

# IMPEL Projects on Inspection Planning

**Doing The Right Things**  
**easyTools**



**IED Inspections**  
**IED/IRAM Inspection Programme**



European Union Network for  
the Implementation and Enforcement  
of Environmental Law

Horst Büther, Germany

Zagreb, 6 October 2015

## History

**easyTools**



- 1997: IMPEL – Minimum Criteria for Inspections
- 1999: IMPEL - Reference Book for Environmental Inspections
- 2001: EU – Recommendation on Minimum Criteria for Environmental Inspections
- 2007: IMPEL – Step by Step Guidance Book for Planning of Environmental Inspections
- 2011: IMPEL – easyTools Risk Assessment Guidance Book
- 2011: EU - Industrial Emissions Directive
- 2012: IMPEL – Guidance for IED Inspections
- 2013: IED/IRAM Inspection Programme

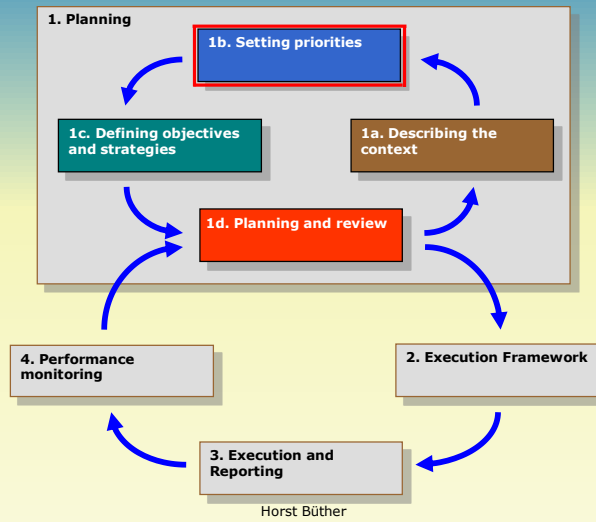


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2

## ENVIRONMENTAL INSPECTION CYCLE



3

### Article 23: Environmental inspections

### IED Inspections

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.



4

## easyTools Project 2010/11

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### Risk Assessment in Inspection Planning



Development of a web based risk assessment tool for inspections like IPPC (IED), Seveso, waste, waste water, genetic engineering, agriculture and so on



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5

## Objectives

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- Evaluation of existing inspection tools and risk criteria
- Development of a risk assessment tool for environmental inspections that could easily be used by every IMPEL member
- Integration into the inspection cycle of the Step by step guidance book (DTRT)
- Availability from the IMPEL website as an advanced interactive IT tool



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6

# Methods for Risk Appraisal

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## Results of the easyTools enquiry

- Nearly all methods developed in the EU use risk criteria to determine the inspection frequency
- Only France uses inspection tasks for risk ranking
- Three basic methods were identified:
  - *Linear mean value of risk criteria scores*
  - *The same multiplied by a probability factor*
  - *Maximum value / highest frequency (France)*
- All want a simple method for risk appraisal



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7

# Linear Mean Value

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$$\text{Risk} = (\text{impact crit.1} + \text{impact crit. 2} + \dots + \text{ICn}) / n$$

All impact scores are added and the mean (or 'average') score is determined.

## Disadvantages:

- high risks are levelled out by low risks
- the more criteria, the smaller the spread ('range')
- the limits of the risk categories are not transparent;
- not a real risk assessment because no probability factors in the calculation.

