

Review of UNECE Informative Inventory Reports (IIRs) in 2011

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ETC-ACC Supported by EEA

TFEIP Meeting Stockholm 2 – 3th May 2011

Outline

- Stage 3 Review and IIRs
 - Review findings
 - Implementation
- IIR Quick Analysis
- Awards??



IIRs & Stage 3 Review

Why IIR?

- Policy Makers the Public & Users of the data.
 - Supports the data (NFR)
 - Explain Emission Trends
 - Understand areas needed for improvement
- Build Trust in the data
 - National System, QA/QC, KCA
 - Highlight Limitations (IE, NE, Uncertainties)
 - Understand Changes
- IIRs Make Stage 3 Review Possible



TCCCA

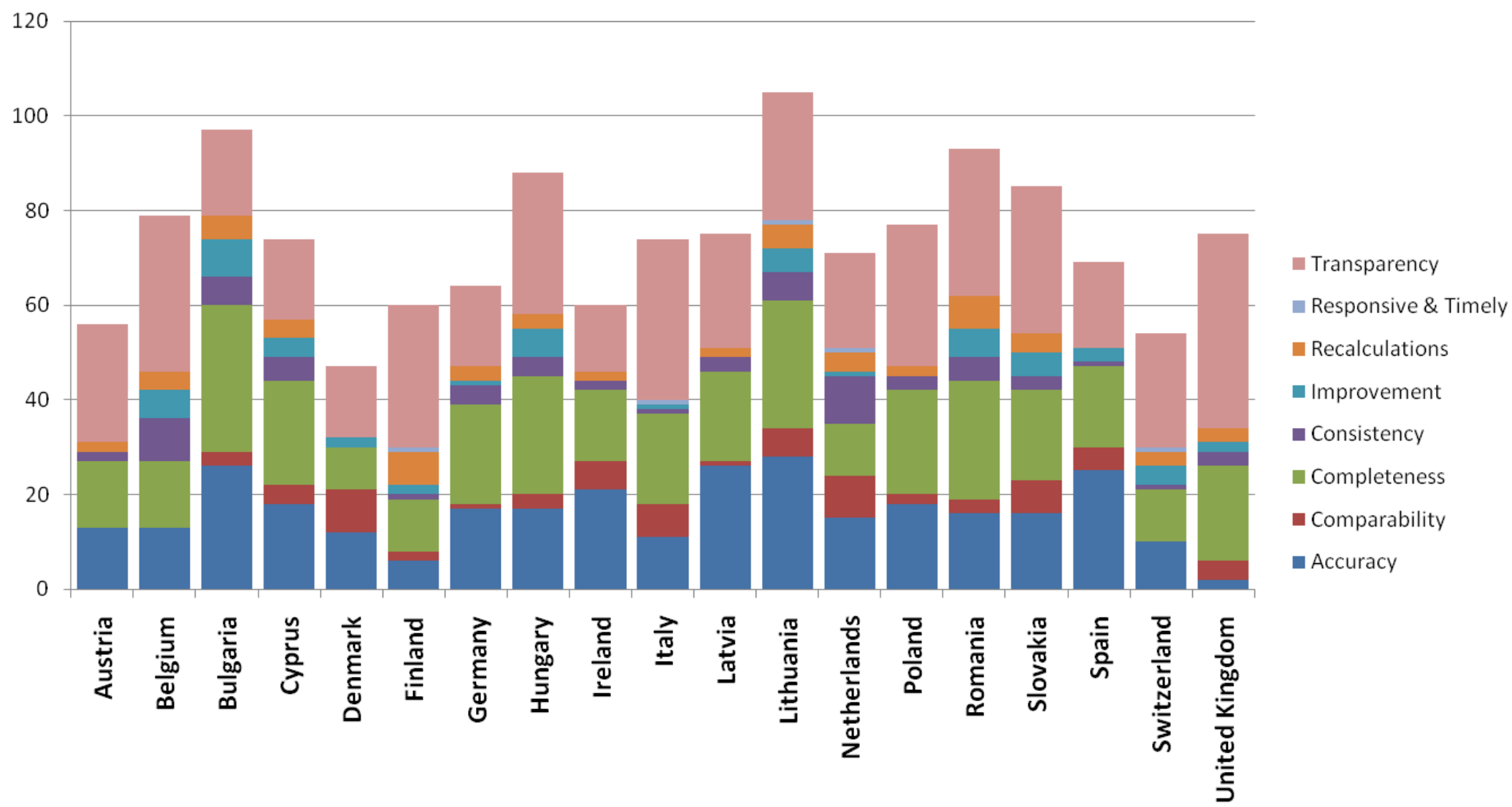
- **Transparency:** including whether the data provided shows clearly the methods, assumptions and data sources used for the estimates.
- **Completeness:** ensuring that all anthropogenic sources of emission are included for which there are methods provided in [The Guidebook](#)
- **Comparability:** ensuring that emission estimates are compiled using similar and compatible methods across Parties and provided at a similar level of detail.
- **Consistency:** ensuring that data provided by a party has consistent data and assumptions *across years* and pollutants reported.
- **Accuracy:** assessment to ensure that ***uncertainties*** in emission estimates are minimized and that uncertainty analysis forms the basis of prioritizing future improvements by the Party. QA/QC to ensure errors are minimized.



