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# Environment and Climate Regional Accession Network (ECRAN)

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Workshop Report  
Capacity Building on the  
Integrated Risk  
Assessment Method  
IRAM/easy Tools

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06 -07 October 2015, Zagreb

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**ENVIRONMENT AND CLIMATE REGIONAL NETWORK FOR ACCESSION - ECRAN**

**WORKSHOP REPORT**

**Activity 1.2.3**

**CAPACITY BUILDING ON THE INTEGRATED RISK ASSESSMENT METHOD  
(IRAM)/EASY TOOLS**

**06 – 07 October 2015, Zagreb, Croatia**



This Project is funded by the  
European Union



A project implemented by  
Human Dynamics Consortium

LIST OF ABBREVIATIONS	
BAT	Best Available Techniques
CLP	Classification, Labelling and Packaging
EC	European Commission
EMAS	Eco-Management and Audit Scheme
EPA	Environmental Protection Act
EU	European Union
IC	Impact Criteria
IED	Industrial Emissions Directive
IMPEL	The European Union Network for the Implementation and Enforcement of Environmental Law
IPPC	Integrated Pollution Prevention and Control
IRAM	Integrated Risk Assessment Method
MENP	Ministry for Environmental and Nature Protection
ODS	Ozone Depleting Substances
OPC	Operator Performance Criteria
REACH	Registration, Evaluation, Authorisation and Restrictions of Chemicals
RMCEI	Recommendation for Minimum Criteria for Environmental Inspections
TFS	Transfrontier Shipment of Waste



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## I. Background/Rationale

Within the RENA programme, the objective of the ECENA Working Group on Environmental Compliance and Enforcement was to improve the ability of RENA member countries to implement and enforce the EU environmental and climate acquis by increasing the effectiveness of inspecting bodies and promoting compliance with environmental requirements.

The activities for the period 2010-2013 were based on a Multi Annual Work Plan, covering the following areas:

- Training and exchange,
- Institutional and methodological development,
- Cross border enforcement.

The activities planned under ECRAN in this area will build on the results achieved under RENA. Since the work of inspectors and permit writers has to be more coordinated and connected to other activities within the environmental protection area, it has been decided that ECENA under ECRAN should be of cross cutting nature. This is particularly important as the work of ECENA is dealing with both implementation and enforcement of the EU acquis. Cooperation with policy makers and law drafters has to be strengthened in order to enable developing better implementable legislation.

The work plan covers the full period of ECRAN (i.e. October 2013 – October 2016). Under this ECENA work plan, the following specific activities have been decided to be implemented:

- 1.2.1 Capacity building on compliance with environmental legislation;
- 1.2.2 External country assessments;
- 1.2.3 Methodological development - application of IRAM/easy Tools;
- 1.2.4 Compliance with REACH/CLP Regulations;
- 1.2.5 Trans frontier Shipment of Waste (TFS);
- 1.2.6 Inspection and enforcement in other policy areas;
- 1.2.7 Inspector's participation in networking activities.

The beneficiaries are the Ministries of Environment of the beneficiary countries (Albania, Bosnia and Herzegovina, Croatia, the former Yugoslav Republic of Macedonia, Kosovo\*<sup>1</sup>, Montenegro, Serbia and Turkey). In addition the other ministries and other bodies and institutions will need to be actively engaged in so far as their work is relevant for the scope of ECRAN.

The overall objective of ECRAN is to strengthen regional cooperation between the EU candidate countries and potential candidates in the fields of environment and climate action and to assist them on their way towards the transposition and implementation of the EU environmental and climate policies, political targets and instruments which is a key precondition for EU accession.

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<sup>1</sup> This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ opinion on the Kosovo declaration of independence.



### ***Activity 1.2.1 Capacity building on the Integrated Risk Assessment Method (IRAM)/easy Tools***

Within IMPEL various tools have been developed for inspection purposes. Pursuant to the Recommendation providing for minimum criteria for environmental inspections (RMCEI), the Industrial Emission Directive (IED) and the Directive on the control of major-accident hazards involving dangerous substances (SEVESO) all inspections should be planned in advance. The competent authority must draw up inspection plans and programs for installations and establishments, including the frequency of site visits. These frequencies should be based on a systematic risk appraisal.

Under the name 'easy Tools' a project team, led by Germany, collected information on the risk assessments that are used across Europe. Based on this information a new rule based methodology was developed and tested, called Integrated Risk Assessment Method (IRAM).

The methodology is based on the following principles:

1. The inspection frequency is determined by value of the highest score;
2. The inspection frequency is reduced by one step, if the set minimum number of highest scores (called "the Rule") is not met;
3. The inspection frequency can be changed by only one step up or down based on operator performance;
4. The higher the sum of scores, the longer the inspection time.

Besides the methodology the project also developed a new web based tool (IRAM tool) that can be accessed by the IMPEL website ([www.impel.eu](http://www.impel.eu)). To disseminate this useful methodology, up to 2 regional trainings have planned to be organised for all ECRAN beneficiary countries at a general level. The first regional training course has been given in Ankara on 15-16 October 2014. The present workshop is the second in the series.

Chapter 2 describes the background and objectives of activity 1.2.3 with the 2<sup>nd</sup> Multi-country Workshop Capacity Building on the Integrated Risk Assessment Method (IRAM)/easy Tools.

Chapter 3 describes the EU policy and legislation covered by the training;

Chapter 4 presents the workshop proceedings and Chapter 5 presents the evaluation. Furthermore the following Annexes are attached:

\_ Annex I: the agenda;

\_ Annex II: List of participants;

\_ Annex III: Power point presentations (downloadable under separate cover):

<http://www.ecranetwork.org/ECENA>



## II. Objectives of the training

### *General objective*

Increasing the effectiveness of inspection bodies and promoting compliance with environmental requirements

### *Specific objectives*

Increased capacity in SEE in the field of planning of inspections with specific reference to the use of the IRAM/Easy Tools methodology.

### *Target group*

The target institutions and beneficiaries are the environmental inspectors and permit writers of the Ministries of Environment in Albania, Bosnia and Herzegovina, Croatia, the Former Yugoslav Republic of Macedonia, Kosovo\*, Montenegro, Serbia and Turkey

### *Expected results*

The following results are expected for this activity

- improved functioning of environmental inspection and enforcement organizations;
- streamlined working methods and implementation of best practice in the region moving towards EU standards.



### III. EU policy and legislation covered by the training

The training covered mainly the RMCEI, IED Directive and SEVESO Directive, concentrating on the inspection planning requirements.

