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Final Report for the Specific Contract:

ERAWATCH International: Research Inventory
and Analytical Country Reports

by the ERAWATCH NETWORK ASBL

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Specific Contract:

ERAWATCH International (phase 2): Research Inventory And Analytical Country Reports

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1 Project Synopsis

Title of specific contract: **ERAWATCH International (Phase 2):
Research Inventory and Analytical Country
Reports**

Duration of the specific contract: 16/12/2010 to 15/12/2013

Final report – January 2014



2 Introduction

ERAWATCH International Phase 2 (EWI hereafter) was completed between 16/12/2010 and 15/12/2013. The project was linked to:

- The overall Erawatch platform and methodology conceived initially for monitoring R&D and innovation systems and policies in the member states (EW Main)
- Initial work undertaken under a previous contract covering non-EU member states.

The deliverables of the project included with different entry years per country:

- 4 specific templates (regarding measures, policy documents, organisations involved in R&D&I) per country per year, equals 12 each for Mexico, Moldova, Ukraine, South Africa, Argentina, Australia, Chile, Algeria, Egypt, Jordan, Morocco, Tunisia, Canada, New Zealand and 4 templates per country for 2012 and 2013 i.e. 8 in each of the following countries: Brazil, China, India, Japan, Russia, South Korea and United States; eventually more specific templates were produced than contractually foreseen
- 21 country fiches (updated electronically on a regular basis)
- 21x3 = 63 analytical country reports (1 per country per year)
- Seven policy notes with themes specified ad hoc by the Commission news, in the form of highlights, when something important changes in a country.

The structure and content of the country fiches (CFs), templates and analytical country reports (ACRs) were aligned as far as possible to those produced in the main ERAWATCH contract and the ERAWATCH International Phase 1 (EWI-1) contract. The structure of the ACR remained the same in 2011 and 2012, whereas it was changed to reflect the priorities of ERA in EW-Main.

The project dealt with 21 countries, which were, however, gradually incorporated into the process:

Table 1: Detailed presentation of deliverables per country and year

Countries covered	2011	2012	2013
Mexico, Moldova, Ukraine and South Africa	Handover from EWI-1; all deliverables	All deliverables	All deliverables
South Korea	ACR only	Handover from EW-Main, in July	All deliverables
Argentina, Australia, Chile, Algeria, Egypt, Jordan, Morocco, Tunisia, Canada, New Zealand	Handover from EW-Intl1 and first creation of ACR	Updates of Temp/CF and Analytical Reports	All deliverables
Brazil, China, India, Japan, Russia and United States	First creation of Analytical country reports	Handover from EW-Main; Updates	All deliverables



In the middle of the period Moldova changed status, i.e. became associated to FP7 and was expected to join Erawatch-Main. However, to avoid contractual changes and IIMS complications the Moldovan CC continued delivering to EWI-2.

The process has been rather smooth, although certain delays were identified in selected cases and in three cases (Chile, Tunisia and Jordan) the country correspondents had to share their reporting obligations with experienced researchers of the network, because their quality was not satisfactory.

Meetings and teleconferences with the Commission were regular. Minutes were written by the Project Manager and agreed with the Project Officer after meetings involving decision making (Appendix 1). Simple reporting meetings were scheduled in-between. The travel budget was significantly lower than anticipated and funds were saved because

- meetings were usually organised when the Project Manager was in Brussels for other obligations and hence her travel expenses were covered by other projects
- reserve budget for travelling to the countries, if problems occurred, was only once used for Jordan. In all other cases teleconferences have been sufficient to resolve any inconveniences.

At the end of the project a Vade Mecum was produced (Appendix 2), which serves as guidance to potential follow up of the exercise by another project team.

3 Deliverables

The following deliverables were created during the project:

3.1 Analytical Country Reports

A total number of 57 Analytical Country Reports were produced, namely

2011: 15 (All countries minus Brazil, China, India, Japan, Russia and United States)

2012: 21

2013: 21

All Analytical Country reports have been reviewed and accepted by the Commission. They are published in the Erawatch website (IIMS managed by IPTS in Seville) retrievable under http://erawatch.jrc.ec.europa.eu/erawatch/opencms/information/reports/country_rep/. The ACRs were originally expected to reach maximum 30 pages; however most countries did not succeed in keeping this limit if they had to respond to all points addressed in the templates.

