Leading beneficiary: UPNA

M.d.Mar Rubio-Varas
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Document history

Deliverable title: Validated Short Country Reports
Deliverable Nº: 3.6 (WP3)
Beneficiary responsible for the delivery: UPNA (compiled by M.d.Mar Rubio-Varas)
First delivery March 2017 - Rejected September 2017
SCR made available on the web of the consortium after feedback from stakeholders July 2018
Resubmission February 2019
Contributors to this version: UPNA, UB, York, UPF, UCPH, Dialogik, UCln.
Executive summary

According to the original EU call (NFRP-12-2014), the project should be organized in different phases. In the first phase, historians shall provide the core facts and figures, based on available documents and other sources of information, complemented as appropriate by field investigations. However, HoNESt consortium went further and implemented a more integrative approach, by embedding the research process in an interdisciplinary framework combining historical accounts of nuclear developments in what we called Short Country Reports (SCRs) with social science analyses of public perceptions and stakeholder engagement. This approach creates a mutual interdependence of the research and analysis processes carried out by both disciplinary teams.

The very objective of SCRs is to provide social scientists with the empirical basis to be drawn upon for perception and engagement studies. Historians were asked to provide specific evidence for the identification of: events, actors, arguments, behaviours, and types of public engagements encountered over the past 60 years across 20 countries. This framework is simple enough to host data from very different political, social and ideological environments, while some variations in the basic structure of the SCRs are unavoidable. As a result, the SCRs are a distinct product from either what the historians or the social scientists would have produced on their own in the absence of the collaborative framework favored by the HoNESt structure.

Historical data do not speak for themselves; archives are incomplete, ambiguous, contradictory, and confusing. In practice, both the Call itself and the DoA imposed the inductive approach on data collection adopted by HoNESt. The SCR had to provide substantiation of what happened in each country by making use of the best available evidence. There was no imperative to fit the country reports into the existing literature and produce novel arguments, but rather to be systematic in the process of collecting, analyzing and interpreting the evidence in order to answer the questions at stake. For over 20 countries with widely different historiographies, ranging from non-existent to massive, produced in a score of national and regional languages, the resulting task was challenging, and implied making use of a variety of sources depending on the case.

The SCRs are a first step towards providing a long-term historical survey integrating social science analysis of nuclear energy’s relation with society. Imperfect, complex and requiring further analysis and complements during the second half of the project, but the collection of country reports in itself - some of them for countries without any significant historiography so far- is, however one of HoNESt most significant exploitable results and a remarkable achievement. Here we report the process to achieve the final versions of the SCRs.
Objectives of the Short Country Reports

According to the original EU call (NFRP-12-2014), the project should be organized in different phases:

In the first phase, historians shall provide the core facts and figures, based on available documents and other sources of information, complemented as appropriate by field investigations, notably interviews of major players with regard to the selected developments and projects. This should result in a well-organised and documented database and historical record. Based on fundamental research, HoNESt historians shall analyse documentation and produce short country reports (SCRs).

The second phase shall bring-in social science specialists in order to analyse and interpret this information from the perspective of furthering the understanding of the mechanisms for effective interaction with civil society regarding nuclear applications and projects, including the factors underlying perception, participation and engagement.

However, although these were the specifications of the call, in the HoNESt project we have tried to go further and implement a more integrative approach, by embedding the research process in an interdisciplinary framework combining historical accounts of nuclear developments (SCRs) with social science analyses of public perceptions and stakeholder engagement. This approach creates a mutual interdependence of the research and analysis processes carried out by both disciplinary teams.

On the one hand, portraying the development of nuclear technologies in 20 countries, was not intended to produce a set of comprehensive histories. Instead the very objective of SCRs has been to provide social scientists with the empirical basis to be drawn upon for perception and engagement studies. On the other hand, following this approach social scientists have to make use of secondary sources mostly without being able to explore the original references, due overall to the language barriers (bear in mind that HoNESt deals with sources more than 20 national/regional official languages)
Against this background the challenge has been to develop a methodology that enables social scientists to analyse the data and reports delivered by HoNESt historians – given the differences in disciplinary norms within their respective fields. In the first place, contents of SCRs were compiled on the basis of historian’s research methods, and were framed by a chapter structure commonly decided upon by historians and social scientists. To further underline the interdisciplinary character of HoNESt, and at the same time create SCRs that meet social scientists’ needs, members of both disciplines developed a document containing guiding questions historians should aim to take into account when compiling their reports.