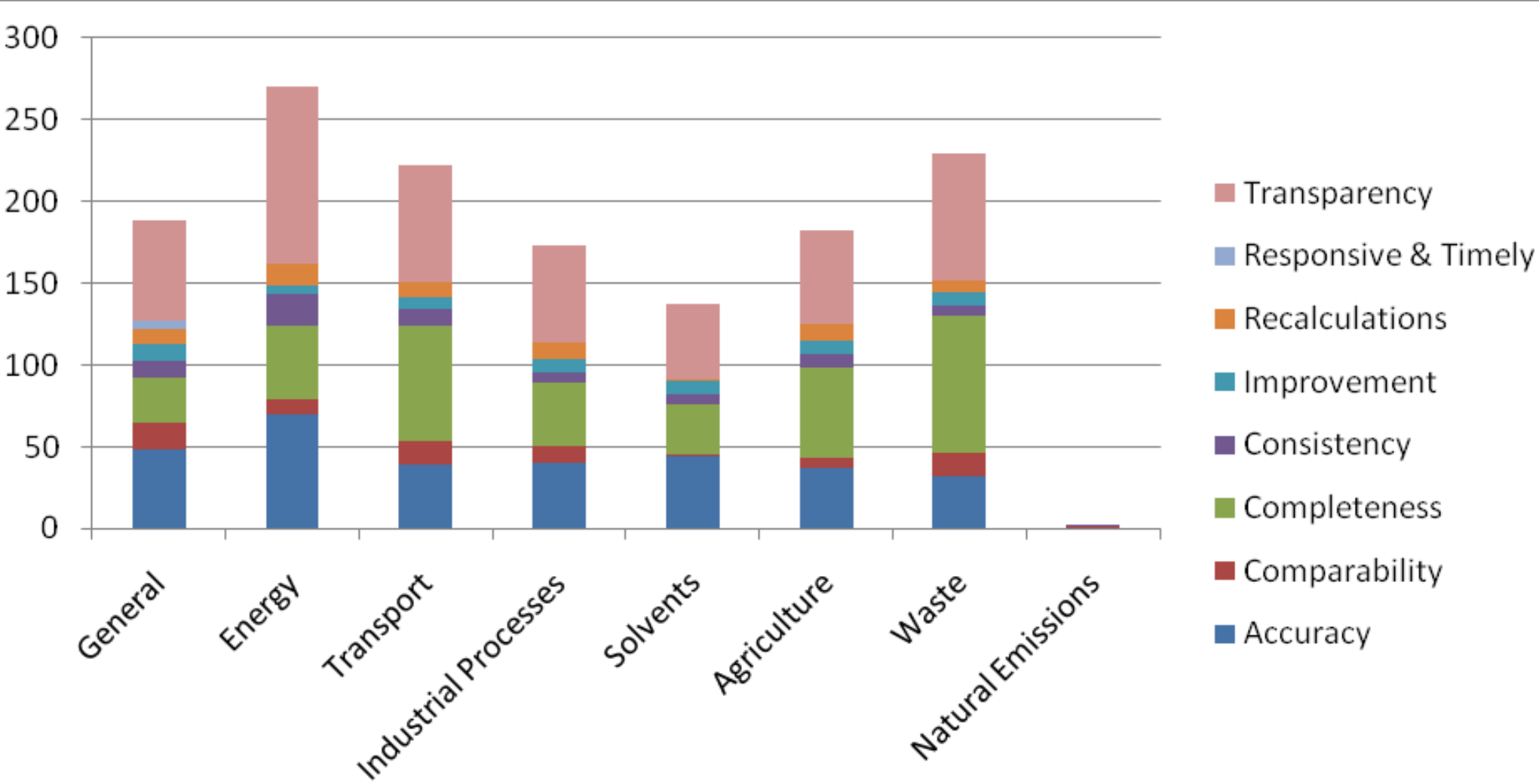
Stage 3 review findings

- 2009 and 2010 Stage 3 review.
 - 19 Parties
 - TCCCA reviewed
 - 1350 findings
- 2011 IIRs
 - Have recommendations been taken into account?

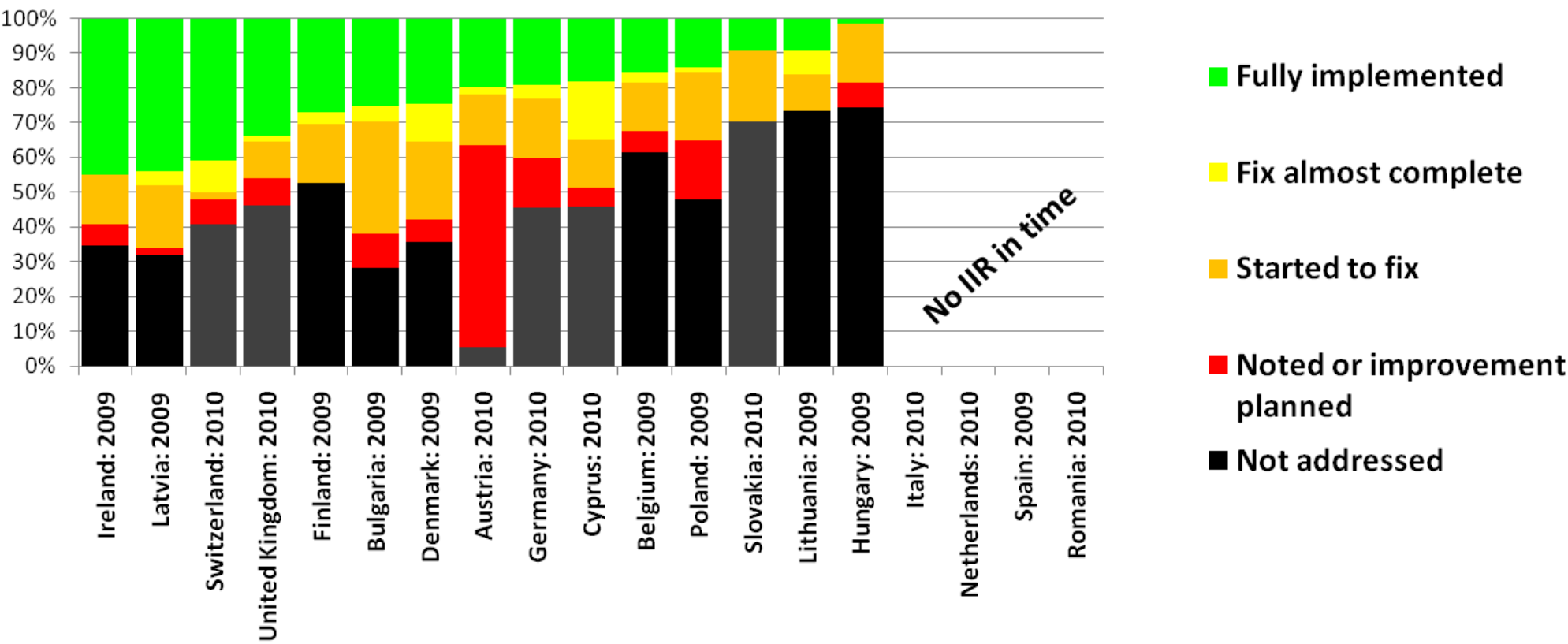
2009 and 2010 Stage 3 Review findings: By Party