**RMCEI** (<http://ec.europa.eu/environment/legal/law/inspections.htm>)

In 2001, recognising that there was a wide disparity between inspection systems in the Member States, the European Parliament and the Council adopted Recommendation 2001/331/EC providing for minimum criteria for environmental inspections in the Member States (RMCEI).

The RMCEI contains non-binding criteria for the planning, carrying out, following up and reporting on environmental inspections. Its objective is to strengthen compliance with EU environment law and to contribute to its more consistent implementation and enforcement in all Member States.

The content of the RMCEI has strongly influenced provisions on environmental inspections in sectoral pieces of environment and climate change legislation. The European Union Network for the Implementation and Enforcement of Environment Law (IMPEL) played an important role in the preparation of the RMCEI and through its activities has also played an important role in its implementation.

**IED Ref 1.**<sup>2</sup>

The Industrial Emission Directive (2010/75/EU), which came into force in January 2011, contains binding requirements for environmental inspections. An essential part of article 23 of the IED is the assessment of environmental risks. "The period between two site visits shall be based on a systematic appraisal of the environmental risks of the installations concerned and shall not exceed 1 year for installations posing the highest risks and 3 years for installations posing the lowest risks."

The systematic appraisal of the environmental risks shall be based on at least the following criteria:

- a) the potential and actual impacts of the installations concerned on human health and the environment taking into account the levels and types of emissions, the sensitivity of the local environment and the risk of accidents;
- b) the record of compliance with permit conditions;
- c) participation in the Union eco-management and audit scheme (EMAS).

**SEVESO (ref 2)**<sup>3</sup>

In article 20.3 of the SEVESO III Directive (2012/18/EU) it is stated that member States shall ensure that all establishments are covered by an inspection plan at national, regional or local level and shall ensure that this plan is regularly reviewed and, where appropriate, updated.

Each inspection plan shall include the following:

- (a) a general assessment of relevant safety issues;
- (b) the geographical area covered by the inspection plan;

<sup>2</sup> REF 1) IED: [http://europa.eu/legislation\\_summaries/environment/soil\\_protection/ev0027\\_en.htm](http://europa.eu/legislation_summaries/environment/soil_protection/ev0027_en.htm)

<sup>3</sup> REF 2): SEVESO <http://ec.europa.eu/environment/seveso/>





- (c) a list of the establishments covered by the plan;
- (d) a list of groups of establishments with possible domino effects pursuant to Article 9;
- (e) a list of establishments where particular external risks or hazard sources could increase the risk or consequences of a major accident;
- (f) procedures for routine inspections, including the programmes for such inspections pursuant to paragraph 4;
- (g) procedures for non-routine inspections pursuant to paragraph 6;
- (h) provisions on the co-operation between different inspection authorities.

Based on the inspection plans referred to in paragraph 3, the competent authority shall regularly draw up programmes for routine inspections for all establishments including the frequency of site visits for different types of establishments. The period between two consecutive site visits shall not exceed one year for upper-tier establishments and three years for lower- tier establishments, unless the competent authority has drawn up an inspection programme based on a systematic appraisal of major-accident hazards of the establishments concerned. The systematic appraisal of the hazards of the establishments concerned shall be based on at least the following criteria:

- the potential impacts of the establishments concerned on human health and the environment;
- the record of compliance with the requirements of this Directive.



#### IV. Highlights from the training workshop

Reference is made to Annex I for the agenda and Annex III for the presentations.

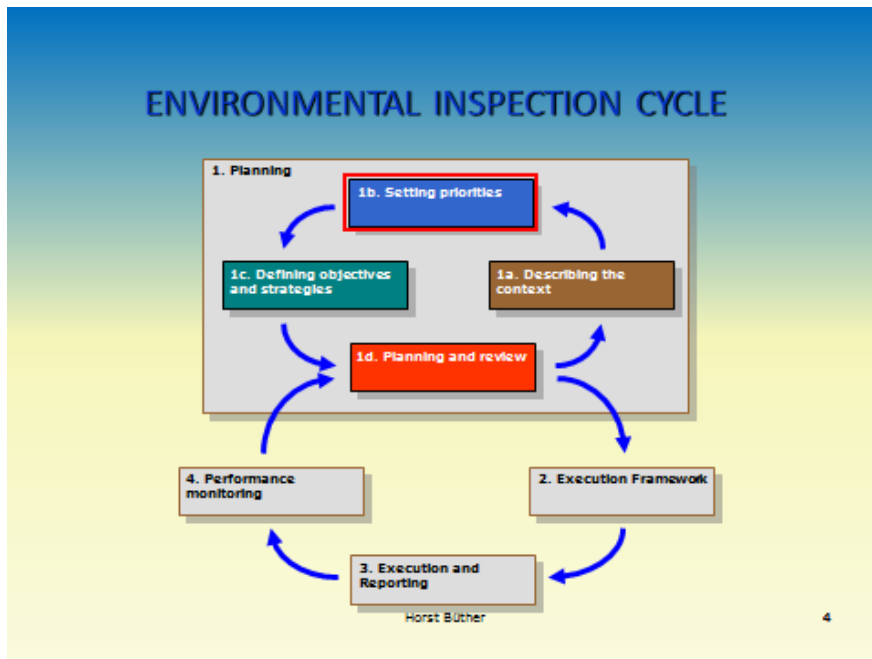
##### *Day 1 – Panorama Zagreb Hotel, Zagreb, 6 October*

1. A welcome was given by Ms. Jelena Manenica on behalf of Ms. Anita Patekar of the Inspection Directorate, Ministry of the Environment and Nature Protection in Croatia. Ms. Patekar is the national coordinator for ECENA/ECRAN. It was mentioned that the Ministry and Inspection Directorate have taken an active role in the ECRAN programme 2013 -2016, not only as participants but also as experts. Inspections should be planned in advance as stated in a number of Directives and Regulations. The IRAM tool as a useful tool for the latter purpose, is in a testing process in Croatia. The Republic of Croatia joined the EU on July, 1, 2013 and sharing of expert knowledge and experience with all ECRAN/ECENA countries is considered of utmost importance. Thanks were given to the experts preparing the workshop and it was strongly recommended that a continuous effort should be made by the participants and the beneficiary countries to have an ECRAN multi-annual programme that meet the countries' specific needs.
2. The workshop was chaired by Mr. Horst Buether (IMPEL expert IRAM/Easy Tools) and Mr. Ike van der Putte (ECRAN ECENA coordinator) starting with a short welcoming and introduction on ECRAN and the ECENA Programme. The information on ECRAN and ECENA has been given including a project summary, results achieved and to be achieved, structures and planned activities. The trainers and IRAM/Easy tools experts, Mr. Vladimir Kaiser and Mr. Florin Homorean were introduced.
3. An introductory round was held among the participants with the question on the years of experience as inspectors, permit writers and policymakers/other fields. The results showed that most of participants have extensive knowledge and experience in inspection and permit writing. There were no representatives from Albania, all other beneficiary countries were represented. Only two representatives participated in the first IRAM training course in Turkey, the majority participated for the first time. Macedonia and Turkey have implemented IRAM already at a basic level.