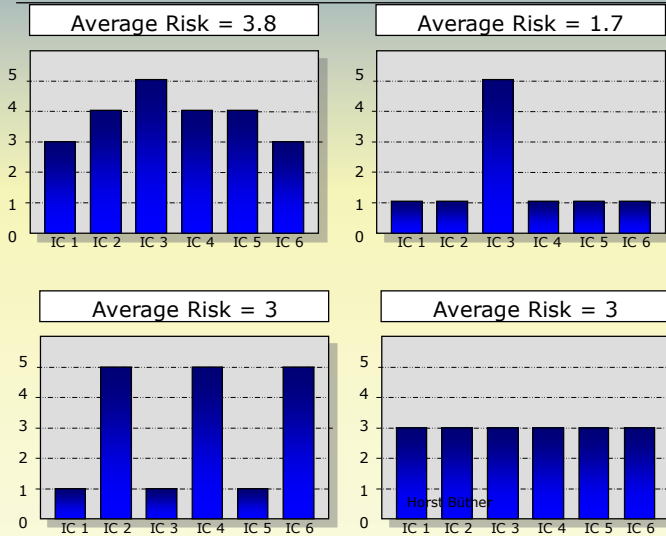


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8

## Linear Mean Value: examples

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9

## Risk Criteria

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### Potential impacts

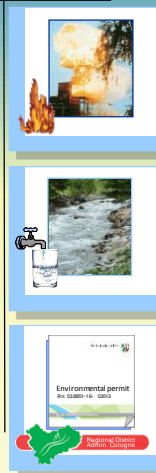
- Kind and type of installation
- Risk of accidents
- Handling and storage of waste

### Actual impacts

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

### Operator performance

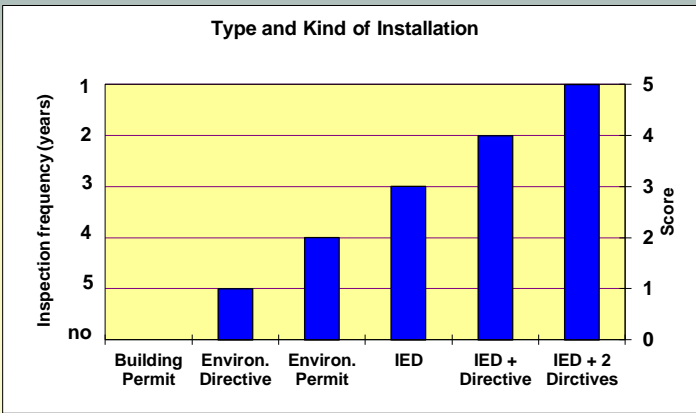
- Compliance with permit conditions
- Attitude of the operator
- Environmental management system (EMAS)



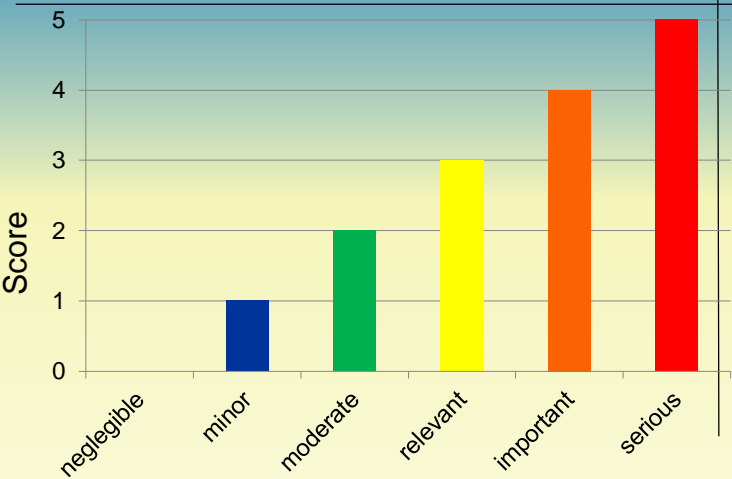
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10