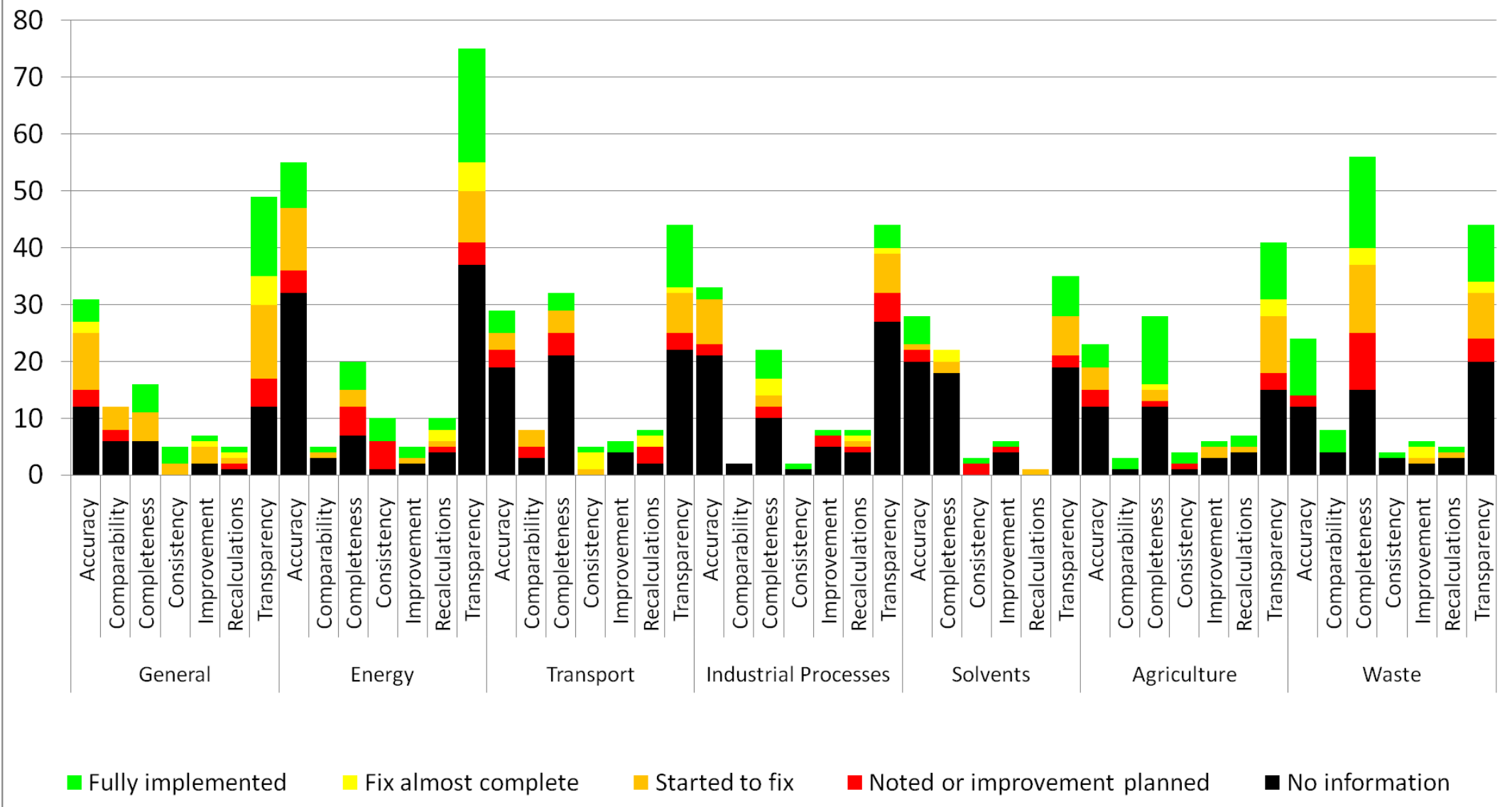
2009 and 2010 Stage 3 Review findings: By Sector



2011 IIRs Review implementation: By Party



2011 IIRs Review implementation: By Sector



2011 Quick IIR Review

- Big improvement in methods for all sectors and projections: ***Slovenia***
- New uncertainty analysis. ***Switzerland***
- More on projections. ***Portugal, Germany***
- Combined GHG and AQP report. Was it easy or difficult to do? ***Norway***
- Still quite good looking.. But not in on time... Some improvements seen. ***Netherlands***
- What did you remove from your IIR? ***Sweden***
- Comprehensive methodology but no KCA, projections or recalculations summary. ***Denmark***
- Specifically addressed all Review recommendations in IIR. ***Austria***

3.3 NFR 1 A Mobile Fuel Combustion Activities

No changes regarding methodology and emission factor were made since submission 2009.

Improvements were made in response to the issues raised in the Stage 3 in-depth review of emission inventories submitted under the UNECE LRTAP Convention and EU National Emissions Ceilings Directive. These improvements are described in Chapter 3.4.

Estonian Informative Inventory Report 2011

EXECUTIVE SUMMARY

Estonia, as party to the Convention on Long-Range Transboundary Air Pollution is required to report annual emission data, projections of main pollutants, activity data and to provide Informative Inventory Report. Emission data of all pollutants for 1990-2009 and projection were submitted 15 February 2011. The first IIR were submitted in 2010.

The current report contains explanation of pollutants trends and key categories, information about sectoral methodologies, recalculations and planned inventory improvements.

The latest recalculations to emission inventory were done for the time period from 1990 to 2008. The reason on recalculations is specified in Table 0.1 below:

Table 0.1. The status of recalculations

NFR code	NFR name	Recalculation reasons	Pollutant	Recalculation period
1.A.3.b	Road transport	New COPERT 8.0 version; correction of activity data and sulphur/lead content in fuels	NO _x , SO ₂ , NMVOC, NH ₃ , TSP, PM ₁₀ , PM _{2.5} , CO, HM, PCDD/PCDF, PAHs	1990-2008
1.A.3.c	Railways	Correction of sulphur contents in fuels	SO ₂	1990-2008
1.A.4.a.ii	Commercial/ institutional: Mobile	Correction of statistical fuel consumption	NO _x , SO ₂ , NMVOC, NH ₃ , TSP, PM ₁₀ , PM _{2.5} , CO, HM, PCDD/PCDF, PAHs	1990-2008
1.A.4.b.ii	Residential: Household and gardening (mobile)	Correction of sulphur contents in fuels	SO ₂ , Pb	1990-2008
1.A.4.c.ii	Agriculture/Forestry/Fishing/ Off-road vehicles and other machinery	New 'EMEP/EEA air pollutant emission inventory guidebook 2009' emission factors; correction of sulphur contents in fuels	NO _x , SO ₂ , NMVOC, NH ₃ , TSP, PM ₁₀ , PM _{2.5} , CO, HM, PCDD/PCDF, PAHs	1990-2008
1.A.2.f.ii	Mobile Combustion in manufacturing industries and construction	New 'EMEP/EEA air pollutant emission inventory guidebook 2009' emission factors; correction of sulphur contents in fuels	NO _x , SO ₂ , NMVOC, NH ₃ , TSP, PM ₁₀ , PM _{2.5} , CO, HM, PCDD/PCDF, PAHs	1990-2008
1.A.3.d.i.(i)	International maritime navigation	New 'EMEP/EEA air pollutant emission inventory guidebook 2009' emission factors	NO _x , NMVOC, NH ₃ , TSP, PM ₁₀ , PM _{2.5} , HM	1990-2008
1.B.2.a.v	Distribution of oil products	Correction of emission factor	NMVOC	1990-2008
1.B.2.b	Natural gas	Correction of emission factor	NMVOC	1990-2008
2.D.2	Food and drink	New 'EMEP/EEA air pollutant emission inventory guidebook 2009' emission factors	NMVOC	1990-2008
3.A.1	Decorative coating application	New methodology	NMVOC	2007-2008, additionally calculated 1990-2006

8.2 Improvements and Recalculations in response to the review process

Improvements made in response to the issues raised in the Stage 3 in-depth review of emission inventories submitted under the UNECE LRTAP Convention and EU National Emissions Ceilings are summarized in the following tables.