	Years of experience		
	<i>1 – 5 years</i>	<i>5 – 10 years</i>	<i>More than 10 years</i>
<b>Inspectors</b>	3	9	15
<b>Permit writers</b>	1	2	2
<b>Policy makers/others</b>			

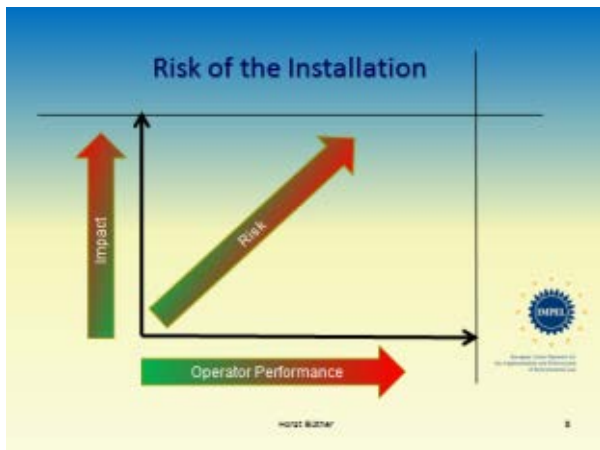
4. *Development of IRAM.* Mr. Horst Buether started with a presentation on the development of IRAM. Starting from a historical overview and the defined inspection cycle elements the Easy Tools project was initiated to develop a web based risk assessment tool for inspections like those required for IPPC (IED), Seveso, waste, waste water, genetic engineering, agriculture and so on.





The first 4 steps of the Environmental Inspection Cycle form the Planning Cycle. The output of the Planning Cycle is the inspection plan. In order to write the inspection plan the inspecting authority first has to identify the relevant activities that should be covered by the inspection plan and gather information on these activities. With this information the inspecting authority can perform an assessment of the risks of the identified activities and assign priorities to these activities with the help of IRAM .

In the developed method the risk of an installation is considered as a function of the (actual and potential) impact and of the operator performance.



### Appraisal of Risk

How is risk defined?

$$\text{Risk} = \text{Impact} \times \text{Probability}$$

Risk in inspection planning:

- **Impact**
  - ▶ Appraisal with impact criteria
- **Probability**
  - ▶ Appraisal with operator performance criteria

The slide includes the 'easyTools' logo and the 'IMPEI' logo (European Union Network for the Implementation and Enforcement of Environmental Law). The name 'Horst Buther' is visible at the bottom.

The various Impact and Operator performance criteria could refer to:

#### Potential impacts

- Kind and type of installation
- Risk of accidents
- Handling and storage of waste



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### Actual impacts

- Levels and types of emissions: air, water, soil
- Sensitivity of the local environment
- Incidents and accidents

### Operator performance

- Compliance with permit conditions
- Attitude of the operator
- Environmental management system (EMAS)

The methodology is able to lead to an Impact steered inspection frequency

- negligible ▶ no routine inspection
- minor ▶ every 5 years
- moderate ▶ every 4 years
- relevant ▶ every 3 years
- important ▶ every 2 years
- serious ▶ every year

Other essential elements are the scoring for impacts, weighting and IRAM principles and rules.

### IRAM principles/rules

- The inspection frequency is determined by the highest impact score
- The inspection frequency is reduced by one step, if the set number of highest scores is not met (the Rule)
- The inspection frequency can be changed by one step up or down based on operator performance
- The more criteria are scored high, the more inspection effort is needed

The IRAM rules were implemented into a web based programme for risk assessment in inspection planning

The programme distinguishes between:

Coordinator ---▶ decides on inspection task, criteria, and steering terms and factors  
Inspector -----▶ does the risk assessment

Assessment data storage in the internet

The assessment data can also be downloaded as XML- or CSV-files and imported into national data bases (Access and Excel)

Address of the programme:


<https://www.fms.nrw.de/lip/authenticate.do>

A special guidance book for IRAM/Easy tools can be found at


[http://impel.eu/wp-content/uploads/2012/09/easyTools\\_Guidance-Book\\_-2012-06-2.pdf](http://impel.eu/wp-content/uploads/2012/09/easyTools_Guidance-Book_-2012-06-2.pdf)



## Guidance book




- Introduction in Risk Assessment
- Integrated Risk Assessment Method (IRAM)
- Manual of the online IRAM tool
- Examples of impact and probability criteria




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## Utilisation of IRAM



IRAM is (considered to be) used by Inspection Authorities of

- Austria, Belgium, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Iceland, Italy, The Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Turkey and RENA member countries.



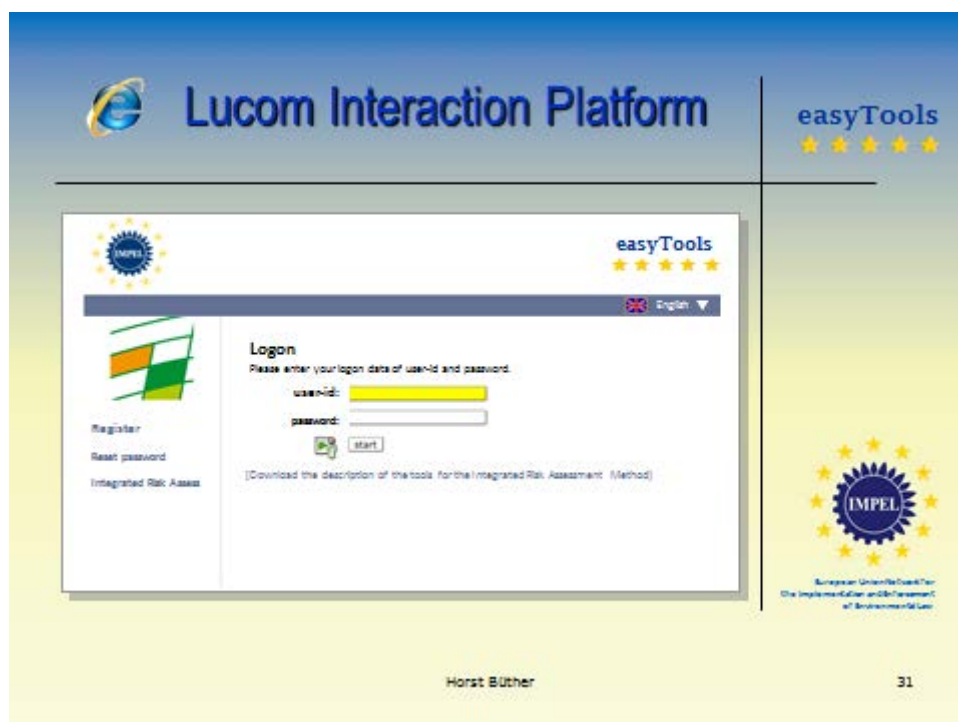
Horst Bütler 40

4. *How to register.* Mr. Vladimir Kaiser gave an introduction with instructions on how to register into IRAM. A number of 7 steps are needed. It was noted that IRAM has been translated in various languages.





