR) and its Integration into Croatian Environmental Information System (CEIS)" (CRO EPR)

The above mentioned Twinning project (HR/14/IB/EN/01) started in January 2016 with the duration of 18 months. The project is implemented by Austria as the lead MS partner and Germany and France as the junior MS partners. The project will strengthen capacities of the CAEN and other national authorities in the field of environmental reporting. The purpose of this project is further development of the Croatian EPR system, including improvement of collecting, validating and reporting process of Croatian EPR, and improvement of consistency with other reporting systems in

the Republic of Croatia, especially Geographic Information System (GIS) and the Common Reporting Format for National Greenhouse Gas (GHG) inventory system.

United Nations Environment Programme / Global Environment Facility (UNEP/GEF) project "Data Flow System and Indicators to Enhance Integrated Management of Global Environmental Issues in Croatia" (2009-2014)

Project was initiated by the Croatian Environmental Agency based on the results of national capacity needs self-assessment for management of global environmental issues in Croatia, particularly related to climate change, desertification and biological diversity.

The Republic of Croatia as a Party to three Rio Conventions, i.e. United Nations Framework Convention on Climate Change (UNFCCC), United Nations Convention to Combat Desertification (UNCCD) and United Nations Convention on Biological Diversity (UNCBD), is obliged to continually develop, implement, evaluate effectiveness and report on national strategies, programmes and action plans to combat climate change, soil degradation and loss of biological diversity.

This task requires systematic approach and development of appropriate tools which would allow better decision-making and assessment of effectiveness of past and future policies and measures based on relevant, accurate, internationally agreed and up to date information and indicators.

The main objective of the project was to design a comprehensive data flow system (DFS) and indicator model for the purpose of sustainable collection and management of common UNFCCC, UNCCD and UNCBD data at the national level, and to test this model through a small-scale pilot area located at the Nature Park Učka.

The results of the project are very concrete in terms of building up a new common data flow system model which departs from existing model of information silos in a direction of collaborative and harmonized model which would enable more efficient usage of common set of data, high quality monitoring and reporting according to the Conventions in regard to accuracy, consistency, completeness and timeliness, as well as more efficient planning and implementation of policy and measures for climate change mitigation and adaptation, preservation of biodiversity and reduction of soil degradation in the Republic of Croatia.

Croatian European Climate Registry (ECR) project "Towards CAFE Directive Implementation in Croatia" (2011-2012)

The purpose of the project was to enhance the capacity of Republic of Croatia in the fulfilment of obligations related to the CAFE directive (Directive 2008/50/EC). Within this project, the Croatian Environmental Agency as a responsible institution, has acquired the necessary knowledge and experience to assess the air quality, according to the references of the EU, which are given in the CAFE Directive. The project supported the implementation of measures required to improve air quality in the areas of agglomeration in which concentrations of specific pollutants have exceed. The above mentioned project ended in June 2012. The project was funded from Short G2G Environmental Facility and lasted for 18 months. The institution responsible for the implementation of the project was Dutch National Institute for Public Health and the Environment (RIVM).

IPA 2007 "Chemical Safety - Strengthening the Legal Framework to Build Institutional Infrastructure Protection when Handling Hazardous Chemicals"

The project consisted of the Twinning (HR/2007/IB/EN/01) and Technical Assistance components. It started in August 2010 and finished in May 2012. The main project beneficiaries were the Ministry of Health and Social Welfare and Ministry of Environment Protection, Construction and Physical Planning, while the CEA was one of the project stakeholders. The Twinning component

was implemented in cooperation with the Swedish Twinning partners. The aim of the project was helping in transposition of EU Regulation concerning Registration, Evaluation, Authorisation and restriction of Chemicals (REACH), Seveso II Directive, biocides and other relevant directives into the Croatian legislation. Project results have contributed to the development of administrative and institutional capacity for effective protection of human health and the environment from hazardous chemicals at the national and local level.

Government to Government (G2G), Bilateral Cooperation Program between the Netherlands and the Republic of Croatia (Environmental Facility)

The project provided expert training and support in implementation of major activities in the implementation of the Seveso II Directive, as well as education for developing professional environmental protection activities in relation to the Seveso-II Directive. It was implemented in the period from March 2010 to August 2011. The main project beneficiary was the Ministry of Environmental and Nature Protection (MENP).

IPA 2007 "Improving Environmental Reporting in Croatia"

The above mentioned Twinning light project (HR/2007/IB/EN/01TL) was implemented by the Austrian Twinning partners in the period from January 2011 to September 2011. The main project beneficiary was the CEA. The purpose of the project was to provide timely, targeted, relevant and reliable information in the field of environment to EEA and policy making agents at European level thus raising the profile of the CEA as a trustworthy partner of the EEA with regard to the forthcoming accession to EU. One of the important outcomes of this Project was the production of the Croatian version of GEMET (General European Environmental Multilingual Thesaurus), with financing contributions from the Twinning Light project, EEA and CEA. GEMET was developed by EEA as an indexing and retrieval tool, on basis of the best existing multilingual thesauri, in order to define a core of general terminology for the environment. One of the practical use of GEMET is seen through implementation of the INSPIRE Directive 2007/2/EC, regarding harmonised spatial information, namely, the use of at least one keyword from GEMET is compulsory for indexing of data sources. GEMET is available in Croatian language.

TAIEX study visits:

- ECENA CARDS study visit (Bulgaria, 2008): introduction on the Seveso II Directive (1996/82/EC) implementation, competent authorities, database;
- INFRA IND/STUD 32512 study visit (Italy 2009): transfer of knowledge on the Seveso II Directive (1996/82/EC) and Directive 2003/105/EC, databases SRIRS and MARS (JRC /Ispra);
- Study Tour Programme for Croatian experts on IPPC (The Netherlands, 2009);
- Workshop on REACH & Product Stewardship (03 to 04 December 2009 Zagreb) (INT MARKT 34226);
- Study tour on IPPC Directive implementation (Dessau, Halle, Germany 22.-26.11.2010.); transfer of knowledge on the IPPC implementation and PRTR reporting;
- TAIEX "Workshop on Classification and Labelling System of Dangerous Chemicals";
- TAIEX Multicounty Workshop: "from REACH to global product strategy";
- Twinning Mission (2011, Zagreb) with Austrian and German experts was organized in cooperation with the Austrian Federal Environmental Agency through IPA 2007 for improving environmental reporting in Croatia.

3.3 Results:

Result 1. Reporting towards the Republic of Croatia and European Union improved

Indicators of achievement:

- Gap analysis of the Croatian Seveso legislation in comparison with EU Seveso legislation conducted and gap analysis report with recommendations prepared, including gap analysis with comparisation of Seveso legislation (Annex I of the Seveso Directive (OG 44/14) and Croatian legislation in the field of chemicals);
- Gap analysis of the current state of REDS/RRMA data regarding reporting conducted and gap analysis report with recommendations prepared, including harmonization with data from other CAEN databases (E-PRTR, IED) and UN databases and reports (CLRTAP, UNFCCC, PRTR);
- Gap analysis related to confidentiallity of data (including maintaining and reporting of confidential data) conducted and gap analysis report with recommendations prepared;
- Gap analysis of databases or sets of data from others institutions which could be and needed to be integrated and/or connected into CSIS conducted and gap analysis report with recommendations prepared;
- Databases or sets of data of the Ministry of Health or other institutions which contain data about chemicals and accidents (e.g. NPRD) successfully integrated into CSIS and tested (report on testing results provided).