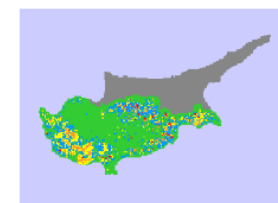
Table 224: Improvements made in response to the Stage 3 in-depth review of emission inventories submitted under the UNECE LRTAP Convention and EU National Emissions Ceilings – CROSS CUTTING ISSUES

REVIEW FINDINGS	Fulfilled
6. Nevertheless, the ERT identified some minor issues and will provide recommendations for improvements in this report. Revised sections for future submissions should include key category analysis, recalculations, and NECD/CLRTAP comparability.	Implemented in Chapter 1.4, Chapter 8, Chapter 12.3
INVENTORY SUBMISSION	
7. Austria has reported emissions for its protocol base years and a full time series up to 2008 (the latest year) for its protocol pollutants in the NFR08 format. Austria also submitted a detailed Informative Inventory Report (IIR). Austria did not provide 2008 gridded emissions.	Submission 2012
KEY CATEGORIES	
10. Austria does not provide a full level assessment for key categories in its IIR. The ERT recommends that Austria completely separates the level and trend assessment for key categories, and revises this chapter of the IIR accordingly.	Implemented in Chapter 1.4.
28. The ERT recommends that Austria strictly separates level and trend assessment for key categories and revises the corresponding chapter of the IIR.	
QUALITY	
12. Austria's IIR is generally well presented, but does not fully follow the IIR structure as proposed by the Guidelines. In particular the chapters on projections and improvement are missing (although the information is available elsewhere).	Implemented
29. The ERT encourages Austria to follow the proposed structure of the IIR even more closely, in particular by introducing chapter on projections and planned improvement at the end of the report.	
13. Austria's IIR provides a lot of detailed information on methodologies. However, it does not indicate the Tier level which methods are considered to be equivalent to. Including this information as a summary table, or with each sector would be very helpful in improving transparency.	Submission 2012
30. The ERT recommends that Austria include an indication of the Tier levels for each of the methodologies explained in the IIR. This will improve transparency.	
Consistency, including recalculations and time-series	
17. Recalculations are generally explained in the major changes section (chapter 3.3) of the IIR, but the ERT recommend that the link between the changes in methodology and the resulting emission numbers are explained in more detail, to provide improved clarity.	Implemented in Chapter 8
31. The ERT encourages Austria to give more detailed information about the links between improvements of the methodologies and resulting recalculations in future IIR.	



Ministry of Labour and Social Insurance
Department of Labour Inspection

Cyprus Informative Inventory Report 2009



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Senior Labour Inspection Officer

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Director, Department of Labour Inspection

Nicosia, March 2011

Key categories in 2009	Key categories in 2009											Total (%)		
	1A3a	1A2	1A1b	1A3B ii	1B3a iv	1B3a v	1A4c ii	1A1a	1A3b i	1D1	2D2		1B3b	1A3b v
SO _x	1A3a (19.7%)	1A2 (18.5%)	1A1b (16.5%)	1A3B ii (16.4%)	1B3a iv (10.5%)									81.5
NO _x	1A3b iii (22.4%)	1A3b i (20.7%)	1A2 (10.4%)	1A3B ii (8.4%)	1A3b ii (7.9%)	1A4c ii (5.9%)	1A1a (5.3%)							80.8
NH ₃	4B1a (23.3%)	4B1b (22.9%)	4D1a (14.3%)	4B1 (12.7%)	4B2 (4.2%)									80.9
NMVOC	1A3b iv (15.9%)	1A2 (11.4%)	1D2 (9.5%)	1A3B ii (7.8%)	1A4b i (8.9%)	1A2 (5.9%)	1A3b i (5.2%)	1D1 (2.8%)	2D2 (2.6%)	1B3b (2.3%)	1A3b v (1.8%)			81.5
CO	1A3b i (23.1%)	1A3b ii (19.6%)	1A4b i (18.6%)	6C (10.8%)	1A3B ii (8.7%)	1A2 (5.9%)								83.7
PM10	1A4b i (2.2%)	6C (7.3%)	1A2 (6.8%)	1A3b i (5.3%)	1A3b ii (5.3%)	4B2 (4.3%)	1A3b ii (3.8%)	1A3B ii (3.5%)	1A4c ii (3.4%)	1A3b iii (3.2%)	2C1 (2.8%)	2A1 (2.7%)		82.6
PM2.5	1A4b i (1.4%)	1A2 (7.3%)	6C (6.8%)	1A3b i (6.8%)	1A3b ii (4.7%)	1A3B ii (4.1%)	1A4c ii (4.1%)	1A3b iii (3.8%)	1A3b iv (3.6%)					81.2
Pb	1A2 (42.3%)	2C1 (25.4%)	1A4b i (19.2%)											87.7
Cd	1A4b i (44.2%)	1A2 (21.2%)	2C1 (13.5%)	1A4b i (13.5%)										83.6
Hg	1A2 (30.0%)	2C1 (27.6%)	1A4b i (23.3%)											80.4
PAH	1A4b i (39.4%)	6C (37.4%)	2C1 (20.3%)											87.0
Dioxin	1A2 (27.4%)	2C1 (26.7%)	1A4b i (17.4%)	6C (16.6%)										87.7
HCB	6C (44.9%)	1A4b i (17.0%)	1A3b i (15.9%)	1A2 (7.8%)										85.2
PCB	2C1 (18.0%)	1A1b (16.0%)	1A4b i (14.2%)											88.2