5. *Exercises:* risk assessment with the web application. The participants could individually do the exercises guided by the Mr. Horst Buether, Mr. Vladimir Kaiser and Mr. Florin Homorean. All elements were covered from registration in the web app, logon, change of passwords and assignment to a coordinator and assignment to an inspector, creation of risk assessment forms, copying risk assessment forms from other coordinators and doing the risk assessments with their created risk assessment forms.



The basis of the exercises on day 1 and day 2 were 3 examples in RA in which descriptions of the companies are given with the various impacts:

- Risk assessment of an IED installation with IRAM web app – Aluminium factory producing aluminium.



- Risk assessment of a SEVESO establishment with IRAM web app – Chemical plant producing fertilizers.
  - Risk assessment of a non IED installation with the IRAM web app – Textile factory producing threads and technical textiles.
6. *Duties of an IRAM coordinator.* Mr. Florin Homerean presented the duties of a coordinator. The IRAM tool can be used in different languages (EN, CZ, DE, FR, HR, PT, SV). The inspection coordinators in the Member Countries need to be assisted and instructed to work with the IRAM tool. Several Presentations & Training Sessions were provided: North-Rhine Westphalia (DE), Lombardia (IT), Austria, Portugal, Iceland, Croatia & Turkey. The IRAM coordinator is nominated by the inspection authority.

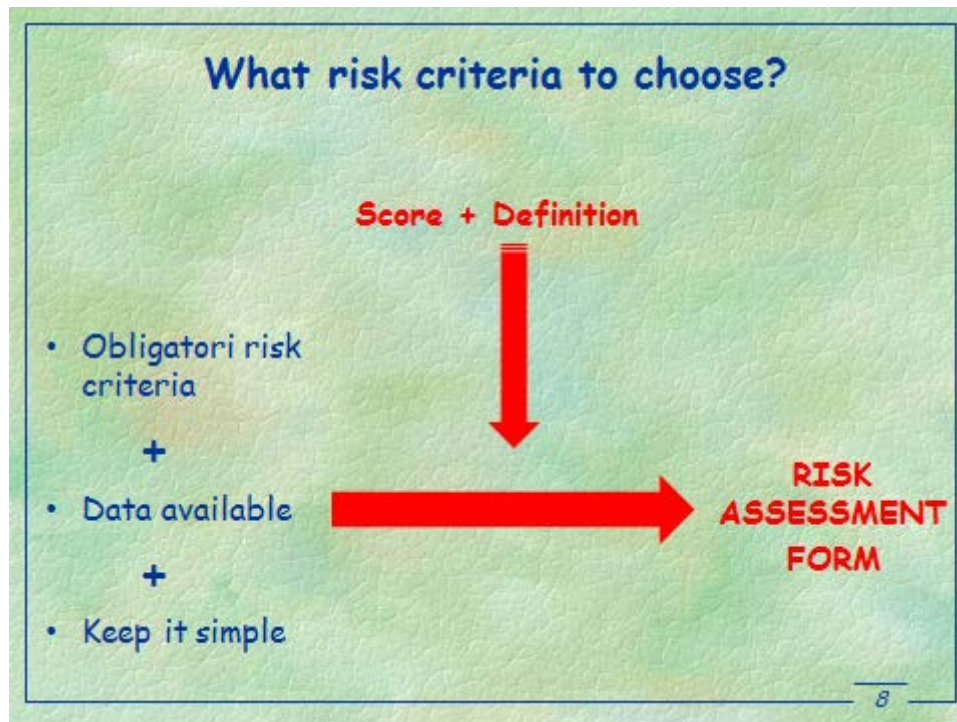
The IRAM coordinator puts the inspectors under his coordination in the user administration of the tool. The IRAM coordinator can create, copy/modify or delete forms for the inspection tasks of his administration. The IRAM coordinator is responsible for the choice of criteria, the graduation of scores and the setting of steering values.

He/she is responsible for validation of risk assessments forms filled in by its inspectors (has the right to modify the scores of RC)

The IRAM coordinator can create an Inspection programme by ranking of Template fulfilled by inspectors under his coordination; the ranking could be downloaded in MS Excel format.

7. *Development of a risk assessment form.* Mr. Vladimir Kaiser in his presentation explained the differentiation between Impact Criteria (IC) and Operator Performance Criteria (OPC). Besides risk assessment method itself (like IRAM) choosing the right set of risk criteria is essential for achieving good risk assessment results. In development of risk assessment forms it is to be emphasized that there are obligatory criteria according to RMCEI (environmental risks), SEVESO (the potential impacts on human health and the environment and the record of compliance with the requirements of this Directive). Obligatory criteria according to IED are:
- levels and types of emissions (water, air, soil, noise,...);
  - the sensitivity of the local environment;
  - the risk of accidents;
  - the record of compliance with permit conditions;
  - the participation of the operator in the Union eco-management and audit scheme (EMAS).





8. *Experiences in Croatia in the creation of inspection programs.* Mr. Ivan Pušić, senior environmental protection inspector, Croatia and Ms .Jelena Manenica, senior environmental protection inspector, Croatia, presented the experiences in Croatia in creating inspection programmes. The following subjects were handled:

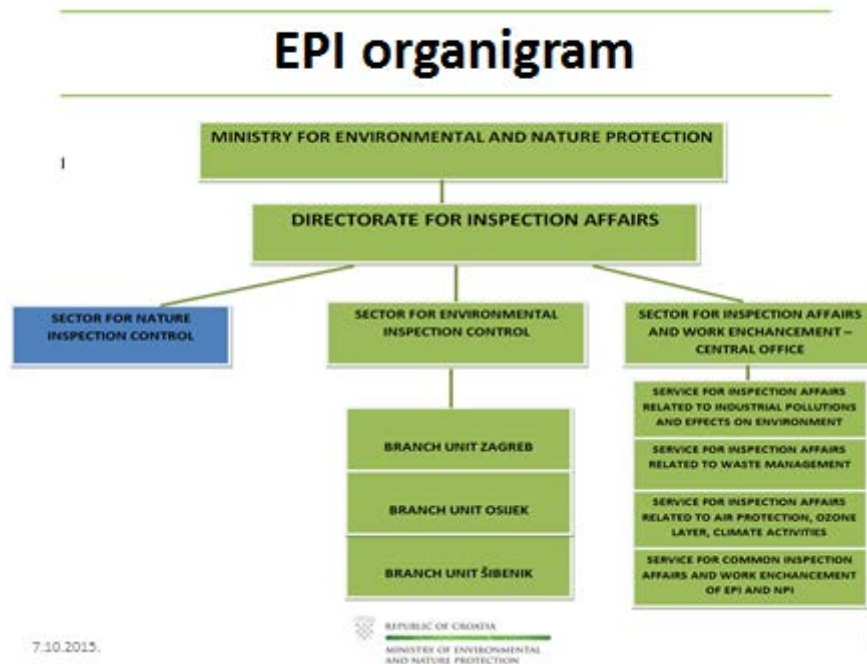
- Environmental Protection Inspection (EPI);
- Legal base – IED;
- Coordinated inspections in Croatia;
- Current practice - inspection planning.
- Outputs of TWL IPA 2011 Project „Capacity building of the environmental inspection and other relevant authorities and institutions for preventing, recognizing, investigating and prosecuting offences against environment”

*The EPI:* the Ministry for Environmental and Nature Protection (MENP) – is the central authority for implementing environmental management and protection policy in Croatia (coordinating role). A number of 75 inspectors are operating through the Central Office in Zagreb (Coordinator for IRAM) and 20 Offices organized in 3 Branch Unit .

EPI competences include: control of EP conditions, EIA, air emissions and air quality, waste management, environmental accidents, sea water quality, TFS, SEVESO, ODS, light protection, remediation of environmental damage, etc.







*The legal base:* the various directives, acts, regulations and articles generally apply:

- Directive 2010/75/EU of the European Parliament and the Council on industrial emissions (the Industrial Emissions Directive or IED) from 24 November 2010 for the first time introduce obligatory provisions related to „system of environmental inspections of installations” - Art. 23;
- IED is mostly transposed in Croatia Environmental Protection Act (EPA) (Official Gazette 80/13, 78/15) and Regulation on environmental permit (Official Gazette 8/14);
- Legal basis for coordinated inspection according to Art. 224 (3) of EPA;
- Legal basis for inspection planning according to Art. 227 of EPA.

The legal base of specific relevance for inspection programmes are IED Art. 23 - point 3 and 4:

Point 3: Each environmental inspection plan shall include the following:

- a general assessment of relevant significant environmental issues;
- the geographical area covered by the inspection plan;
- a register of the installations covered by the plan;
- procedures for drawing up programmes for routine environmental inspections pursuant to paragraph 4;
- procedures for non-routine environmental inspections pursuant to paragraph 5;
- where necessary, provisions on the cooperation between different inspection authorities.

Point 4: Based on the inspection plans, the competent authority shall regularly draw up programmes for routine environmental inspections, including the frequency of site visits for different types of installations.



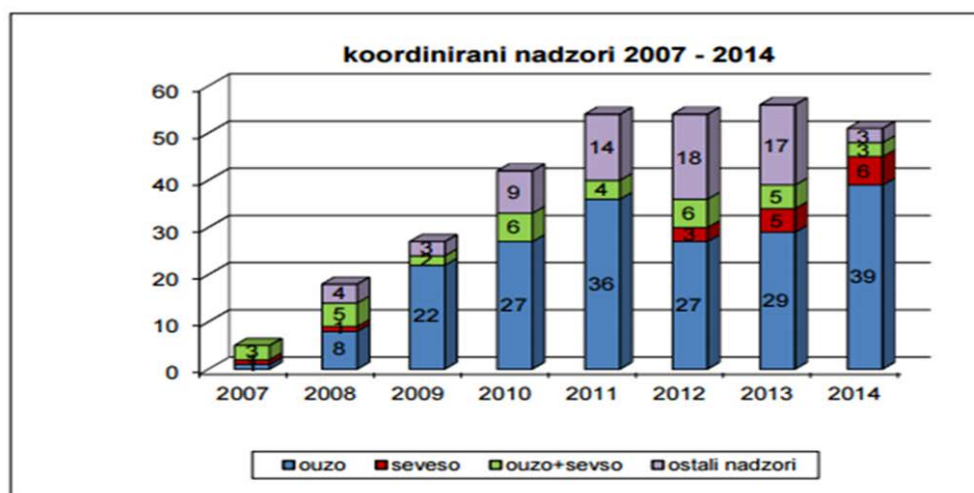
The period between two site visits shall be based on a systematic appraisal of the environmental risks of the installations concerned and shall not exceed 1 year for installations posing the highest risks and 3 years for installations posing the lowest risks.

If an inspection has identified an important case of non-compliance with the permit conditions, an additional site visit shall be carried out within 6 months of that inspection.

Coordinated inspections.

Coordinated inspections are being carried out since 2007 according to Agreement on cooperation between inspection services – installations with significant environmental impact (Annex I IED, SEVESO, both IED & SEVESO, others).

A Manual for inspection control of IPPC installations - Phare 2005 project Enhancement of environmental protection inspection for enforcement of new environmental legislation – has been developed



*Inspection planning.* The system of inspection planning in Croatia was explained. The use of IRAM has recently been introduced (2014) with the defined Impact Criteria (IC) and Operator Performance Criteria (OPC). The Risk Category – intervals are 1, 2 or 3 years (legal base Art. 227 (4) EPA).

In the inspection planning, approval is required from other line inspections.



## Inspection planning 3—other Inspections

- **Data and proposals from other line inspections** → **FINAL APPROVAL**



Some examples of inspection planning were given.

*Outputs of TWL IPA 2011 Project.* Among the various outputs a number of guidelines have been produced:

- Guideline for inspection plans;
- Guideline for inspection programs for coordinated inspections;
- Guideline for the “content of inspection” (scope of inspection and questionnaire for inspectors, including the correct procedure in the application of BAT-conclusions);
- Guideline for relevant information from line-inspectors for the “consolidated report”;
- Guideline for the “consolidated report” ;
- Guideline for the “information on performed inspection” that is to be published .

Day one was finalized with a start of the exercise on creation of risk assessment forms.

### *Day 2 – Panorama Zagreb Hotel, Zagreb, 7 October*



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1. *Practical exercises.* Day 2 was fully allocated to the continuation of the practical exercises.