Result 2. Software for validation tools for SMS and MAPP integrated; GIS integrated

Indicators of achievement:

- Technical functionality for the whole software component defined;
- Change, risk and quality management for the whole process of software integration defined;
- Software tool for SMS and MAPP successfully developed, integrated into REDS/RRMA and CSIS and tested (report on testing results provided);
- REDS/RRMA seccessfully integrated into GIS and tested (report on testing results provided);
- Data services for data sharing and reporting (Inspire Directive and other Directives) inside GIS defined, established and tested (report on testing results provided).

Result 3. The CSIS integrated into the CEIS, combined with implementation of SMS and MAPP procedures and GIS

Indicators of achievement:

- Gaps and needs analysis, business needs and processes analysis, regulative analysis and analysis of the stakeholders' requirements conducted in order to define the technical roles and responsibilities for preparation/processing of the existing and planned datasets/databases

including connecting with other databases of the CAEN and corresponding report with recommendations prepared;

- Technical analysis of the methodologies and procedures for data collection, procedures for recording and storing data and accessibility of the collected data conducted and corresponding report with recommendations prepared;
- Conceptual design of the optimum characteristics of the Integrated Information System defined and corresponding report with recommendations prepared;
- Functional and technical specifications for development of specialized Croatian Seveso Atlas (developed from spatial GIS components) prepared;
- Croatian Seveso Atlas covering the Croatian Seveso system in specific areas and enabling spatial analysis and appropriate visual interpretation of data developed (as part of the CSIS);
- Requirements for inclusion of the existing and/or planned spatial data for all types of data sources defined and corresponding report with recommendations prepared;
- Data for integration into central unique related database, followed by database documentation prepared and harmonised;
- Central (related) database with the defined table of content, followed by database documentation established;
- The web based application, performing quality control in order to determine accuracy of data and implementing the developed application into the central unique related database developed and tested (report on testing results provided);
- The web based GIS application developed, quality control performed in order to determine accuracy of data and the developed GIS application implemented into the central unique related database, including all necessary spatial datasets developed and tested (report on testing results provided);
- Technical workshops on the implemented IT solution for at least 6 CAEN employees with the purpose of dissemination of the technical materials and user documentation on the integration of the CSIS into the CEIS combined with implementation of SMS and MAPP procedures and GIS prepared and conducted;
- REDS/RRMA, together with software tools for validation for SMS and MAPP and GIS integrated into CSIS;
- Relevant procedures and manuals prepared.

Result 4. Institutional capacity of the Croatian Agency for the Environment and Nature (CAEN), competent authorities (CA) and other stakeholders strengthened

Indicators of achievement:

- Training Needs Analysis (TNA) conducted and TNA report with training program for CAEN, CA and other stakeholders prepared;
- Materials for trainings and workshops prepared on the basis of the TNA report;

- Training and workshops on SMS and MAPP (in line with the European best practice regarding SMS and MAPP validation tools and in line with the EU guidelines for quantitative risk assessment) for at least 10 CAEN employees and at least 40 representatives of stakeholders (competent authorities, other relevant institutions and industry) conducted;
- At least 3 on-the-spot visits to industry establishments (chosen during the project implementation according to their activities, capacities or type of emissions) with the purpose of adoption of practical knowledge about the data collected in the REDS/RRMA conducted;
- Trainings of Trainers (ToT) for at least 10 CAEN employees and at least 10 employees from the competent authorities (separately for CAEN and representatives of competent authorities) conducted and training evaluation report with recommendations for further trainings of stakeholders produced;
- At least one (1) study visit in duration of 5 working days for at least 10 CAEN Croatian Seveso experts to an MS institution relevant for valuating and reporting toward Seveso (including introduction to MS Seveso database) conducted and corresponding report produced;
- At least one 2-day conference that will include workshops by sector (activities) for representatives of stakeholders and industry conducted, with at least one round table with competent authorities (MENP, NPRD, MCPP, all relevant inspections, Ministry of Health; Croatian Chamber of Economy (CCE); CAEN, industry representatives, others if needed) organised;
- Relevant procedures and manuals prepared (e.g. Seveso Manual, Manual for GIS, Manual for SMS and MAPP, Instructions for classifying of dangerous substances).

3.4 Activities:

The activities listed below represent the minimum activities to be implemented in the course of the Twinning project. Member State(s) may propose additional activities in line with the methodology elaborated in its proposal.

Activities related to Result 1:

1.1. Conducting gap analysis of the Croatian Seveso legislation in comparison with EU Seveso legislation and preparing corresponding report;[2] including gap analysis with comparisation of Seveso legislation (Annex I of the Seveso Directive (OG 44/14) and Croatian legislation in the field of chemicals);

1.2. Conducting gap analysis of the current state of REDS/RRMA database regarding reporting, including harmonization with data from other CAEN databases, if needed (E-PRTR, IED) and UN databases and reports (CLRTAP, UNFCCC, PRTR) and preparing corresponding report;

[2] Analysis will also include relevant Regulation, Ordinance, especially Annex I of the Regulation in correspondence with Croatian and EU legislation from the field of REACH and CLP and from the field of National Inventory Report (NIR) as well as legislation on safety and rescue.

1.3. Conducting gap analysis related to confidentiality of data (including maintaining and reporting of confidential data) and preparing corresponding report;

1.4. Conducting gap analysis of databases or sets of data from other institutions which could be integrated and/or connected into CSIS and preparing corresponding report (report should also take into account outputs of Activity 1.2);

1.5. Integration of databases or sets of data of the Ministry of Health or other institutions which contain data about chemicals and accidents (e.g. NPRD) into CSIS, performing corresponding testing procedure and preparing report on testing results.

Activities related to Result 2:

2.1. Defining technical functionality for the whole software component for validation tools for SMS and MAPP integration;

2.2. Defining change, risk and quality management for the whole process of software integration;

2.3. System implementation (application and database) needed to establish validation tools for SMS and MAPP, integration of the developed software tool for SMS and MAPP into REDS/RRMA and CSIS, performing corresponding testing procedure and preparing report on testing results;

2.4. System implementation (application and database) needed to establish GIS component, integration of REDS/RRMA into GIS, performing corresponding testing procedure and preparing report on testing results;

2.5. Defining specifications of data services for data sharing and reporting (Inspire Directive and other Directives) inside GIS, their establishment/integration, performing corresponding testing procedure and preparing report on testing results.

Activities related to Result 3:

3.1. Conducting gaps and needs analysis, analysis of business needs and processes, regulative analysis and analysis of the stakeholders' requirements in order to define the technical roles and responsibilities for preparation/processing of the existing and planned datasets/databases including connecting with other databases of the CAEN and preparing corresponding report;

3.2. Conducting technical analysis of the methodologies and procedures for data collection, procedures for recording and storing data and accessibility of the collected data and preparing corresponding report;

3.3. Defining conceptual design of the optimum characteristics of the Integrated Information System and preparing corresponding report:

- Conceptual design will include technical definition of the whole Integrated Information System (definition of type of functionality, type of data processing, data status, definition of technical procedures, type of data presentation and type of

integration of data from a number of data sources as well as definition of necessary spatial and alphanumeric analysis that will include the geoinformation platform).

3.4. Preparing functional and technical specifications for development of specialized Croatian Seveso Atlas to be developed from spatial GIS components.