1 Energy 2 Industry 3 Solvent and product use 4 Agriculture 5 Waste 6 Other 7 Other

Table 1.5 Key categories for the Italian Emission Inventory in 2009

IIR Performance 2011: 1 of 5

11 Categories scored:

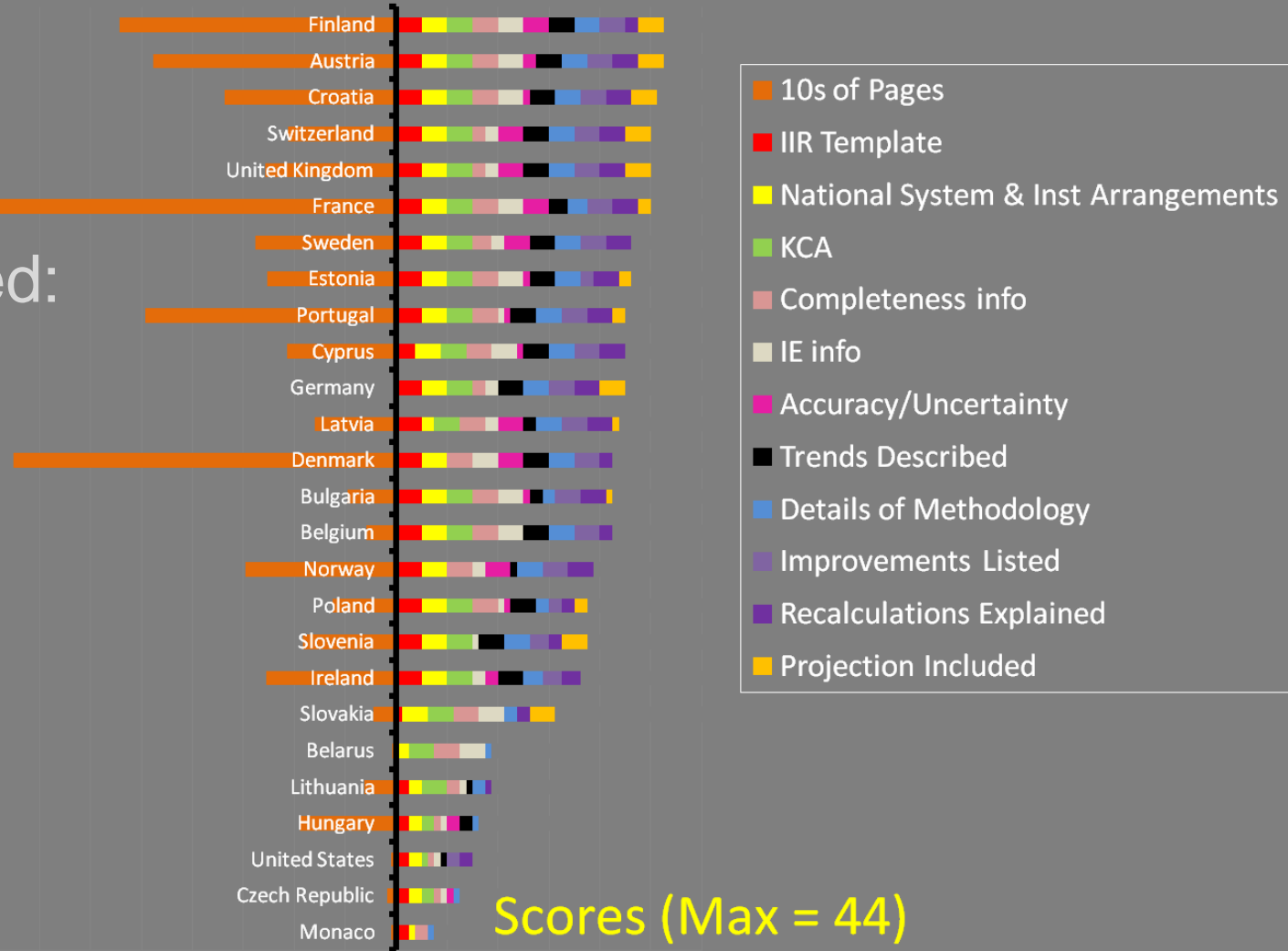
- 4 for **Good**
- 2 for **Moderate**
- 1 for **limited**
- 0 for **No Information**

2011 = 5897 IIR pages!!

2010 = 4646 IIR pages!

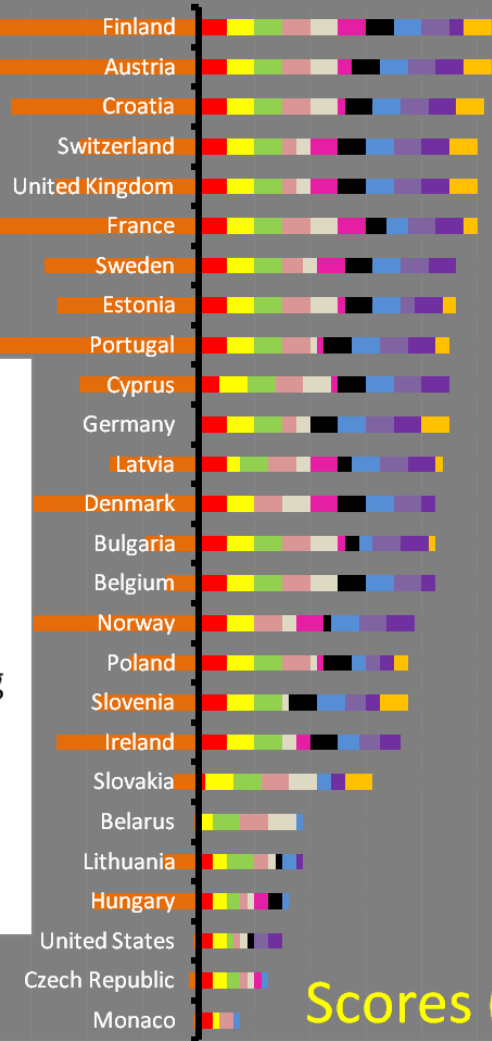
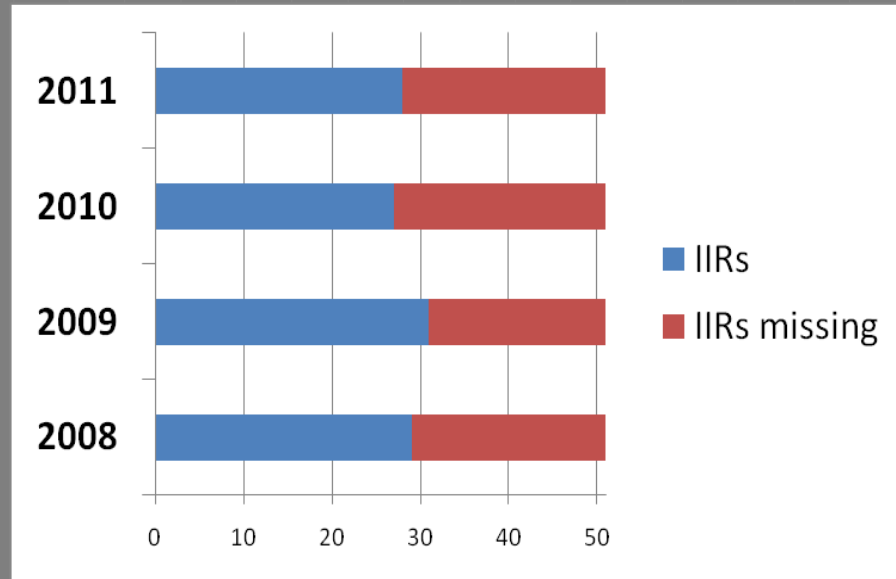
Number of Pages (*10)