Attention was paid on how to be a coordinator, with instructions, exercises and the creation of templates with risk criteria for the country. Here it should be noted that as a coordinator you can create the templates for inspectors in the IRAM system.

An explanation was given on how to use the templates by national inspection authorities.

The participants were divided into 5 groups, with each group defining risk criteria for a selected case in their country (landfill, IED/IPPC installation). For this purpose it is of importance to consider the data that are available, the environmental problems, political interest and goals.

2. *Experiences in Croatia in creating Risk Assessment Forms.* Ms. Dubravka Pajkin Tučkar, Senior Environmental Inspector of the Ministry of Environment and Nature Protection and National IRAM Method coordinator in Croatia described the experiences in Croatia with IRAM with specific reference to the creation of risk assessment forms.

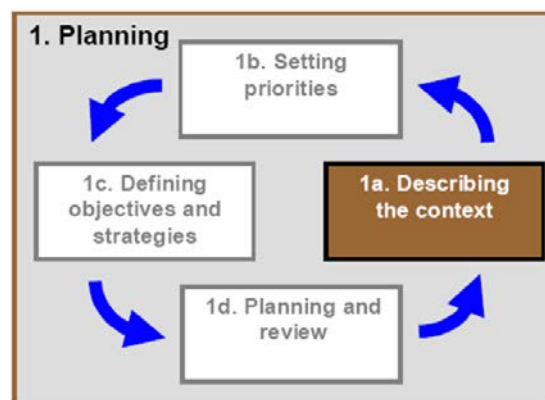
In 2010 – 2012 the easyTools Project: Risk assessment in inspection planning was carried out. The main objective of the project was to develop an easy and flexible risk assessment tool as part of the planning of environmental inspections. Linked to European environmental law (IED and SEVESO) and the RMCEI a new rule based methodology was developed and tested, called Integrated Risk Assessment Method (IRAM).

Croatia was participating in the Project.

At the final annual meeting – W 4 – ECENA, 2013, Croatia appointed the national coordinator for IRAM Method. The question arised on how to implement IRAM and start the whole process and also on how to build up the system.

For this purpose a start was made by considering the basic principles of the Environmental Inspection Cycle – step 1: Planning

- 1a. Describing the context
- 1b. Setting priorities
- 1c. Defining objectives and strategies
- 1d. Planning and review



### 1a. Describing the context

Input data were: legal obligations to inspect, permit situation, register of activities and installations for which the inspecting authority is competent to (numbers and geographical distribution of installations), information about companies and installations that fall under the competence of the authority, relevant legislation and regulations, compliance behaviour, the inspection resources (financial and human) that are available for the inspecting authority. Specific information included:

- Data base of installations (IED) in EPA (AZO);
- Data base of issued permits (IED) in MENP (MZOIP);
- Geographical area: Republic of Croatia with
  - 178 IED installation
  - 25 SEVESO upper tier installation /30 lower tier installation
  - 267 waste management operators

### 1b. Setting priorities

Croatia's approach and experiences in creating risk assessment forms.

Croatia used experience of the neighbouring country-Slovenia through ECRAN and IMPEL meetings

Participation in these networks was of the great benefit for Croatia

The advantage was that:

- there is no language barrier
- there are no significant differences between type and number of IED installation and other installations /operators

For setting priorities Impact criteria (IC) in Risk Assessment Forms were developed with reference to:

- Emissions into the air;
- Amount of hazardous and non-hazardous waste;
- Risk of accidents due to hazardous substances;
- Compliance with Permit conditions;
- Emissions to the water;
- Noise emissions;
- Impact on human health and environment;
- Distance to sensitive areas or objects.

Furthermore Operator Performance Criteria were developed with reference to:

- Environmental management system ISO 14001
- Willingness of the operator to follow the rules

The National coordinator for implementation of IRAM formed working groups of 5 inspectors and performed training in the IRAM web application and started to develop a set of risk criteria that are relevant for Croatian installations/operators (one can use and copy the Template from IRAM but this is not always applicable).



An open discussion in developing impact criteria (IC) for IED installation and (IC) for operators in the waste management sector was held.

The Criteria for SEVESO (IC) are presently being formalized.

In the annual meeting for environmental inspectors in 2014, information about the obligation of using the risk assessment tool (IRAM) was forwarded to all inspectors.

The national coordinator provides registration of all inspectors in the system and provides detailed instructions in using IRAM.

There is an obligation for each inspector to report on IRAM evaluations through a consolidated Report.

This is performed in good cooperation between inspectors and the coordinator.

The results for planning and execution are depicted in the following figures:

### Planning cyclic proces

#### 1d. Planning and execution

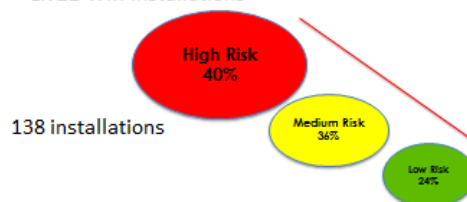
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**Planned actions & Actions in 2015. (138 operators evaluated in IRAM)**

138 operators/ total	IED 65	%	WMI 73	%
HR/12m	28	43%	27	38%
MR/24m	25	39%	24	32%
LR/36m	12	17%	22	30%

- IED installation
- WMI-waste management installations (hazardous waste, recycling)

### Planning cyclic proces

Outcome RA: HR 28 IED instalations  
 MR 25 IED instalations  
 LR 12 IED instalations  
 HR 27 WM installations  
 MR 24 WM installations  
 LR 22 WM installations



The presentation was finalised with the planned actions for the coming years:

2015 and 2016

- coordinated inspection controls of all IED, SEVESO and waste management installation (WMI) to collect information and assess the risk in IRAM easy tools

2017

- adequate enforcement actions on all High Risk sites (HR) with low level of compliance sites, especially the ones with high risk classification (HR) in order to reduce the non-compliances

inspection of all high risk sites (HR)

2018

- follow-up inspections in order to check whether the measures were implemented and if compliance has improved (in case of HR and low compliance sites) and inspection of the MR

3. *Minimum inspection programme.* Mr. Vladimir Kaiser discussed the approach on how to set up an inspection programme for different inspection tasks when you do not have enough inspectors. The annual programme can be separated into two parts:

- The part that should not be changed. It consist of OBLIGATORY INSPECTIONS (IED, SEVESO, etc.). One must have enough inspectors to execute that part of the programme.
- Adjustable part of a plan – NON OBLIGATORY INSPECTIONS (non IED, petrol stations, etc.). That part of programme should be adjusted according to available human resources.

An adjusted programme was described with examples of calculations for which the approach is:

Separate obligatory inspections from non-obligatory inspections. Do not change the programme regarding obligatory inspections.