3.5. Developing Croatian Seveso Atlas that will cover the Croatian Seveso system in specific areas and will enable spatial analysis and appropriate visual interpretation of data (Croatian Seveso Atlas will form part of the CSIS);[3]

3.6. Defining requirements for inclusion of the existing and/or planned spatial data for all types of data sources defined and preparing corresponding report;

3.7. Preparing and harmonizing data for integration into central unique related database, followed by database documentation;

3.8. Establishing central (related) database with the defined table of content, followed by database documentation;

3.9. Developing the web based application, performing quality control in order to determine accuracy of data and implementing the developed application into the central unique related database, performing corresponding testing procedure and preparing report on testing results;

3.10. Developing the web based GIS application, performing quality control in order to determine accuracy of data and implementing the developed GIS application into the central unique related database, including preparation of all necessary spatial datasets, performing corresponding testing procedure and preparing report on testing results;

3.11. Preparing and implementing technical workshops for at least 6 CAEN employees on the implemented IT solution with the purpose of dissemination of the technical materials and user documentation on the integration of the CSIS into the CEIS combined with implementation of SMS and MAPP procedures and GIS;

3.12. Integrating of REDS/RRMA, together with software for validation tools for SMS and MAPP and GIS into CSIS;

3.13. Preparing of relevant procedures and manuals for software and GIS.

Activities related to Result 4:

4.1. Conducting Training Needs Analysis (TNA) and preparing TNA report with training program for CAEN, CA and other stakeholders;

4.2. Preparing materials for trainings and workshops based on the TNA report;

4.3. Conducting training and workshops on SMS and MAPP (in line with the European best practice regarding SMS and MAPP validation tools and in line with the EU guidelines for

[3] Croatian Seveso Atlas should be developed in a user friendly way in order to improve public information for multiple target groups (schools, professionals stakeholders and other interested public groups) in educational, visually advanced and interactive.

quantitative risk assessment) for at least 10 CAEN employees and at least 40 representatives of stakeholders (competent authorities, other relevant institutions and industry);

4.4. Conducting at least 3 on-the-spot visits to industry establishments (chosen during the project implementation according to their activities, capacities or type of emissions) with the purpose of adoption of practical knowledge about the data collected in the REDS/RRMA;

4.5. Conducting Trainings of Trainers (ToT) for at least 10 CAEN employees and at least 10 employees from the competent authorities (separately for CAEN and representatives of competent authorities) and producing trainings evaluation report with recommendations for further trainings of stakeholders;

4.6. Conducting at least 1 study visit in duration of 5 working days for at least 10 CAEN Croatian EPR experts to an MS institution relevant for valuating and reporting toward Seveso (including introduction to MS Seveso database) and producing corresponding report:

- The main target of the study visit is to gain the practical applicable experience, from introducing and accessing to implementation of the system (including IT system) which will be successfully established, run and maintained in the real environment in Croatia;
- In the course of the study visit, MS Seveso database will be presented to the participants and they will be introduced to relevant, fully operating databases, their design and structure with the purpose of achieving knowledge on the European best practice and best available techniques (BAT); The topics of the study visit will also include introduction to the software tools for SMS & MAPP and GIS.

4.7. Conducting at least one 2-day conference that will include workshops by sector (activities) for representatives of stakeholders and industry. During the conference, at least one round table with competent authorities (MENP, NPRD, MCPP, all relevant inspections, Ministry of Health; Croatian Chamber of Economy (CCE); CAEN, industry representatives, others if needed)' will be organized;

4.8. Relevant procedures and manuals prepared (e.g. Seveso Manual, Manual for GIS, Manual for SMS and MAPP, Instructions for classifying of dangerous substances).

Minimum two visibility events will be organized in the course of the implementation of the project; Kick-off meeting at the start of the implementation and the Final meeting at the end of the implementation of the project activities.

3.5 Means/ Input from the MS Partner Administration:

MS Project Leader may participate in the project also as the short-term expert (STE) and in this case the MS Project Leader should satisfy requirements stipulated in the Fiche for both the Project Leader and the relevant STE profile.

3.5.1 Profile and tasks of the Project Leader

Profile of the Project Leader

Requirements:

- University level education or equivalent professional experience of 10 years in the environmental sector
- Minimum 5 years of experience in the environmental sector
- Experience in environmental reporting
- Working level of English language
- Computer literacy
- Experience in project management
- Proven contractual relation to public administration or mandated body, as defined under Twinning Manual 5.4.5

Assets:

- Experience in EU funded projects
- Experience in institution building activities related to implementation of the EU acquis in the environmental sector
- Experience in practical application of legislation in the area of the Seveso Directive
- Experience in design, development or implementation of databases for data management and dissemination

Tasks of the Project Leader:

- Overall responsibility and coordination of the MS Twinning partner inputs
- Providing guidance in introducing the EU best practice and assuring compatibility with EU requirements
- Ensuring sound implementation of envisaged activities and time managing
- Networking with relevant institutions in Croatia and in MS
- Coordination and managing of MS experts` work and availability
- Executing administrative issues
- Organizing, supervising and coordinating implementation of the project in cooperation with the BC Project Leader
- Organization of study visit
- Ensuring backstopping and financial management of the project in the MS
- Project reporting
- Participating in Steering Committee meetings

3.5.2 Profile and tasks of the RTA

Profile of the Resident Twinning Adviser

Requirements:

- University level education or equivalent professional experience of 10 years in the environmental sector
- Minimum 5 years of experience in the environmental sector
- Minimum 3 years of experience in environmental reporting
- Working level of English language
- Computer literacy
- Experience in project management

- Proven contractual relation to public administration or mandated body, as defined under Twinning Manual 5.4.5

Assets:

- Experience in practical application of legislation or related EU policies and best practices in the area of the Seveso Directive
- Experience in organizing trainings or workshops in the field of environmental reporting
- Experience in preparing project documentation which include different materials related to project implementation

Tasks of the Resident Twinning Adviser:

- Supervising and managing project implementation on a day-to-day basis and proposing corrective actions if necessary
- Coordination and assistance to the short term experts
- Support and coordination of all activities in the BC
- Organization of visibility events (kick-off and final event)
- Executing administration tasks and assisting in reporting
- Advising on related EU policies and best practices, legislation and regulations
- Networking with institutions relevant to this project in Croatia and in MS
- Responsible for organization of Steering Committee meetings
- Providing support to the national management staff to ensure training is delivered efficiently and effectively

The duration of the RTA secondment is 18 months.

3.5.3 Profile and tasks of the short-term experts

For each of the proposed experts in the submitted proposal the Member State(s) is kindly requested to indicate the expert's profile.

Profile of the Short-term expert 1 (STE 1) – Seveso Expert

Requirements:

- University level education or equivalent professional experience of 8 years in the environmental sector
- Minimum 3 years of experience in monitoring and reporting data in the area of the Seveso Directive
- Working level of English language
- Computer literacy
- Proven contractual relation to public administration or mandated body, as defined under Twinning Manual 5.4.5

Assets:

- Experience in implementing and conducting Safety Management System (SMS) and Major Accident Prevention Policy (MAPP) in the area of the Seveso Directive
- Experience in validation of data in the area of the Seveso Directive
- Experience in the field of confidentiality of data in the area of the Seveso Directive

- Experience in practical application of the Seveso III Directive, EU Regulation on Registration, Evaluation, Authorisation and restriction of Chemicals (REACH) and EU Regulation on Classification, Labelling and Packaging (CLP)
- Experience in development of decision support system for management of chemicals
- Experience in conducting trainings

Tasks of the Short-term expert 1:

- Close cooperation with the Croatian experts in undertaking all activities
- Participating in all relevant project activities in cooperation with other short-term experts with particular emphasis on the following activities:
    - Conducting gaps and needs analysis, analysis of business needs and processes, regulative analysis and analysis of the stakeholders' requirements and preparing corresponding report;
    - Conducting technical analysis of the methodologies and procedures for data collection, procedures for recording and storing data and accessibility of the collected data and preparing corresponding report;
    - Preparing and implementing workshops, seminars and trainings for relevant participants from the CAEN, competent authorities and other stakeholders;
    - Conducting ToT and producing trainings evaluation report with recommendations for further trainings of stakeholders;
    - Preparing relevant procedures and manuals.