This document, the so-called ‘Guiding Framework’ (D.3.1), was devised to help historians in creating SCRs that enables social scientists to understand how different societies have reacted to nuclear developments. The framework requires historians to consider and report on the broader political and societal context within their particular country and the changes that have occurred over time. This provided social scientists with a deeper understanding of why certain events took place and why decisions were taken. Besides emphasizing the need for important facts and figures, e.g. key dates, list of reactors, or data on electricity production, the document specifies the following four issues to be addressed by historians:

- **Events**: For each country, historians should provide a succinct narrative of the course of specific civil nuclear developments that affected this country and citizens since 1950, emphasizing and discussing the key events during this time. Ideally each report should cover five events referring to occasions when important decisions were made or when citizens became engaged in the issue.

- **Actors**: This topic is interested in who the main actors were that have been involved in the civil development of nuclear energy in the time since 1950. Actors can be understood as collective groups sharing interests, positions, cultural features, etc. They can be sometimes represented by individuals holding social, community or institutional positions, or stand out by their active engagement with the issue. Possible actor types encompass ‘promotors’ (e.g. companies, interest organizations, political parties), ‘receptors’ (e.g. civil society organisations, public in general, being affected by nuclear developments in
positive and/or negative ways), and ‘regulators’ or public authorities (policy makers on different levels).

- **Arguments and behaviours:** This issue is about the kinds of discussions that took place within a country about nuclear developments since 1950. These discussions may have been verbal or written and may have taken place at a specific event, or be associated with a distinctive point in the historical development of nuclear energy. Of specific interest are the behaviours of different actors regarding the event. Here it is important to reflect the messages as they were conveyed at the time.

- **Public engagement:** Since the limitations of a one-way information process from institutions to society more and more has become visible, interacting with the public seems to be the means of choice to make (energy) policy decisions socially acceptable. Against this background, historians should provide information on four types of engagement: ‘public communication’ (information is conveyed by promoters to the public), ‘public initiated communication’ (information is conveyed by the public to regulators or nuclear companies), ‘public consultation’ (following a process initiated by the promoters, information is conveyed from members of the public to the promoters), and ‘public participation’ (dialogue-based exchange between members of the public and the promoters). Besides depicting what type of engagement was characteristic for it, for each event historians should convey information when it took place, and who was involved.

Based on these guidelines to data collecting and structuring the reports, country reports were produced that served the needs of social scientists both with respect of analysing engagement activities of actors seeking to support or oppose nuclear power, and drawing conclusions on how social actors perceive and evaluate nuclear energy – in a country and a cross-country perspective.

The present deliverable, D.3.6, offers the 20 SCR that had achieved both internal validation by the partners involved in WP3 regarding the objectives set by HoNESt, and external validation by stakeholders and experts. The SCR reports are designed to assemble information and research
results on the history of the relations between nuclear energy and society in a structured, accessible manner, and to document the findings with references. The purpose of the country reports is threefold, addressing three different audiences:

1. to provide basic elements of narrative and analysis for further historical research by HoNESt researchers
2. to provide information, context and background for further analysis for HoNESt’s social science researchers
3. to provide accessible information on nuclear-societal relations in the various countries for the purposes of outreach and communication with stakeholders (civil society, industry, associations, policy makers, journalists).