-152144136128120112104-96 -88 -80 -72 -64 -56 -48 -40 -32 -24 -16 -8 0 8 16 24 32 40 48



Scores (Max = 44)

IIR Performance 2011 : 2 of 5



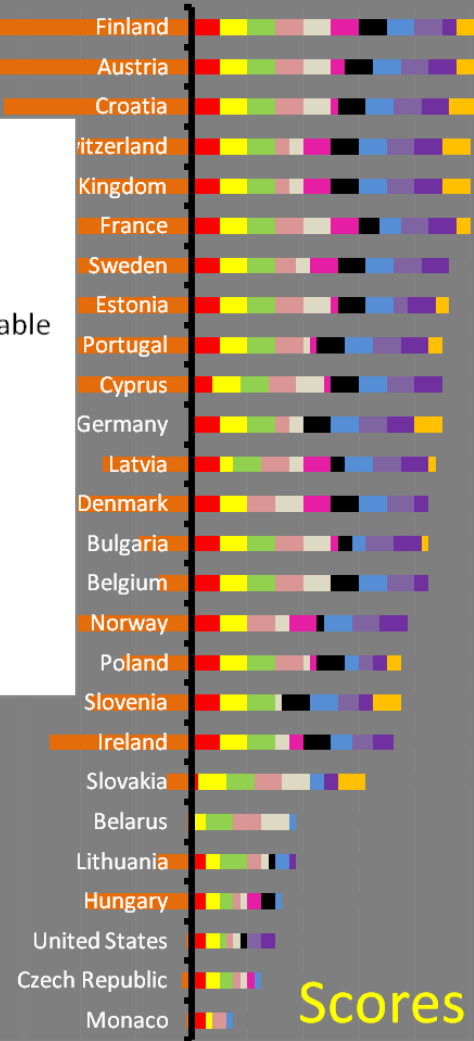
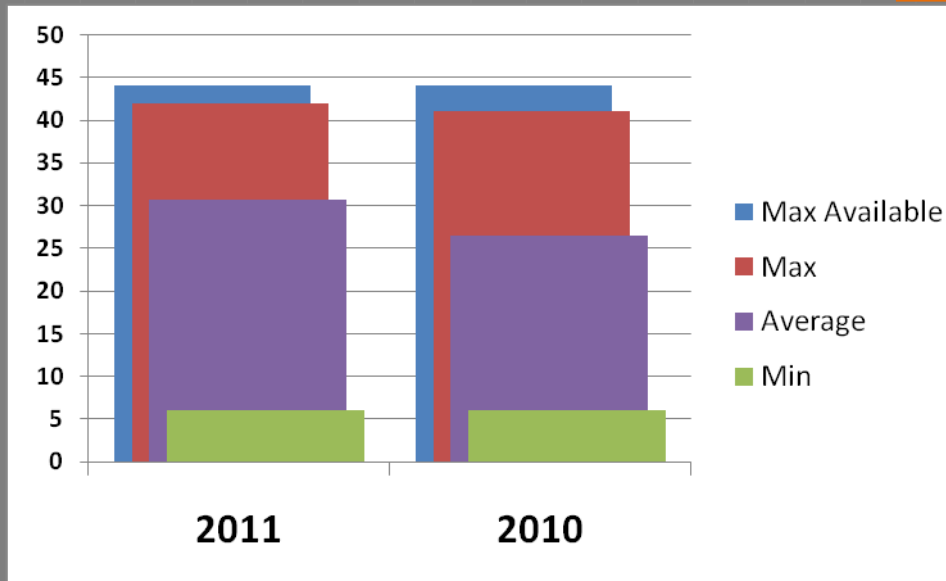
- 10s of Pages
- IIR Template
- National System & Inst Arrangements
- KCA
- Completeness info
- IE info
- Accuracy/Uncertainty
- Trends Described
- Details of Methodology
- Improvements Listed
- Recalculations Explained
- Projection Included

Number of Pages (*10)

Scores (Max = 44)

-152 144 136 128 120 112 104 -96 -88 -80 -72 -64 -56 -48 -40 -32 -24 -16 -8 0 8 16 24 32 40 48

IIR Performance 2011 : 3 of 5



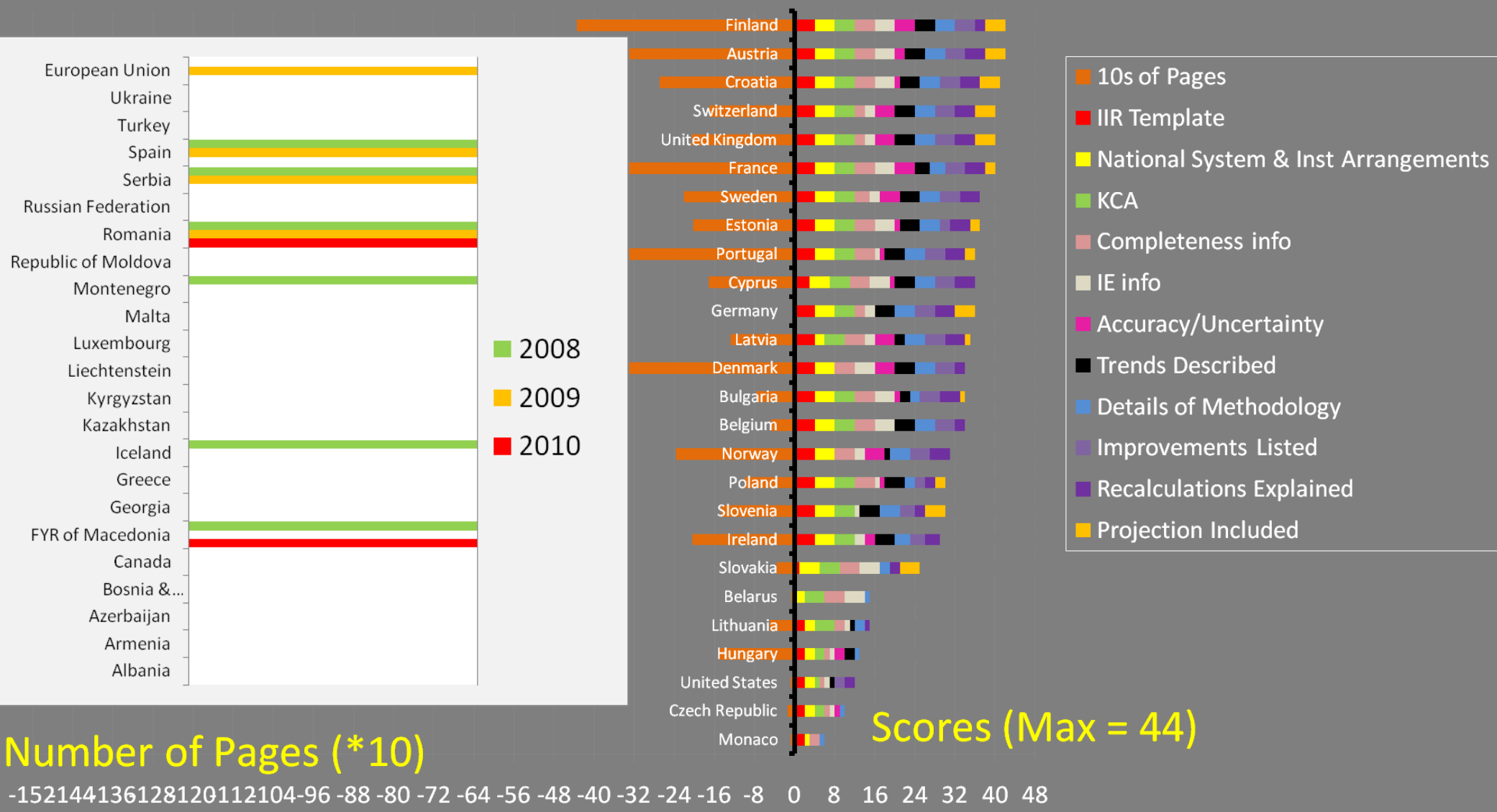
- 10s of Pages
- IIR Template
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Number of Pages (*10)