Profile of the Short-term expert 2 (STE 2) – IT Seveso Expert

Requirements:

- University level education or equivalent professional experience of 8 years in the field of information technology (IT)
- Minimum 3 years of experience in development or implementation of the Seveso database i.e. database with dangerous substances according to Seveso legislation
- Working level of English language
- Computer literacy
- Proven contractual relation to public administration or mandated body, as defined under Twinning Manual 5.4.5

Assets:

- Experience in design and development of web portal
- Experience in design or development of IT system for dissemination of data and information through the Internet
- Experience in development or implementation of GIS relational database system
- Experience in the area of database security
- Experience in development of decision support system for management of chemicals

Tasks of the Short-term expert 2:

- Close cooperation with the Croatian experts in undertaking all activities
- Participating in all relevant project activities in cooperation with other short-term experts with particular emphasis on the following activities:
    - Design/development of IT system for dissemination of data and information through the Internet;

- Defining conceptual design of the optimum characteristics of the Integrated Information System and preparing corresponding report;
- Preparing and harmonizing data for integration into central unique related database, followed by database documentation;
- Establishing central (related) database with the defined table of content, followed by database documentation;
- Developing the web based application, performing quality control and implementing the developed application into the central unique related database, performing corresponding testing procedure and preparing report on testing results;
- Preparing and implementing workshops, seminars and trainings for relevant participants from the CAEN, competent authorities and other stakeholders;
- Integrating of REDS/RRMA, together with software for validation tools for SMS and MAPP;
- Preparing relevant procedures and manuals.

Profile of the Short-term expert 3 (STE 3) – GIS Expert

Requirements:

- University level education or equivalent professional experience of 8 years in the field of information technology (IT)
- Minimum 3 years of experience in development or implementation of GIS relational database system
- Working level of English language
- Computer literacy
- Proven contractual relation to public administration or mandated body, as defined under Twinning Manual 5.4.5

Assets:

- Experience in design and development of web portal
- Experience in design or development of IT system for dissemination of data and information through the Internet
- Experience in the area of the Seveso Directive
- Experience in the area of the Inspire Directive
- Experience in development of decision support system for management of chemicals

Tasks of the Short-term expert 3:

- Close cooperation with the Croatian experts in undertaking all activities
- Participating in all relevant project activities in cooperation with other short-term experts with particular emphasis on the following activities:
  - Preparing functional and technical specifications for development of specialized Croatian Seveso Atlas to be developed from spatial GIS components;
  - Developing Croatian Seveso Atlas;
  - Defining requirements for inclusion of the existing and/or planned spatial data for all types of data sources defined and preparing corresponding report;
  - Preparing and harmonizing data for integration into central unique related database, followed by database documentation;
  - Developing the web based GIS application, performing quality control and implementing the developed GIS application into the central unique related database,

including preparation of all necessary spatial datasets, performing corresponding testing procedure and preparing report on testing results;
- Preparing and implementing workshops, seminars and trainings for relevant participants from the CAEN, competent authorities and other stakeholders;
- Preparing relevant procedures and manuals.

Note:

The pool of experts should include:

- At least one short-term expert who in addition to the respective profile requirements has experience in conducting trainings;
- At least one short-term expert who in addition to the respective profile requirements has experience in implementation or maintaining SMS and MAPP in the area of the Seveso Directive.

4. Institutional Framework

Croatian Environmental Agency (CEA) was a public institution established by the Croatian Government in June 2002. According to the Environmental Protection Act (Article 38), activities of collecting and integrating collected environmental data and information for the purpose of ensuring and monitoring the implementation of the environmental protection and sustainable development policy were performed by the CEA. Main activities of the CEA also included establishment, development, maintenance and coordination of Croatian National Environmental Information System (CEIS) in Croatia, collection and integration of environmental data and/or information. The CEA was the central national information authority for national and international reporting and reporting coordination to the European Commission, EEA (according to the requirements of EIONET) and reporting to other global organization (i.e. UN and it`s bodies) on national environmental issues. The CEA also ensured conditions for public access to environmental information, held by it and under its supervision. The CEA is also part of the European Environment Agency's EIONET (European Environment Information and Observation Network).

By the Government Decision of Republic Croatia, from 16 September 2015 (OG 72/15), the CEA was integrated with State Institute for Nature Protection into a new institution: Croatian Agency for the Environment and Nature (CAEN). The CAEN is a legal successor of both institution that includes all obligations, authorizations and operations.

The main project beneficiary is the CAEN, more specifically Sector Impact Monitoring Department (SIMD) – Plant and Pollutant Unit. Some other CAEN organizational units will also participate in this project.

The competent Authorities for Seveso directives implementation in Croatia are the CAEN, Ministry of Environmental and Nature Protection and National Protection and Rescue Directorate.

- **Croatian Agency for the Environment and Nature** (CAEN) has the following roles and responsibilities:
  - Establishes, develops, manages and coordinates information systems environment and nature in the Republic of Croatia,

- Develop and maintain appropriate databases on environment and nature, and provides the conditions for access to information about the environment and nature, which has and that it oversees,
- Prepares reports on the state of the environment and reports on the state of nature,
- Compiling data to create documents and reports relating to environmental protection and sustainable development,
- Develop a national list of indicators,
- Develop the technical basis for the preparation of, or cooperating on the development, environmental documents and sustainable development and reports to be provided in connection with the implementation of these documents,
- Performs the tasks of monitoring and reporting on the state of the environment and monitoring and reporting on the impact of the environment on human health, in cooperation with the Croatian Institute for Public Health,

- Performs vulnerability assessment components of biodiversity, including the development of the red list of endangered wild species,
- Performs standardization of methodologies and protocols, monitoring the state of conservation of biodiversity and geodiversity and proposing measures for their protection,
- Preparation of the technical basis for the protection and conservation of protected natural areas and the ecological network,
- Develop the technical basis for the planning of wildlife management, unless special provision is not otherwise provided,
- Develop information for the purpose of determining the nature protection requirements for natural resource management plans and nature conservation requirements for preparation of spatial plans
- Develop the technical basis for the development of spatial plans of special characteristics of national and nature parks,
- Carries out professional activities related to the impact assessment, control and eradication of alien species, reintroduction and repopulation of wild species in nature, the procedure for assessment of acceptability for ecological network in connection with cross-border traffic and trade in wildlife,
- Organize and conduct training of stakeholders in the environment and nature, as well as educational and promotional activities in the environment and nature,
- Carried out or participating in the implementation of international treaties and agreements on environmental protection and nature conservation which the Republic of Croatia is a party, in the part related to reporting to the assumed obligations,
- Participate in the projects and programs in the field of environmental protection and nature.