The ACRs of 2010 (produced in 2011) were based strictly on the template developed for EW-Main. In 2012 a simplified template was used in order to avoid emphasising issues that are strictly referring to EU policies and in order to minimise repetitions. The length and overlap of the reports with the country fiches had been identified as a problem by the users (Science



Counsellors and Country Desks). Any future exercise needs to take simplicity and shorter size seriously into consideration.

3.2 Country Fiches

Country Fiches were taken over from EWI-1 and EWI-Main and were regularly updated. The final versions of the CFs are published in the Erawatch website (IIMS managed by IPTS in Seville) retrievable under:

http://erawatch.jrc.ec.europa.eu/erawatch/opencms/information/country_pages/

The structure of the CFs was determined by EW-Main and their completion was made on-line over the IIMS. The structure was complex and to a large extent overlapping with the content of the Analytical Country Reports. The slow responsiveness of the IIMS created a lot of frustration to the CCs, when completing it.

All CFs were updated for the last time at the end of in 2013. As foreseen all CF were expected to be updated twice. Some correspondents indicated that there were very limited changes to be reported and in a few cases there was no change at all.

A major problem (which affected also the ACRs) was that, unlike data for the member states, the data for the 21 countries of EWI-2 are not centrally deposited in Eurostat. Some countries have an excellent surveying and reporting system, while others have data with significant lags and/or data that are not internationally validated. In order to ensure compatibility of the data, the overview section was updated regularly. The last update contains the data available at the end of the project, sent to IIMS and updated electronically. Table 2 includes the last data available.

Comparison of the main data is always problematic when countries of different economic performance are concerned: the selection of year and currency affects the overall picture significantly. In general international sources use PPP dollars, but in order to facilitate comparisons with the member states it was agreed to use Euros for the overview and national currencies plus Euros (in brackets) within the text. In certain cases this created confusion and annual growth was affected, as it included the appreciation/depreciation of the national currency. This is another feature that needs to be taken into consideration in future exercises.



Table 2: Basic R&D data for 21 EWI-2 countries

<i>COUNTRY</i>	<i>Population (2012)</i>	<i>GDP per capita (2012) Euros*</i>	<i>R&D intensity GERD/GDP</i>	<i>Year</i>	<i>Share of private sector R&D</i>	<i>Year</i>	<i>Share of public sector R&D</i>	<i>Year</i>
Algeria	38.481.705	4.053,13	0,07	2005	N/A	N/A	N/A	N/A
Argentina	41.086.927	8.771,49	0,62	2010	22,30	2010	72,70	2010
Australia	22.683.600	51.201,91	2,38	2010	61,90	2008	34,60	2008
Brazil	198.656.019	8.594,44	1,16	2010	45,40	2010	52,70	2010
Canada	34.880.491	39.577,84	1,74	2011	46,50	2011	36,10	2010
Chile	17.464.814	11.711,54	0,42	2010	35,40	2010	37,30	2010
China	1.350.695.000	4.616,49	1,84	2011	73,90	2011	21,70	2011
Egypt	80.721.874	2.467,79	0,43	2011	N/A	N/A	N/A	N/A
India	1.236.686.732	1.128,69	0,76	2007	33,90	2007	66,10	2007
Japan	127.561.489	35.410,34	3,26	2010	75,90	2010	17,20	2010
Jordan	6.318.000	3.720,63	0,43	2008	N/A	N/A	N/A	N/A
Mexico	120.847.477	7.388,89	0,46	2011	56,30	2011	37,50	2011
Morocco	32.521.143	2.199,71	0,73	2010	29,90	2010	23,10	2010
New Zealand	4.433.100	28.611,04	1,30	2009	38,50	2009	45,70	2009



<i>COUNTRY</i>	<i>Population (2012)</i>	<i>GDP per capita (2012) Euros*</i>	<i>R&D intensity GERD/GDP</i>	<i>Year</i>	<i>Share of private sector R&D</i>	<i>Year</i>	<i>Share of public sector R&D</i>	<i>Year</i>
Republic of Korea	50.004.000	17.121,57	3,74	2010	71,80	2010	26,70	2010
Republic of Moldova	3.559.541	1.544,34	0,41	2011	51,40	1997	47,80	1997
Russian Federation	143.533.000	10.638,93	1,12	2011	27,70	2011	67,10	2011
South Africa	51.189.307	5.690,24	0,87	2009	42,50	2009	44,40	2009
Tunisia	10.777.500	3.211,16	1,10	2009	20,00	2009	65,00	2009
Ukraine	45.593.300	2.930,88	0,73	2011	27,20	2011	46,00	2011
USA	313.914.040	39.221,31	2,77	2011	60,00	2011	33,40	2011