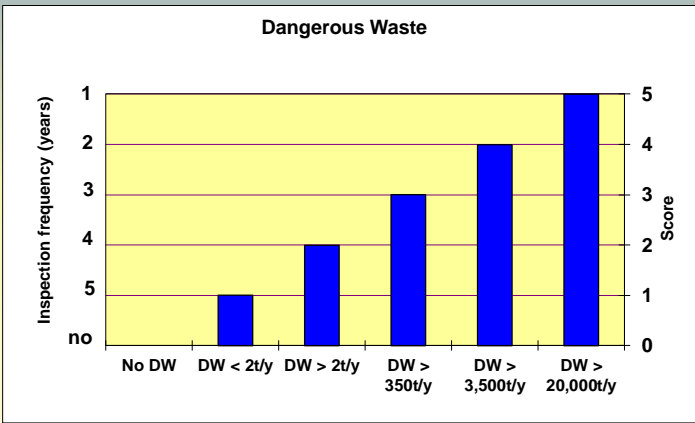
# Potential Impacts



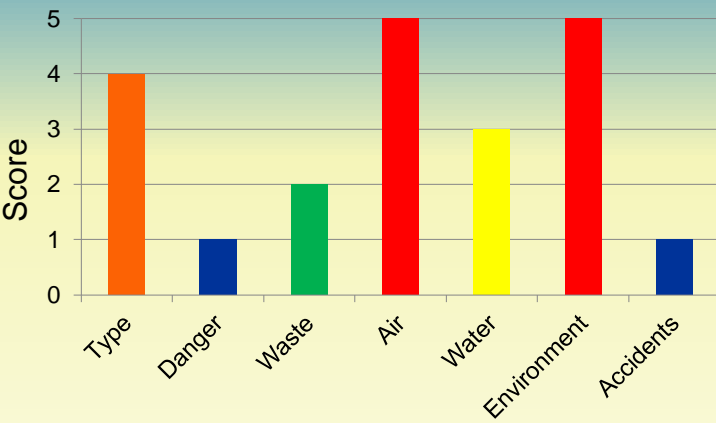
# Impact on the Environment

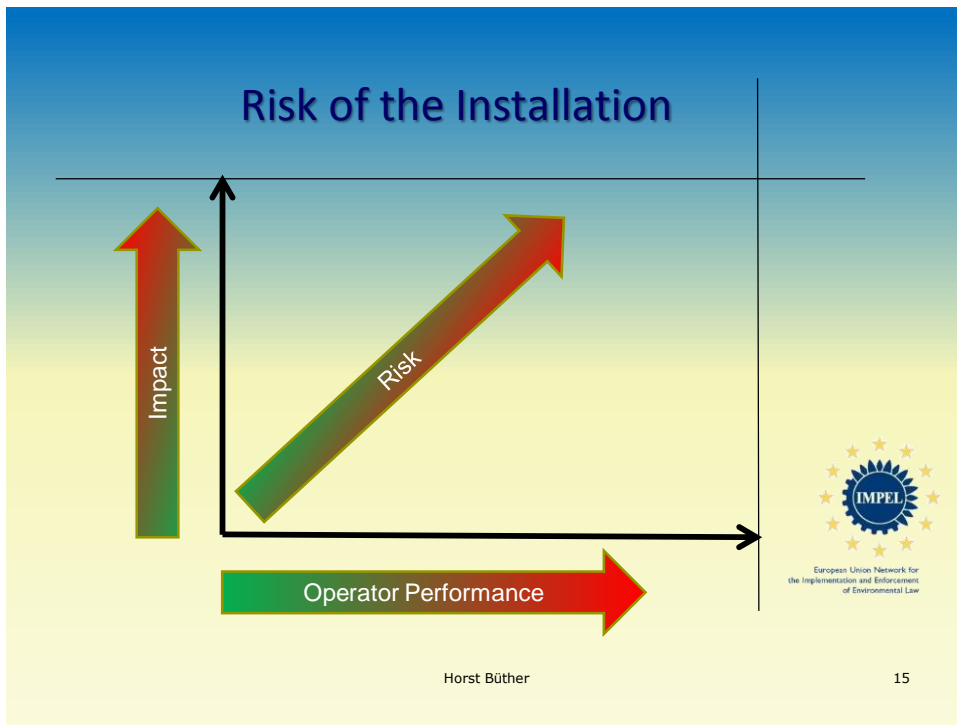


# Potential Impacts



# Integrated Risk Assessment Method





# Integrated Risk Assessment Method

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## Influence of Operator Performance

- Operator performance criteria:
  - ▶ Compliance
  - ▶ Attitude of the operator
  - ▶ Environmental management system
- Scoring of operator performance criteria:
  - ▶ good: -1
  - ▶ moderate: 0
  - ▶ bad: +1
- The average (integer) of the operator performance scoring is added to each impact criteria score ▼