Moreover, in the field of Seveso the CAEN has the following roles and responsibilities:

- Cooperating with MENP and other institutions in implementing of policies and strategies in the field of environmental and nature protection and cooperating in working groups for preparation and amendments of legislation in the field of Seveso;
- Provides professional assistance to beneficiaries, the competent authorities, experts and the interested public via Industry Applications helpdesk and Help Desk REDS/RRMA;
- Delivers data from REDS/RRMA for European register in database of Joint Research Centre: E-SPIRS and E-MARS;
- Develops national annual report of the data from Register of Establishments in which Dangerous Substances are Present and the Register of Reported Major Accidents (REDS/RRMA), according to the Regulations, and publishes it on the website: http: //www.azo.hr/IzvjescaRPOT;

- Collaborates with EEA through the appropriate working groups and coordinates and implements the reporting requirements of the European Commission (EC) for the European information system, and other international bodies.

- **Ministry of Environmental and Nature Protection** (MENP) has the following relevant roles and responsibilities:
  - Implements policies in the field of environmental and nature protection and it is the competent authority for adoption and interpretation of the Environmental Protection Act and its by-laws;
  - Verifies the forms notification of the presence of hazardous substances in the establishment in accordance with the Regulation;
  - Notifies of plant areas with potential or increased risk of a domino effect;
  - Approves the Safety Report, in the way to check if it contains all the necessary information, evidence, and data required in accordance with the provisions of the Regulation, and publishes them on the web site.

Additionally, the Environmental Inspection within the MENP is performing the following tasks:

- Inspection of Environmental Protection (IEP) as a part of MENP, in the field of Seveso and climate changes, based on the legislations is responsible for:Conducting on-site inspections relating to the implementation of regulations in the field of environmental protection, sustainable waste management and air protection, including Seveso establishments;
- Conducting Joint or Coordinated inspections with others inspections (from other institutions), including Seveso establishments;
- Taking steps to remove potential adverse effects on the environment caused by accidents;
- Supervising treatment with substances that deplete the ozone layer and the implementation of ratified international treaties;
- Participate in the realization of cooperation with other government bodies and local governments, and especially with other inspection services, with clients and more;
- Preparing national reports and reports towards EK in their responsibilities
- Cooperating in implementing of policies in the field of environmental and nature protection and producing Lows and by-lows.

- **National Protection and Rescue Directorate** (NPRD) has the following relevant roles and responsibilities:
  - Implements policies on the field on protection and rescue and it is the competent authority for adoption and interpretation of the legislation in the field of protection and rescue;
  - In accordance with the provisions of the Protection and Rescue Act (OG 174/04, 79/07, 38/09, 127/10), brings a decision on the need for External Protection and Rescue Plan (a plan of measures and activities carried out by the competent authority (district (regional) self-government), or county/City of Zagreb) for the area of the establishment;
  - Verifies the forms notification on the presence of hazardous substances in the establishment (Article 10, paragraph 6 of the Regulation, Article 12, paragraph 5 of the Regulation, Annex II. Regulation, Article 6 of the Seveso II Directive);
  - Participates in integrated inspections of Seveso establishments and carries out separate inspections on Seveso establishments.

Cooperating institutions in the respective area and their tasks are as follows:

- **Ministry of Construction and Physical Planning** (MCPP): participates in part of the Land-Use planning in accordance with the regulation governing Land-Use planning; among others tasks, The Ministry performs administrative and other tasks related to the establishment of requirements for designing and construction of construction works; building and use permits; use, maintenance and removal of construction works; building inspectional tasks, etc. Inside the task of issuing building and use permits, Ministry has to take into account Seveso establishments with domino-effects.

- **Local governments and regional government**: the Republic of Croatia established total of 576 government units, divided into two sub-national levels of government: regional government (20 counties, including the capital City of Zagreb, with a status of both a city and a county) and local self-government (127 cities and 428 municipalities). All local and territorial (regional) government units produce documents in the field of protection and rescue (Risk Assessment of the Population, Material and Cultural Resources and the Environment, and Protection and Rescue Plans). Counties and the City of Zagreb make External Protection and Rescue Plan.

Other project stakeholders are as follows:

- **Ministry of Health and Croatian Institute for Toxicology and Antidoping (CITA)** [4]
- **All relevant inspections**:
  - All relevant inspections according to Agreement on inspection cooperation in the field of Environment protection (2008), are: Environmental inspection (MNEP), Cultural Heritage Protection Inspection (Ministry of Culture), Inspection of transport (Ministry of Maritime Affairs, Transport and Infrastructure); Inspection of Ministry of Economy, Inspection of Ministry of Agriculture, Inspection of Ministry of the Interior, Sanitary Inspection of Ministry of Health, and from 2012 Inspection of National Protection and Rescue Directorate. They also conducts inspections of legal persons, who in the process of production, use or store hazardous substances that can cause disasters and major accidents, verifies the accuracy of the data from the forms notification of the presence of hazardous substances in the establishment, checks measures to prevent major accidents, safety management system, information from Safety Reports, over the implementation of the Environmental Protection Act (OG 110/07; and current law OG 80/13, 78/15) and other regulations;
- **Croatian Chamber of Economy** (CCE)
- **Industry** (persons obliged to submit data: operators and establishments and others);
- **Authorised legal persons** (legal persons authorised to prepare documents and reports in the field of environmental protection or rescue and safety (authorised by either MENP or NPRD).

As the main project beneficiary the CAEN will coordinate all project activities involving competent authorities and other project stakeholders. The results of this project will not lead to a change of the institutional framework as described.

The beneficiary institution will dedicate all necessary human and financial resources in order to guarantee an effective implementation of the respective project. In particular, the beneficiary institution will insure the availability of the following provisions:

- Adequately equipped office space for the RTA and the RTA assistant for the entire duration of

[4] Ministry of Health and additionally Croatian Institute for Toxicology and Antidoping (CITA) are competent authorities for chemicals.

their secondment (in particular a desk, a telephone line, PC with e-mail account and internet access, possibility to use fax & copy services);
- Adequate conditions for the STEs to perform their work while on mission to the BC;
- Training and conference venues as well as presentation and interpretation equipment;
- Costs for travel by BC participants from their capitals to a MS or between MS (study visits);
- Its active involvement in preparation of the PIU and Steering Committee meetings and participation of its members on the same;
- The availability of the BC human resources (BC experts) during the implementation of the activities.

5. Budget

Chemicals and hazardous substances monitoring improvement and integration of Seveso database into Croatian Environmental Information System (CEIS) as the unique Central Seveso Information System (CRO SEVESO)	Transition Facility Contribution	National Co-financing	TOTAL
Twinning Contract	95% 855.000 EUR	5% 45.000 EUR	900.000,00 EUR

The total amounts of the Transition Facility Programme Contribution and National Co-financing stipulated in the above table represent the total maximum amounts and therefore, they may be reduced at the level of the Twinning contract, while the relevant ratio (percentages) should be maintained as fixed.

The co-financing requirement foreseen under Transition Facility will be considered fulfilled according to the provision of the relevant Financing Decision.

Interpretation costs will be reimbursed from the budget only for the purpose of workshops and seminars, up to 7% of the Contract amount can be used for translation and interpretation purposes.