* conversion rate \$/Euro = 1,3194, i.e 31/12/2012, Bank of Greece http://www.bankofgreece.gr/Pages/el/Markets/isotimies/BoG_Isotimies.aspx?Deltio=1&Hmnia=20121231

Source: Population, GDP per capita: The World Bank Group <http://databank.worldbank.org/data/home.aspx>;

R&D intensity GERD/GDP; Share of private sector R&D; Share of public sector R&D: UNESCO Institute for Statistics <http://www.uis.unesco.org/Pages/default.aspx>



3.3 Templates

An inventory of 306 templates of policy documents, policy measures and organisations produced and/or updated were posted in the Erawatch website retrievable under:

[http://erawatch.jrc.ec.europa.eu/erawatch/opencms/search/advance-search.html?tab=template&subtab=.](http://erawatch.jrc.ec.europa.eu/erawatch/opencms/search/advance-search.html?tab=template&subtab=)

Table 3: Number of templates produced/updated after 15/12/2010 per country

<i>Country</i>	<i>Templates actually produced</i>	<i>Contractually binding templates</i>
Algeria	12	12
Argentina	16	12
Australia	18	12
Brazil	9	8
Canada	17	12
Chile	16	12
China	17	8
Egypt	16	12
India	10	8
Japan	21	8
Jordan*	11	12
Mexico	13	12
Moldova	17	12
Morocco	16	12
New Zealand	15	12
Rep. of South Korea	17	8
Russian Federation	21	8
South Africa	17	12
Tunisia	12	12
Ukraine	12	12
United States	24	8
Total	327	224

*One Jordanian template was never published as it has not been formally published by the national organisation



Initially the templates followed the Country Correspondent – Quality Reviewer – Project Officer loop. It was, however, soon found out that this process for the hundreds of templates produced created a huge overload of work and it was decided, after the second year, to send them directly to publication with Quality Reviewer responsibility.

For some countries the correspondent produced more than the number of templates contractually foreseen, because there were important measures to report or because they were handed over from previous contracts. For other countries, however, the number of measures and policy documents available were not sufficient to cover the contractually binding number. Hence, despite the fact that measures and policy documents were a priority, in order to comply with their contractual obligations (in agreement with the Project Manager and Project Officer), the country correspondents in these countries created also templates on R&D&I organisations:

In terms of type, the breakdown is:

- Organisations 62
- Policy Documents 85
- Support Measures 180

The content of the templates per country is presented in Appendix 3.

After the completion of EW-Main the new contracts for the CCs of the member states did not foresee the renewal of templates, and the overall interest in the Erawatch Inventory has diminished because a lot of its use was made by policy makers and academics who wished to analyse policy trends.

Experience with the template production led to two conclusions:

1. Agreeing ex ante on a number of templates by country and year does not make sense: certain countries have important measures/documents to report in total or in certain periods and not at all in others. It is thus crucial to leave some flexibility (to be reflected in the budget or not) when designing the call for tenders.
2. It is very difficult to manage such a long list with different levels of control. Accountability has to be reduced to one level only.

3.4 Highlights

An additional obligation was the systematic production of highlights of interesting new features. Each time something relevant for RTDI took place in a country the CC was expected to report on it in a short form and post it on IIMS initially. When the ILN¹ was completed the highlights were transferred in terms of news into it.

It proved that the highlights were not very systematically produced. The PM had to remind CCs in regular intervals (approximately every three months) and then highlights appeared

¹ The International Learning Network (ILN) aims at providing an integrated forum to support the dialogue among the main stakeholders involved in the FP7 INCO activities and initiatives.



concentrated in a few weeks after the specific reminder. As foreseen by the EW Main Standards highlights older than 6 months are archived.

Highlights are presented in Appendix 4. There has never been any feed-back on the highlights and there is no information on their value for the overall target of the project.

3.5 Policy briefs

The contract foresaw the creation of 2-3 policy briefs per year, responding to specific requests of the Commission and based on the data included in the formal EWI-2 deliverables. Requests from the Commission started late but were then accelerated as specific Fiches as models were requested for several countries in 2013. The following policy briefs have been produced (Appendix 5):

1. A survey of existing EU/MS expertise on Science, Technology and Innovation on China
2. Cross country analysis on international cooperation
3. 'PILOT' COUNTRY FICHE – Russian Federation
4. 'PILOT' COUNTRY FICHE – MEXICO
5. 'PILOT' COUNTRY FICHE – Canada
6. 'PILOT' COUNTRY FICHE – USA
7. 'PILOT' COUNTRY FICHE – Brazil

The Pilot Country Fiches, which were produced based on a template given by the Commission with minor amendments suggested by the PM, proved to be a concise and interesting way of summarising relevant data and can be used the Country Desks of the Commission to easily monitor progress in quantitative data, once the project is finished.