1. Arrange non obligatory inspections according to category and last date of inspection.
2. For non-obligatory inspections decide what part of each category will be inspected next year (50% of 1, 30% of 2, 20 % of 3).
3. Calculate a number of non-obligatory inspections for each category.
4. Choose non-obligatory inspections according to the calculation and produce a list of non-obligatory inspection.

A recommendation was made on which non-obligatory inspections are to be added in an adjusted programme. The following rules are recommended to apply:

- First take installations that have not been inspected yet.
  - Next take installations with oldest date of last inspection.
  - At the end take installations with the latest date of the last inspection.
4. *Closure.* In the closing session Mr. Ike van der Putte and Mr. Horst Buether thanked the presenters for their contribution and the participants for their active participation in the course and especially in the case studies. Interest within the beneficiary countries to implement the IRAM system has



clearly been expressed. Via ECRAN and TAIEX, Kosovo\* has asked for assistance in national implementation. A national course will be organised on 12-13 November 2015. Serbia has announced that a request for a national course will soon be submitted. Turkey and the Former Yugoslav Republic of Macedonia already implemented the system. Interest of the other countries was already expressed in the first training course. Considering the implementation time of ECRAN (until October 2016), an active attitude regarding this subject was recommended.





## V. Evaluation

The following summary of the training evaluation report, developed on the basis of analysis of the training questionnaires can be given. A number of 28 out of 35 participants filled the evaluation form. It shows that the expectations of the workshop were met.

All trainees indicated that their expectations for the workshop were met. The trainees indicated that the training was of a high quality and fit for its purpose. The excellent preparation (hand-outs) and knowledge of the trainers were appreciated. Representatives from Serbia also expressed their wish to have a national training on implementation of IRAM.

### Statistical information

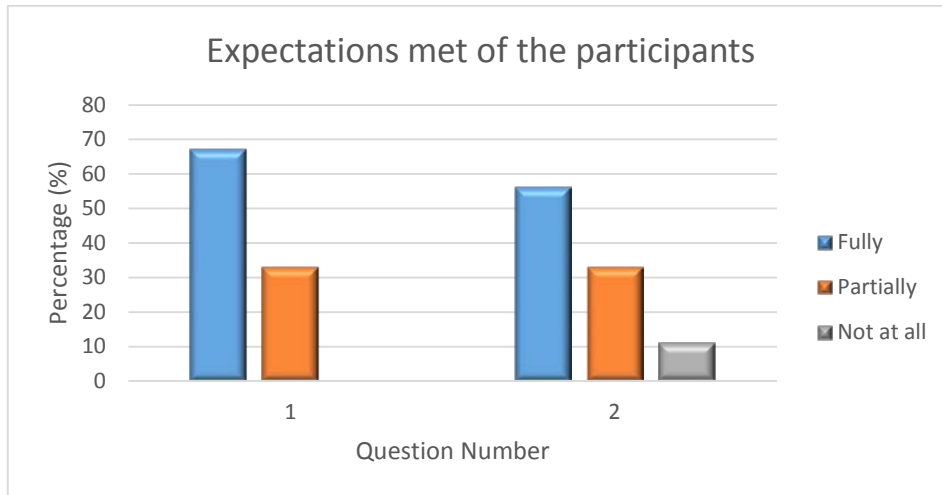
1.1	Workshop Session	Capacity Building Workshop on the Integrated Risk Assessment Method/Easy Tools 06-07 October 2015, Zagreb, Croatia
1.2	Facilitators name	As per agenda
1.3	Name and Surname of Participants (evaluators) optional	As per participants' list

### Your Expectations

Please indicate to what extent specific expectations were met, or not met:

My Expectations	My expectations were met		
	Fully	Partially	Not at all
1. Improved functioning of environmental inspection and enforcement organizations	■■■■ ■■■■ ■■■■ ■■■■ ■■■■ ■ (93%)	■■ (7%)	
2. Streamlined working methods and implementation of best practice in the region moving towards EU standards	■■■■ ■■■■ ■■■■ ■■■■ ■■■■ ■■■■ (89%)	■■■ (11%)	





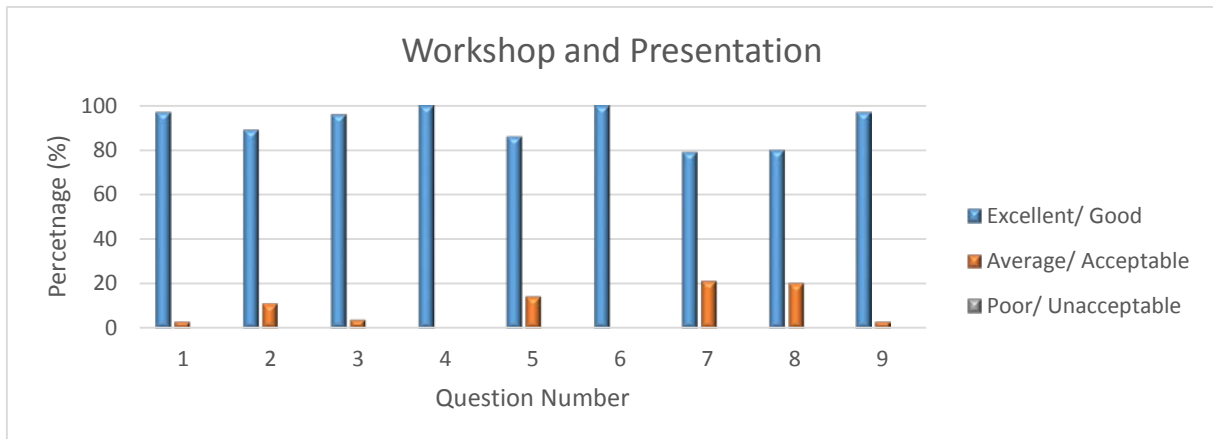
### Workshop and Presentation

Please rate the following statements in respect of this training module:

Aspect of Workshop	Excellent	Good	Average	Acceptable	Poor	Unacceptable
1. The workshop achieved the objectives set	    (61%)	 (36%)	 (3%)			
2. The quality of the workshop was of a high standard	      (70%)	 (19%)	 (11%)			
3. The content of the workshop was well suited to my level of understanding and experience	   (57%)	 (39%)	 (4%)			
4. The practical work was relevant and informative	    (63%)	 (37%)				
5. The workshop was interactive	      (72%)	 (14%)	 (14%)			
6. Facilitators were well prepared and knowledgeable on the subject matter	     (69%)	 (31%)				
7. The duration of this workshop was neither too long nor too short	 (29%)	     (50%)	 (21%)			



8. The logistical arrangements (venue, refreshments, equipment) were satisfactory	 (48%)	 (32%)	 (16%)	 (4%)		
9. Attending this workshop was time well spent	 (68%)	 (29%)	 (3%)			



### Comments and suggestions

I have the following comment and/or suggestions in addition to questions already answered:

#### Workshop Sessions:

- All was excellent!