6. Implementation Arrangements

6.1 Implementing Agency responsible for tendering, contracting and accounting:

Central Finance and Contracting Agency (CFCA)
Ulica grada Vukovara 284
10000 Zagreb, Croatia
Ms Nataša Mikuš Žigman, Director
Phone: +385 (0)1 6042 400
Fax: +385 (0)1 6042 598
E-mail: procurement@safu.hr

Twinning Administrative Office
Central Finance and Contracting Agency
Ulica grada Vukovara 284

10000 Zagreb, Croatia
Ms Nirvana Sokolovski, Twinning NCP
Phone: +385 (0)1 6042 400
Fax: + 385 (0)1 6042 598
E-mail: twinning@safu.hr

6.2 Main counterpart in the BC:

Senior Programme Officer (SPO):
Matija Franković, PhD
Croatian Agency for the Environment and Nature (CAEN)
Radnička cesta 80
10000 Zagreb
Tel: +385 (0)1 55 02 900
Fax: +385 (0)1 55 02 901
E-mail: matija.frankovic@dzzp.hr

Project Leader counterpart:
Ms Hana Mesić, B. Sc.
Head of Environment Monitoring Sector
Croatian Agency for the Environment and Nature (CAEN)
Radnička cesta 80
10000 Zagreb

RTA Counterpart:
Ms Marijana Zanoški Hren, PhD
Senior Adviser in Plants and Pollutants Unit
Croatian Agency for the Environment and Nature (CAEN)
Radnička cesta 80
10000 Zagreb

6.3 Contracts:

It is envisaged that the Project will be implemented through one Twinning Contract with the maximum amount of 900.000,00 EUR.

7. Implementation Schedule (indicative)

7.1 Launching of the call for proposals: 1Q 2016[5]

7.2 Start of project activities: 4Q 2016

7.3 Project completion: 2Q 2018

7.4 Duration of the execution period (number of months): 21 months; the execution period will end 3

[5] Member States submitting proposals for Twinning projects implemented in Croatia, as well as the beneficiary institutions, will be requested to finalise drafting of the contracts in maximum four months regardless of the period of the year during which the drafting will take place.

months after the implementation period of the Action (work plan) which will take 18 months.

8. Sustainability

This project will help the CAEN in further developing and improving the current Seveso database and reporting system and the CEIS as a whole. This project will establish and improve database modelling, data harmonization location and creation of required data services, together with the established metadata and data flow, user trainings, maintenance, etc. REDS/RRMA database and CEIS will be improved through this project. Capacities related to reporting in the environment field will be strengthened, especially capacities necessary for reporting data in the area of the Seveso Directive. The project results will be used on regular bases, the acquired know-how will be further disseminated and thus, the project will have a direct positive impact on the institutional capacities of the CAEN, competent authorities and other stakeholders.

9. Crosscutting issues

Equal access regardless of sex, nationality, racial or ethnic origin, religion or belief, disability, age or sexual orientation will be guaranteed for participation in the project. Equal opportunities will be ensured by the Steering committee during the project implementation.
This project will not have any negative impact on environment. Moreover, it will have a positive effect on the improvement of environmental protection by enhancing Croatian environmental reporting capacities.

10. Conditionality and sequencing

N/A

ANNEXES TO PROJECT FICHE

1. Logical framework matrix in standard format
2. Detailed implementation chart
3. Contracting and disbursement schedule by quarter for full duration of programme (including disbursement period)
4. List of reporting obligations of the Republic of Croatia according to the relevant EU Directives
5. List of abbreviations (in alphabetical order)

Annex 1. Logical framework matrix in standard format

Chemicals and hazardous substances monitoring improvement and integration of Seveso database into Croatian Environmental Information System (CEIS) as the unique Central Seveso Information System (CRO SEVESO)		**Programme name and number:** Transition Facility IPA/2013/24986 (Annex of C(2013) 8057 final)	
Croatian Agency for the Environment and Nature (CAEN)		**Contracting period expires:** 3 years from the day on which the Commission notifies the Republic of Croatia that all of its internal procedures necessary for the adoption of this Decision have been fulfilled	**Disbursement period expires:** 4 years following the expiration of the contracting deadline
		Total budget: 900.000,00 EUR	**TF financing:** 855.000 EUR (95%) **National co-financing:** 45.000 EUR (5%)[6]
Overall objective	**Objectively Verifiable Indicators**	**Sources of Verification**	
The overall objective is to strengthen the capabilities and efficiency of the Republic of Croatia in the field of environmental protection and mitigation of climate changes by improving management, monitoring and more precise reporting on chemicals, emissions, hazardous substances and accidents as well as to upgrade and integrate the current Seveso databases with Geographic Information System (GIS) within Croatian Environmental Information System (CEIS).	Reports and data in line with defined requirements Compliance with requested formats achieved and quality of databases improved Data quality improved	EC annual reports on Croatia National Report on Environment CEA reports	
Project purpose	**Objectively Verifiable Indicators**	**Sources of Verification**	**Assumptions**
The purpose of the project is to improve and harmonize climate change mitigation capabilities and chemical pollution and	Increased quality of data and reports Increased number of established environmental databases	Interim Quarterly Reports Final Twinning Report Documentation produced under	Continuous Government support to development of environmental information system and protection of the environment

[6] The total amounts of the Transition Facility Programme Contribution and National Co-financing stipulated in the above table represent the total maximum amounts and therefore, they may be reduced at the level of the Twinning contract, while the relevant ratio (percentages) should be maintained as fixed. The co-financing requirement foreseen under Transition Facility will be considered fulfilled according to the provision of the relevant Financing Decision.

hazardous substances monitoring of the Croatian Agency for the Environment and Nature (CAEN).	A more effective and efficient information system Trained employees of the CAEN and the project stakeholders	project (analysis reports, recommendations, specifications, software documentation, maintenance documentation, etc.) CEIS databases Training programme and training materials Lists of participants on workshops and trainings; training certificates Trainings evaluation reports List of participants on study visit and study visit report	Capability of relevant stakeholders to implement/enforce project results into practice Adequate commitment of all relevant stakeholders involved in the project Availability of data and/or its compatibility in form or quality Adequate IT resources Adequate infrastructure, databases and documents Sufficient quality of submitted data in databases Relevant data easily accessible
Results	**Objectively Verifiable Indicators**	**Sources of Verification**	**Assumptions**
Result 1. Reporting towards the Republic of Croatia and European Union improved	• Gap analysis of the Croatian Seveso legislation in comparison with EU Seveso legislation conducted and gap analysis report with recommendations prepared, including gap analysis with comparisation of Seveso legislation (Annex I of the Seveso Directive (OG 44/14) and Croatian legislation in the field of chemicals); • Gap analysis of the current state of REDS/RRMA data regarding reporting conducted and gap analysis report with recommendations prepared, including harmonization with data from other CAEN databases (E-PRTR, IED) and UN databases and reports (CLRTAP, UNFCCC, PRTR); • Gap analysis related to confidentiallity of data (including maintaining and reporting of confidential data) conducted and gap analysis report with recommendations prepared; • Gap analysis of databases or sets of data from others institutions which could be and needed to be integrated and/or connected into CSIS conducted and gap analysis report with recommendations prepared; • Databases or sets of data of the Ministry of Health or other institutions which contain data about chemicals and accidents (e.g.	Interim Quarterly Reports Final Twinning Report Documentation produced under project (analysis reports, recommendations, specifications, software documentation, maintenance documentation, etc.) CEIS databases Training programme and training materials Lists of participants on workshops and trainings; training certificates Trainings evaluation reports List of participants on study visit and study visit report	Capability of relevant stakeholders to implement/enforce project results into practice Adequate commitment of all relevant stakeholders involved in the project Availability of data and/or its compatibility in form or quality Adequate IT resources Adequate infrastructure, databases and documents Sufficient quality of submitted data in databases Relevant data easily accessible