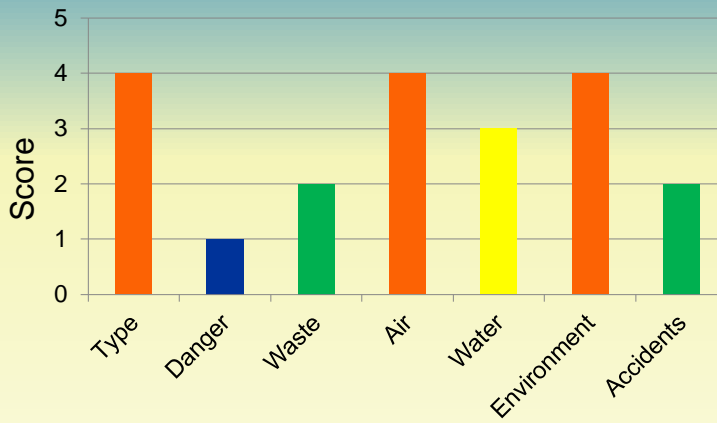
**risk score**

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16



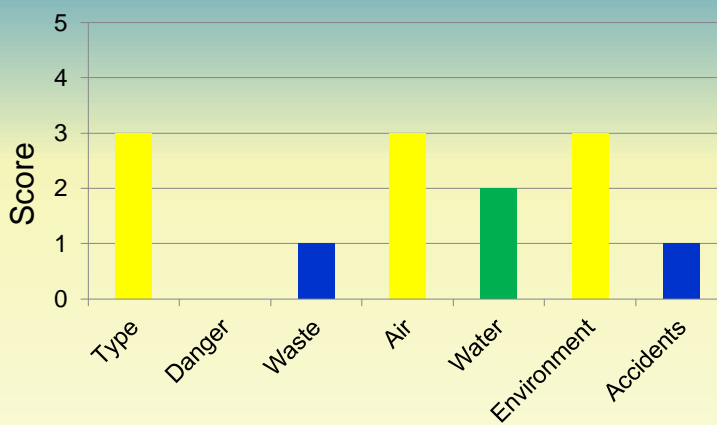
## Scored Risk Criteria



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17

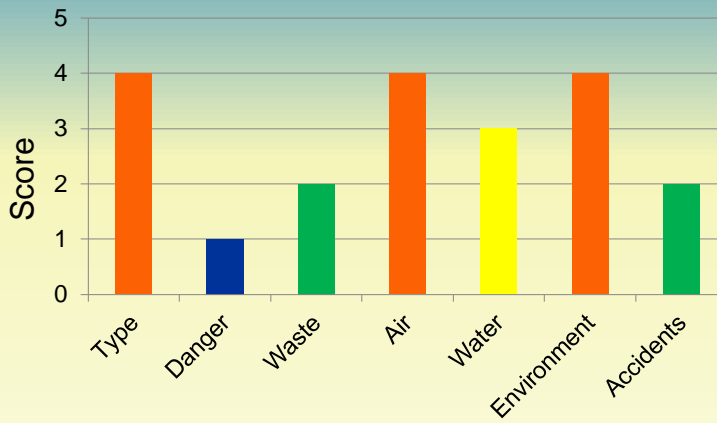
## Good Operator Performance



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18

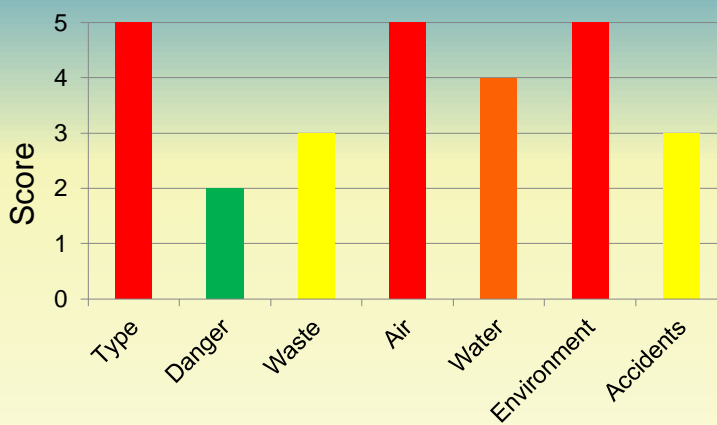
## Scored Risk Criteria



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19

## Bad Operator Performance



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20

# Integrated Risk Assessment Method

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## IRAM principles

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

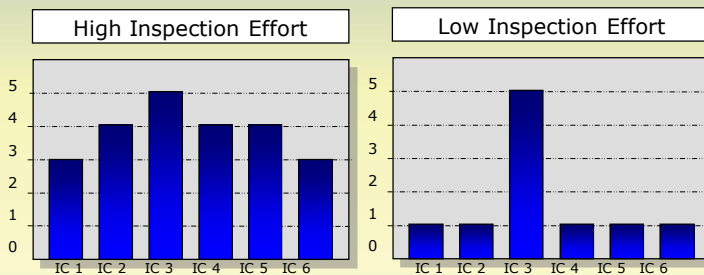


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21

## IRAM Principles II and IV: Inspection Frequency and Effort

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22

## Weight

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- Not all criteria have the same importance
- Therefore: Weighting
- Weighting is often Political
- Weighting factors (\*) and
- Weighting terms (+)



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23

## Web Tool and Database

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- 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>





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24



# Lucom Interaction Platform

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English ▼




Register  
Reset password  
Integrated Risk Assess

### Ligon

Please enter your logon data of user-id and password.

user-id:

password:

 start

[Download the description of the tools for the Integrated Risk Assessment Method]





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25



# Lucom Interaction Platform

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English ▼



Home  
Master data  
Folders A-Z  
Forms A-Z  
Search  
Support

Logged in as: Koordinator BR Köln

## Welcome, Koordinator BR Köln!

Date of the last logon: April 1, 2013 at 6:14 PM

You are on the IMPEL form server that provides you with an application for risk assessment in inspection planning.

### New Language Versions

- Czech
- Deutsch
- Français
- Hrvatski
- Portuguese
- Slovenian



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26



# Lucom Interaction Platform

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Assessment done by

Inspection object  ID

Inspection task

Date of inspection plan

Integrated Risk Assessment

Address data

Street

Postal code  Location



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27