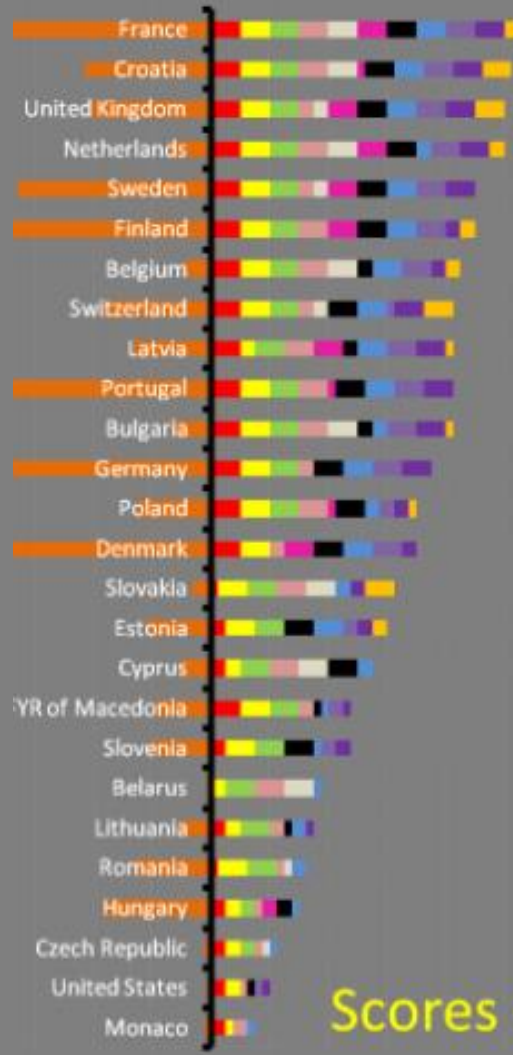
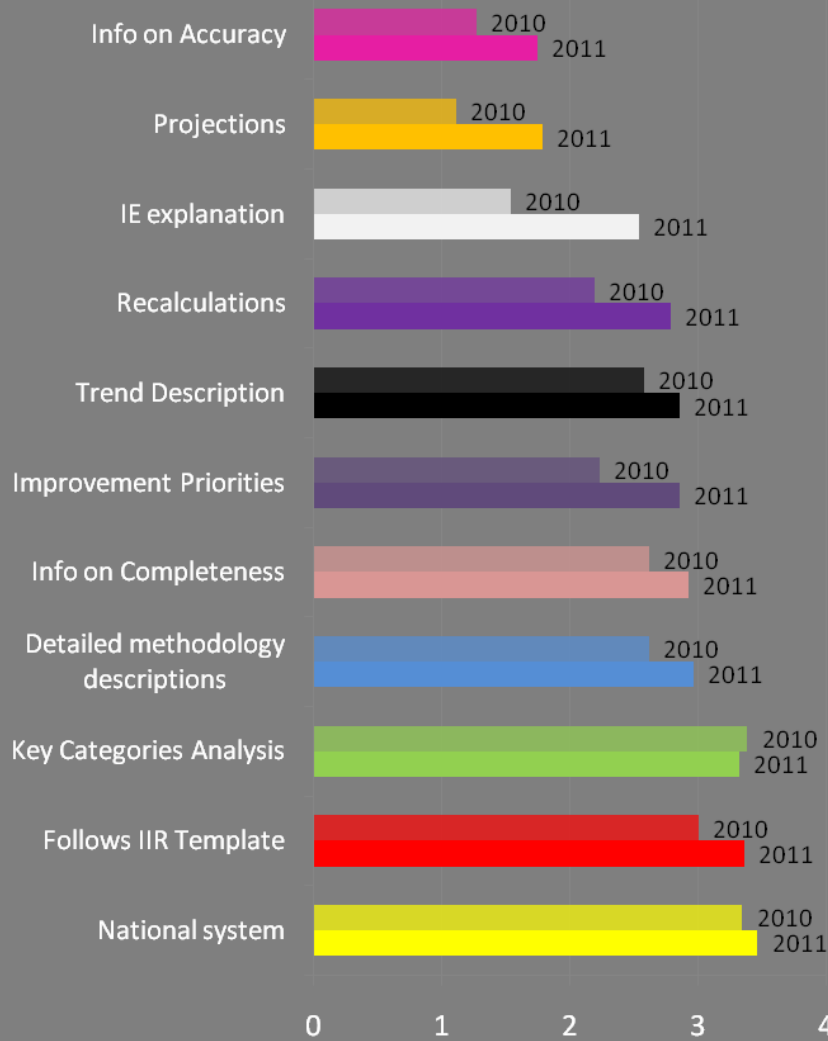
Scores (Max = 44)

-15 21 44 136 128 120 112 104 96 88 80 72 64 56 48 40 32 24 16 8 0 8 16 24 32 40 48