Result 2. Software for validation tools for SMS and MAPP integrated; GIS integrated Result 3. The CSIS integrated into the CEIS, combined with implementation of SMS and MAPP procedures and GIS	NPRD) successfully integrated into CSIS and tested (report on testing results provided). • Technical functionality for the whole software component defined; • Change, risk and quality management for the whole process of software integration defined; • Software tool for SMS and MAPP successfully developed, integrated into REDS/RRMA and CSIS and tested (report on testing results provided); • REDS/RRMA seccessfully integrated into GIS and tested (report on testing results provided); • Data services for data sharing and reporting (Inspire Directive and other Directives) inside GIS defined, established and tested (report on testing results provided). • Gaps and needs analysis, business needs and processes analysis, regulative analysis and analysis of the stakeholders' requirements conducted in order to define the technical roles and responsibilities for preparation/processing of the existing and planned datasets/databases including connecting with other databases of the CAEN and corresponding report with recommendations prepared; • Technical analysis of the methodologies and procedures for data collection, procedures for recording and storing data and accessibility of the collected data conducted and corresponding report with recommendations prepared; • Conceptual design of the optimum characteristics of the Integrated Information System defined and corresponding report		

	with recommendations prepared; • Functional and technical specifications for development of specialized Croatian Seveso Atlas (developed from spatial GIS components) prepared; • Croatian Seveso Atlas covering the Croatian Seveso system in specific areas and enabling spatial analysis and appropriate visual interpretation of data developed (as part of the CSIS); • Requirements for inclusion of the existing and/or planned spatial data for all types of data sources defined and corresponding report with recommendations prepared; • Data for integration into central unique related database, followed by database documentation prepared and harmonised; • Central (related) database with the defined table of content, followed by database documentation established; • The web based application, performing quality control in order to determine accuracy of data and implementing the developed application into the central unique related database developed and tested (report on testing results provided); • The web based GIS application developed, quality control performed in order to determine accuracy of data and the developed GIS application implemented into the central unique related database, including all necessary spatial datasets developed and tested (report on testing results provided); • Technical workshops on the implemented IT solution for at least 6 CAEN employees with the purpose of dissemination of the technical materials and user documentation on the integration of the CSIS into the CEIS combined with implementation of SMS and MAPP procedures and GIS prepared and conducted;		

Result 4. Institutional capacity of the Croatian Agency for the Environment and Nature (CAEN), competent authorities (CA) and other stakeholders strengthened	• REDS/RRMA, together with software tools for validation for SMS and MAPP and GIS integrated into CSIS; • Relevant procedures and manuals prepared. • Training Needs Analysis (TNA) conducted and TNA report with training program for CAEN, CA and other stakeholders prepared; • Materials for trainings and workshops prepared on the basis of the TNA report; • Training and workshops on SMS and MAPP (in line with the European best practice regarding SMS and MAPP validation tools and in line with the EU guidelines for quantitative risk assessment) for at least 10 CAEN employees and at least 40 representatives of stakeholders (competent authorities, other relevant institutions and industry) conducted; • At least 3 on-the-spot visits to industry establishments (chosen during the project implementation according to their activities, capacities or type of emissions) with the purpose of adoption of practical knowledge about the data collected in the REDS/RRMA conducted; • Trainings of Trainers (ToT) for at least 10 CAEN employees and at least 10 employees from the competent authorities (separately for CAEN and representatives of competent authorities) conducted and training evaluation report with recommendations for further trainings of stakeholders produced; • At least one (1) study visit in duration of 5 working days for at least 10 CAEN Croatian Seveso experts to an MS institution relevant for valuating and reporting toward Seveso (including introduction to MS Seveso database) conducted and corresponding report produced; • At least one 2-day conference that will		

	include workshops by sector (activities) for representatives of stakeholders and industry conducted, with at least one round table with competent authorities (MENP, NPRD, MCPP, all relevant inspections, Ministry of Health; Croatian Chamber of Economy (CCE); CAEN, industry representatives, others if needed) organised; • Relevant procedures and manuals prepared (e.g. Seveso Manual, Manual for GIS, Manual for SMS and MAPP, Instructions for classifying of dangerous substances).		
Activities	**Means**	**Specification of costs**	**Assumptions**
The activities listed below represent the minimum activities to be implemented in the course of the Twinning project. Member State(s) may propose additional activities in line with the methodology elaborated in its proposal. 1.1. Conducting gap analysis of the Croatian Seveso legislation in comparison with EU Seveso legislation and preparing corresponding report; including gap analysis with comparisation of Seveso legislation (Annex I of the Seveso Directive (OG 44/14) and Croatian legislation in the field of chemicals); 1.2. Conducting gap analysis of the current state of REDS/RRMA database regarding reporting, including harmonization with data from other CAEN databases, if needed (E-PRTR, IED) and UN databases and reports (CLRTAP, UNFCCC, PRTR) and preparing corresponding report; 1.3. Conducting gap analysis related to confidentiality of data (including maintaining and reporting of confidential data) and preparing corresponding report; 1.4. Conducting gap analysis of databases or sets of data from other institutions which could be integrated and/or connected into CSIS and preparing	Analysis, consultations, assessment, training, workshop, study visit, discussions, round table discussion, preparation of documentation, software development and testing	Twinning contract with amount of 900.000,00 €.	Adequate commitment of all relevant stakeholders involved in the project Availability of data and/or its compatibility in form or quality Adequate IT resources Adequate infrastructure, databases and documents Sufficient quality of submitted data in databases

corresponding report (report should also take into account outputs of Activity 1.2); 1.5. Integration of databases or sets of data of the Ministry of Health or other institutions which contain data about chemicals and accidents (e.g. NPRD) into CSIS, performing corresponding testing procedure and preparing report on testing results. 2.1. Defining technical functionality for the whole software component for validation tools for SMS and MAPP integration; 2.2. Defining change, risk and quality management for the whole process of software integration; 2.3. System implementation (application and database) needed to establish validation tools for SMS and MAPP, integration of the developed software tool for SMS and MAPP into REDS/RRMA and CSIS, performing corresponding testing procedure and preparing report on testing results; 2.4. System implementation (application and database) needed to establish GIS component, integration of REDS/RRMA into GIS, performing corresponding testing procedure and preparing report on testing results; 2.5. Defining specifications of data services for data sharing and reporting (Inspire Directive and other Directives) inside GIS, their establishment/integration, performing corresponding testing procedure and preparing report on testing results. 3.1. Conducting gaps and needs analysis, analysis of business needs and processes, regulative analysis and analysis of the stakeholders' requirements in order to define the technical roles and			

responsibilities for preparation/processing of the existing and planned datasets/databases including connecting with other databases of the CAEN and preparing corresponding report; 3.2. Conducting technical analysis of the methodologies and procedures for data collection, procedures for recording and storing data and accessibility of the collected data and preparing corresponding report; 3.3. Defining conceptual design of the optimum characteristics of the Integrated Information System and preparing corresponding report: - Conceptual design will include technical definition of the whole Integrated Information System (definition of type of functionality, type of data processing, data status, definition of technical procedures, type of data presentation and type of integration of data from a number of data sources as well as definition of necessary spatial and alphanumeric analysis that will include the geoinformation platform). 3.4. Preparing functional and technical specifications for development of specialized Croatian Seveso Atlas to be developed from spatial GIS components. 3.5. Developing Croatian Seveso Atlas that will cover the Croatian Seveso system in specific areas and will enable spatial analysis and appropriate visual interpretation of data (Croatian Seveso Atlas will form part of the CSIS); 3.6. Defining requirements for inclusion of the existing and/or planned spatial data for all types of data sources defined and preparing corresponding report; 3.7. Preparing and harmonizing data for integration into central unique related database, followed by database documentation; 3.8. Establishing central (related) database			