4 Management and Reporting Issues

Management was rather smooth with few problems emerging when CCs did not deliver on time or did not produce the quality expected. Quality reviewers had to step in sometimes in 3-4 iterations, which created both fatigue and frustration. Cooperation with the Commission was smooth and the travel budget foreseen was not exhausted.

Problem with the IIMS were significant at the beginning. Over the years and with significant support from the Helpdesk most problems were eliminated. It remains, however, that the system is slow and not user friendly.



5 Conclusions and recommendations for potential follow up

The idea of centralised reporting on the R&D&I policies of the 21 countries had considerable value. There is limited evidence of the use of the deliverables produced. Science Counsellors in general reported that the ACRs that they read to send their feed-back on were useful and informative. There are no statistics about the utilisation of the Inventory per country. While we know that third countries were interested and clicked on the EW website², we have no data on the frequency each country was visited. It would be recommended to incorporate a future of this kind in case of a future similar exercise.

While the original idea was to ensure full compatibility between the EW and EWI reporting it soon proved that amendments were needed, which were partly organised in the context of the contract but more will be needed in case the exercise will be repeated in the future:

1. The ACRs and CFs were to a large extent replicating the same information, creating frustration to CCs reporting on the same things twice. This could not be addressed in the present context. However, in the future, it looks more convenient to reduce the CFs to a quantitative, simple and transparent instrument (based on the model of the last policy briefs) and keep only the ACRs as extensive narratives.
2. The structure of the ACRs should be simplified. The current headings created both difficulties for the CCs to keep it to the prescribed size and fatigue to readers. Conversely, certain areas that are important were not treated, as they were not within the ERA objectives, such as:
 - Complementarity of research focus with Europe
 - Detailed analysis of the mode and results of international cooperation in these countries; while a special section was dedicated to international cooperation its focus was descriptive and not analytical.

A much simpler structure is needed and any future exercise needs to take simplicity and length seriously into consideration.

3. For several EWI countries data are lacking (whereas for the member states they are delivered by Eurostat). Cooperation with DG DEV, Eurostat and the UNESCO Institute of Statistics might be worth considering for kick-starting an R&D&I reporting process.
4. A fixed number of templates per country does not make sense, as some countries have many interesting measures/documents to report, whereas in others it is difficult to identify a sufficiently large number of activities to report about. Hence, agreeing ex ante on a number of templates by country and year does not make sense. It is thus crucial to leave some flexibility (to be reflected in the budget or not) when designing

² While about only 30% of the total traffic originated in the EU, it is interesting to note that:

- 38% of visits are supposedly from the “USA” although this includes all visitors hosted on any dot.com site,
- 16% of visits are from Third countries, excluding USA,
- 4 to 5% of visits are from each of the Russian Federation and China



the call for tenders. It is very difficult to manage such a long list with different levels of control. Accountability has to be reduced to one level only.

5. Finally in case a similar project will be launched in the future it will be important to foresee a budget for English editing.

Two institutional points need to be dealt with for the future:

How will the Research and Innovation Observatory (RIO) follow up? It is likely that EWI reporting will be taken over by the Research and Innovation Observatory (RIO) but RIO will mainly focus on the ERA needs and member states. Careful cooperation between the Directorate for International Cooperation and RIO to prioritise the needs of international cooperation will be necessary, keeping a minimum compatibility with member states reporting but avoiding using strait jackets for countries whose systems do not fall within the EU regulatory framework/content.

What will happen to the Inventory? An open question remains on what happens to the IIMS and all the deliverables produced. While we know they will be maintained by IPTS during the immediate future, the value of the deliverables will diminish rapidly as they are not going to be updated. A strategic decision in agreement with EW-Main is needed (not leading necessarily to the same conclusions for member states and INCO). Options include:

- Simply let the IIMS phase out until a minimum number of clicks
- Decide explicitly on an end-date
- Decide explicitly on an end-date and reopen the site once/if RIO has started updating the content
- For the EWI-2 countries discuss with international organisations their potential interest to take over the maintenance and update.