Impact criteria	Maximum score	Score	score (weight)
Type and kind of installation	5	4	0
Impacts on human health or the environment	5	2	0
Releases to air	5	3	0
Releases to water / off-site transport in waste water	5	5	0
Releases to land	5	0	0
Off-site transfer of waste	5	4	0
Input of waste	5	4	0
Quality of the local environment	5	3	0
Sensitivity of the local environment	5	3	0
Risk of accidents	5	5	0
Noise	5	1	0

Minimum number of highest score  Lowest risk category  Highest risk category

## Input of Operator Performance Scores


Operator performance criteria	Weight of criteria	Score
Compliance	2	0
Attitude of the operator	1	-1
Environmental management system	1	-1

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28



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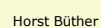
26

47 %

B

36

24.12.2016



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31

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- The image shows the front cover of a spiral-bound book. The cover is white with a yellow vertical band on the left side where the spiral binding is located. At the top, the word 'easyTools' is written in a large, blue, sans-serif font, with 'easy' in a lighter blue and 'Tools' in a darker blue. Below this, the title 'RISK ASSESSMENT GUIDANCE BOOK' is printed in a bold, black, sans-serif font. In the center of the cover is the IMPEL logo, which consists of a dark blue circle with the word 'IMPEL' in white capital letters inside. Surrounding the circle are twelve yellow stars, arranged in a circle like the European Union flag. Below the logo, the text 'European Union Network for the Implementation and Enforcement of Environmental Law' is written in a smaller, black, sans-serif font. At the bottom of the cover, the text 'Final version/February 2012' is printed in a small, black, sans-serif font.

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32



## Cologne Workshop Conclusions

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- The methodology is accepted
- The comparison with other systems confirms the value of IRAM
- The IRAM tool is an added value and organisations can start implementation
- Procedural arrangements in the member countries need to be made



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33

## Utilisation of IRAM

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

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



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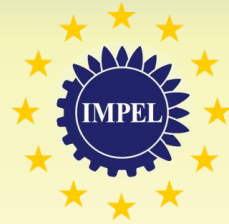
34

Thank you for your attention

Thank you for your attention



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35