with the defined table of content, followed by database documentation; 3.9. Developing the web based application, performing quality control in order to determine accuracy of data and implementing the developed application into the central unique related database, performing corresponding testing procedure and preparing report on testing results; 3.10. Developing the web based GIS application, performing quality control in order to determine accuracy of data and implementing the developed GIS application into the central unique related database, including preparation of all necessary spatial datasets, performing corresponding testing procedure and preparing report on testing results; 3.11. Preparing and implementing technical workshops for at least 6 CAEN employees on the implemented IT solution with the purpose of dissemination of the technical materials and user documentation on the integration of the CSIS into the CEIS combined with implementation of SMS and MAPP procedures and GIS; 3.12. Integrating of REDS/RRMA, together with software for validation tools for SMS and MAPP and GIS into CSIS; 3.13. Preparing of relevant procedures and manuals for software and GIS. 4.1. Conducting Training Needs Analysis (TNA) and preparing TNA report with training program for CAEN, CA and other stakeholders; 4.2. Preparing materials for trainings and workshops based on the TNA report; 4.3. Conducting training and workshops on SMS and MAPP (in line with the European best practice regarding SMS and MAPP validation tools and in line with the			

EU guidelines for quantitative risk assessment) for at least 10 CAEN employees and at least 40 representatives of stakeholders (competent authorities, other relevant institutions and industry); 4.4. Conducting at least 3 on-the-spot visits to industry establishments (chosen during the project implementation according to their activities, capacities or type of emissions) with the purpose of adoption of practical knowledge about the data collected in the REDS/RRMA; 4.5. Conducting Trainings of Trainers (ToT) for at least 10 CAEN employees and at least 10 employees from the competent authorities (separately for CAEN and representatives of competent authorities) and producing trainings evaluation report with recommendations for further trainings of stakeholders; 4.6. Conducting at least 1 study visit in duration of 5 working days for at least 10 CAEN Croatian EPR experts to an MS institution relevant for valuating and reporting toward Seveso (including introduction to MS Seveso database) and producing corresponding report: - The main target of the study visit is to gain the practical applicable experience, from introducing and accessing to implementation of the system (including IT system) which will be successfully established, run and maintained in the real environment in Croatia; - In the course of the study visit, MS Seveso database will be presented to the participants and they will be introduced to relevant, fully operating databases, their design and structure with the purpose of achieving knowledge on the European best practice and best available techniques (BAT); The topics of the study visit will also include introduction to the software tools for SMS & MAPP and GIS.			

4.7. Conducting at least one 2-day conference that will include workshops by sector (activities) for representatives of stakeholders and industry. During the conference, at least one round table with competent authorities (MENP, NPRD, MCPP, all relevant inspections, Ministry of Health; Croatian Chamber of Economy (CCE); CAEN, industry representatives, others if needed)' will be organized; 4.8. Relevant procedures and manuals prepared (e.g. Seveso Manual, Manual for GIS, Manual for SMS and MAPP, Instructions for classifying of dangerous substances).			
			Preconditions: **N/A**

Annex 2. Detailed implementation chart

Chemicals and hazardous substances monitoring improvement and integration of Seveso database into Croatian Environmental Information System (CEIS) as the unique Central Seveso Information System (CRO SEVESO)	**2016**											**2017**												**2018**						
Month	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J
Twinning	T	T	T	T	C	C	C	C	C	A/I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	R	R	R

T – Call for proposals and evaluation
C – Contracting
A/I – Arrival of the RTA/ Start of the implementation of activities
I – Implementation of activities
R – Report

Annex 3. Contracting and disbursement schedule by quarter for full duration of programme (including disbursement period)

Chemicals and hazardous substances monitoring improvement and integration of Seveso database into Croatian Environmental Information System (CEIS) as the unique Central Seveso Information System (CRO SEVESO)	**Cumulative contracting schedule by quarters in EUR (provisional)**			
	2016			
	I	**II**	**III**	**IV**
Twinning				900.000,00
TOTAL (EUR):				**900.000,00**

Chemicals and hazardous substances monitoring improvement and integration of Seveso database into Croatian Environmental Information System (CEIS) as the unique Central Seveso Information System (CRO SEVESO)									
	2016	**2017**				**2018**			
	IV	**I**	**II**	**III**	**IV**	**I**	**II**	**III**
Twinning	585.365,85			224.634,15				90.000,00
TOTAL (EUR):	**585.365,85**			**810.000,00**				**900.000,00**

Annex 4. List of reporting obligations of the Republic of Croatia according to the relevant EU Directives

Reporting obligation	Legislative instrument	Report to:
Control of major-accident hazards report (3-years report)	Council Directive 96/82/EC of 9 December 1996 on the Control of Major-Accident Hazards Involving Dangerous Substances	DG ENV (EC)
Reporting of data according Council Directive 96/82/EC of 9 December 1996 on the Control of Major-Accident Hazards Involving Dangerous Substances to the EC/Joint Research Centre (JRC), e-SPIRS (Seveso Plants Information Retrieval System) from REDS	Council Directive 96/82/EC of 9 December 1996 on the Control of Major-Accident Hazards Involving Dangerous Substances	JRC (EC)
Reporting of data according Council Directive 96/82/EC of 9 December 1996 on the Control of Major-Accident Hazards Involving Dangerous Substances to the EC/Joint Research Centre (JRC), e-MARS (Major Accidents Retrieving System) from RRMA	Council Directive 96/82/EC of 9 December 1996 on the Control of Major-Accident Hazards Involving Dangerous Substances	JRC (EC)
Yearly Report on data from REDS	Ordinance on the Register of Installations in Which Dangerous Substances are Present and the Register of Reported Major Accidents (OG 113/08)	National

Annex 5. List of abbreviations (in alphabetical order)

BAT - Best Available Techniques

CA - Competent authorities

CAEN - Croatian Agency for the Environment and Nature

CCE - Croatian Chamber of Economy

CEA - former Croatian Environmental Agency

CEIS - Croatian Environmental Information System

CSIS - Central SEVESO Information System

CRO SEVESO - the unique Central SEVESO Information System

EEA - European Environment Agency

EIONET - European Environment Information and Observation Network

EIS - Environmental Information System

EPR - Environmental Pollution Register

EU - European Union

GEMET - General European Environmental Multilingual Thesaurus

GIS - Geographic Information System

IPPC - Integrated Pollution Prevention and Control

MAPP - Major Accident Prevention Policy

MCPP - The Ministry of Construction and Physical Planning

MENP - Ministry of Environmental and Nature Protection

MS - Member State

NIR - National Inventory Report

PIU - Project Implementation Unit

NPRD - National Protection and Rescue Directorate

PRTR - Pollutant Release and Transfer Register

REDS/RRMA - database Register of Establishment in which Dangerous Substances are Present and the Register of Reported Major Accidents

RIDS/RRMA - former database Registry of Installations in which Dangerous Substances are Present and the Register of Reported Major Accidents

ROD - Reporting Obligations Database

SEIS - Shared Environmental Information System

SIMD - Sector Impact Monitoring Department

SMS - Safety Management System

TNA - Training Needs Analysis