IIR Performance 2011: 4 of 5



IIR Performance 2011 : 5 of 5

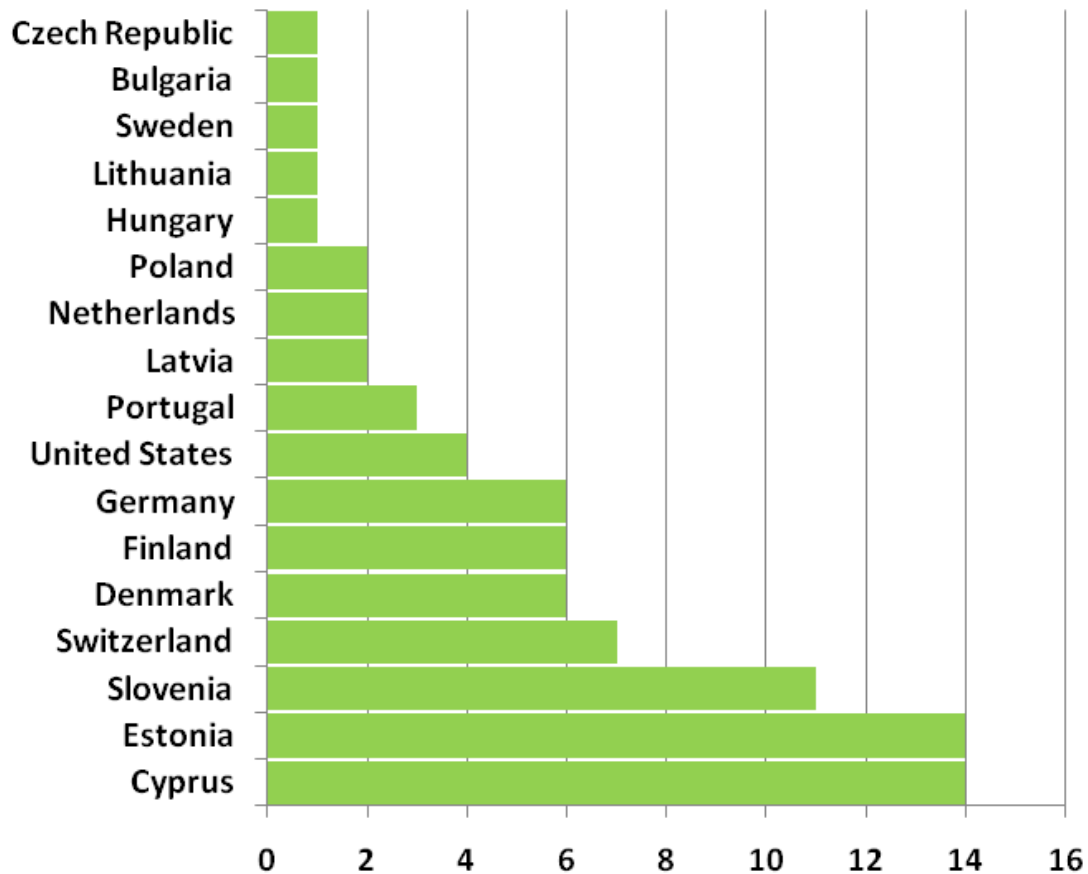


Scores (Max = 44)

-144 136 128 120 112 104 -96 -88 -80 -72 -64 -56 -48 -40 -32 -24 -16 -8 0 8 16 24 32 40 48

IIR Improvement

Improvement 2010 - 2011



- Estonia:
 - **Completeness, IEs, Accuracy, Improvements, recalculations**
- Cyprus:
 - IIR template, National System, methods, **improvements, recalculations**
- Slovenia:
 - IIR, IEs, **Methods, improvements, projections**
- Switzerland:
 - **Accuracy, Improvement**

Awards

- Most comprehensive
- Most Innovative -> Most Improved
- Most Innovation -> Best Country score
- Best small Party



Feedback

“I must admit that the award means a lot to me, because I have never received something like that. “ **Croatia**

“It was a big surprise for us. We are very proud for that award... we have made a copy of our award and we keep it in a display on the directors' floor. It's something we are proud of!!! ” **Cyprus**

“The impact of winning "the most comprehensive IIR" award has been quite positive”. **France**

“We were feeling mighty proud. Of course the prospect of winning more and other awards put a lot of pressure on our team ;-) “ **Netherlands**

“Well, our wiki thing was kind of a testing balloon. Winning a prize for it is much better than having it rejected by the community.” **Germany**

Nominations: Most Comprehensive

- Austria
- France
- Denmark
- Finland



Winner 2010: France



Nominations: Most Innovative -> Most improved

Estonia:

Winner

Completeness, IEs, Accuracy, Improvements, recalculations

Cyprus:

IIR template, National System, methods, improvements, recalculations

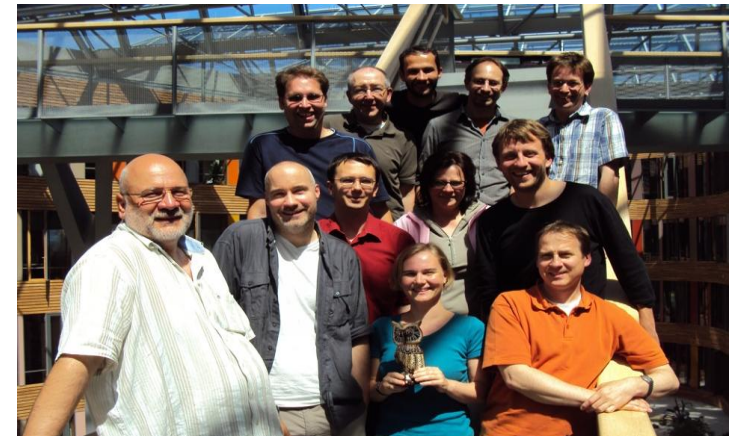
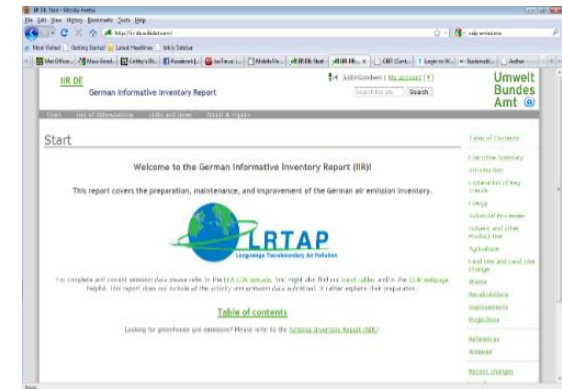
Slovenia:

IIR, IEs, Methods, improvements, projections

Switzerland:

Accuracy, Improvement

Winner 2010: Germany



Nominations: Best Looking -> Best Country

- Austria
- Netherlands
- Finland

- Croatia
- UK



Winner 2010: Netherlands



Nominations: Best Country (Population < 10m): *Best with limited resources*

- Switzerland
- Cyprus
- Croatia
- Latvia
- Slovenia

Winner

Winner

Winner 2010: Croatia, Cyprus



Keep the Awards going..

- Another quick review next year?
- Bring back prizes to pass on to the next winners..
- Improve IIRs...