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#### Facilitators:

- OK!

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#### Workshop level and content:

- OK!
  - More explanations about each criteria, reasons they are in risk assessment, with which criteria would be replaced, differences in criteria among few.
- 



ANNEX I – Agenda

**Day 1 : Tuesday, 6 October 2015**

Topic: Application of IRAM/Easy Tools				
Chair and Co-Chairs: Ike van der Putte/Horst Buether/Anita Patekar				
Venue: Zagreb, Croatia				
Start	Finish	Topic	Speaker	Sub-topic/Content
08:30	09:00	<b>Registration</b>		
09:00	09:15	Opening	<p>Anita Patekar. Senior Environmental Protection Inspector Directorate for Inspection Ministry of Environmental and Nature Protection Zagreb, Croatia.</p> <p>Ike van der Putte, ECRAN ECENA Coordinator</p> <p>Mr Horst Buether, IMPEL, TAIEX expert</p>	<p>Welcome remarks</p> <p>Explanation of background, objectives and expected results of the workshop</p>
09:15	09:30	Introduction round	Mr. Ike van der Putte, ECRAN ECENA Coordinator	Introduction of the participants and experts
09:30	10:00	Integrated Risk Assessment Method (IRAM)	<p>Horst Buether, TAIEX expert</p> <p>Florin Homorean, National Environmental Guard, Romania, TAIEX expert</p>	<p>Recapitulation of the Method learnt in the first meeting in Ankara in 2014</p> <p>Method: PPP and Q&amp;A</p> <p>Materials provided: Guidance book</p>



			Vladimir Kaiser, Inspectorate of the Republic of Slovenia for Agriculture and the Environment , TAIEX expert	
10:00	11:00	Exercise: risk assessment with the IRAM web app	Horst Buether	Risk assessment of an IED installation Method : Working with the application Materials provided: IRAM guidance book
11:00	11:15	<b>Coffee Break</b>		
11:15	11:45	Duties of an IRAM coordinator	Mr. Florin Homorean,	Method : PPP and Q&A Materials provided: easyTools guidance book
11:45	12:30	Exercise: user administration by the coordinator	Florin Homorean Vladimir Kaiser Horst B��ther	Method: Work with computer and internet <ul style="list-style-type: none"> <li>▪ Selection of users</li> <li>▪ Assignment to the coordinator</li> <li>▪ Assignment to user groups</li> </ul>
12:30	13:30	<b>Lunch Break</b>		
13:30	14:00	Development of risk assessment forms	Mr. Vladimir Kaiser, ,	How to put criteria and contingency tables into a risk assessment form Method : PPP and Q&A Materials provided: easyTools guidance book
14:30	15:15	Exercise: creating risk assessment forms with the web app	Vladimir Kaiser Florin Homorean Horst Buether	Method: Work with computer and internet
15:15	15:30	<b>Coffee Break</b>		
15:30	16:15	Exercise: risk assessment by using the forms developed by the participants	Vladimir Kaiser Florin Homorean Horst Buether	Method: Work with computer and internet
16:15	16:45	Comparing of the results	Horst Buether	This session is proposed to offer the opportunity for detailed questions and discussions.



16:45	17:15	Experiences in Croatia in creating risk assessment forms	Dubravka Pajkin Tučkar Jelena Manenica  Directorate for Inspection  Ministry of Environmental and Nature Protection, Croatia	Description of the approach and experiences in Croatia in creating of risk assessment forms
17:15	17:30	Closure	Ike van der Putte	



## Day 2 : Wednesday, 7 October 2015

<b>Topic: Application of IRAM/Easy Tools</b>				
<b>Chair and Co-Chairs: Ike van der Putte/Horst Buether/Anita Patekar</b>				
<b>Venue: Zagreb, Croatia</b>				
<b>Start</b>	<b>Finish</b>	<b>Topic</b>	<b>Speaker</b>	<b>Sub topic/Content</b>
<b>08:30</b>	<b>09:00</b>	<b>Registration</b>		
09:00	09:30	Summary and questions from first day	Ike van der Putte, Horst Buether	Repeating of the content and discussions of problems of the first day
09:30	10:00	How to modify risk assessment forms of other coordinators	Horst Buether	A way to develop risk assessment forms in an easy way Method: PPP and Q&A
10:00	10:30	Exercise: creating a Seveso risk assessment form	Horst Buether Vladimir Kaiser Florin Homorean	Method: Work with computer and internet
10:30	10:45	<b>Coffee Break</b>		
10:45	12:00	Exercise: risk assessment by using the forms developed by the participants	Horst Buether Vladimir Kaiser Florin Homorean	Method: Work with computer and internet
12:00	12:30	Comparing of the results	Horst Buether	This session is proposed to offer the opportunity for detailed questions and discussions.
12:30	13:30	<b>Lunch Break</b>		
13:30	14:00	Exercise: doing risk assessment examples for the creation of an inspection program	Florin Homorean Vladimir Kaiser Horst Buether	Method: Work with computer and internet
14:00	14:30	Ranking of inspection programmes	Horst Buether	Method: PPP and Q&A



14:30	15:00	Exercise: Ranking of inspection programs	Horst Buether Florin Homorean Vladimir Kaiser	Method: Work with computer and internet
15:00	15:15	<b>Coffee Break</b>		
15:15	15:45	Minimum inspection programme	Vladimir Kaiser	How to set up an inspection programme for different inspection tasks when you don't have enough inspectors
15:45	16:30	Exercise: Case study minimum inspection programme	Vladimir Kaiser Florin Homorean Horst Buether	Method: Work with computer and internet
16:30	17:30	Experiences in Croatia in the creation of inspection programmes	Jelena Manenica Ivan Pušić Directorate for Inspection Ministry of Environmental and Nature Protection, Croatia	Current developments of inspection programmes based on IRAM method in Croatia
17:30	18:00	Evaluation and Closure	Horst Buether Ike van der Putte Anita Patekar	Final discussion





## ANNEX II – Participants

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A project implemented by  
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### **ANNEX III – Workshop materials (under separate cover)**

Workshop materials including presentations can be downloaded from:

[http://www.ecranetwork.org/Files/Workshop\\_Materials, IRAM, October 2015, Croatia.zip](http://www.ecranetwork.org/Files/Workshop_Materials,_IRAM,_October_2015,_Croatia.zip)



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