Consequently, the SCRs have been used as the basis for further research within HoNESt both by historians and social scientist in working packages 2, 3 and 4, and in the interaction with stakeholders (see external validation section below). Concretely, the following consortium deliverables make explicit use of the findings of the SCRs validated here:

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<th>Deliverable #</th>
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<tr>
<td>2.11</td>
<td>Comparative and transnational analysis on preliminary identification of key factors underlying civil nuclear developments and applications</td>
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<tr>
<td>2.12</td>
<td>Case studies reports: In-depth understanding of the mechanisms for effective civil nuclear developments and applications: selected case studies</td>
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<td>3.7</td>
<td>In-depth case studies reports (main reports) (External Deliverable)</td>
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<td>4.2</td>
<td>Comparative cross-country analysis on preliminary identification of key factors underlying public perception and societal engagement with nuclear developments in different national contexts</td>
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<tr>
<td>4.3</td>
<td>Case studies reports: In-depth understanding of the mechanisms for effective interaction with civil society: selected case studies</td>
</tr>
<tr>
<td>4.4</td>
<td>Integrated comparative report for in-depth understanding of the mechanisms for effective interaction with civil society</td>
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A key feature of HoNESt is the intensive collaboration of historians and social scientists. The ultimate aim of this interdisciplinary endeavour is to explore nuclear-society interactions in a historical perspective in terms of both public engagement and public perception and discover mechanisms that shape the interaction.

**Validation processes (internal and external)**

Both the Call itself and the DoA imposed the inductive approach on data collection adopted by HoNESt. Before HoNESt could venture to explain why something happened (in its second phase), HoNESt had to provide substantiation of what happened by making use of the best available evidence. There was no imperative to fit the country reports into the existing literature and produce novel arguments, but rather to be systematic in the process of collecting, analyzing and interpreting the evidence in order to answer the questions at stake. For over 20 countries with widely different historiographies, ranging from non-existent to huge, the resulting task was challenging, and implied making use of a variety of sources depending on the case. The SCR had undergone successive validation processes, internally within the consortium, and externally once the SCRs were made available for discussion with stakeholders, which feedback has now been included in the SCRs.

The internal process of validation included a series of scoping pilot exercises and draft elaborations which were subsequently evaluated within the consortium. The scoping-pilot exercises for data gathering (D.2.2) and short country reports (D.2.3) showed the feasibility of the approach taken by HoNESt by month 6. The scoping-pilots were evaluated by WP3 (D.3.2 and D.3.3), allowing for the fine-tuning of the strategy. For instance, from the interaction of Historians and Social Scientists, it emerged that, while the historical context was well covered in most of the early drafts by historians, the societal aspect needed more emphasis and a more detailed description and classification in the SCR in order to be of use for the social scientist analysis in subsequent phases of the project. Successive drafts approached these objectives. The SCR drafts elaborated by month 12 were subject to an individual evaluation process (D.3.4). The evaluation paid particular attention to the fact that, the reports constitute the primary sources for
the social sciences phase of the project in WP4 and WP5. As such, the fulfilment of the Guidance Framework (D.3.1) constituted the main criteria of the evaluation. By month 12 some of the short country reports achieved a higher degree of usability than others from a social science perspective, but in general most of the reports were found to be satisfactory. During the final months before the first version of the SCR, the WP2 partners in charge of the elaboration of the reports had received detailed feedback for the final harmonization, with a focus on structure and technical correction of the texts.

As expected, the process has been one of learning by doing. The time and resources spent on scoping exercises, e.g. for data gathering (D2.2, D3.2) or pilot country reports (D2.3) provided important lessons to refine the guidance issued. Thanks to these interactions, and in response to comments from the social science team mediated through WP3, the SCR and the GF itself have been through two major structural and analytical changes. It is possible to see the transformation in structure and analysis by comparing the preliminary and final versions of the reports which are available in M-Files, the Databank of the HoNESt project (https://honest.cloudvault.m-files.com/).

To some extent, variations across the SCR were unavoidable. These variations enrich HoNESt historical accounts. The heterogeneity issue was raised in WP3 reports (specifically in WP3.4). Yet, we need to emphasize that the process of convergence of the SCRs has been huge following the successive rounds of revisions and cross validation. Table 1 provides an overview of how the SCRs converged towards a far more homogeneous set in D.3.6 as they kept including the requested sections and data as the work progressed. This was direct result of the collaboration between historians and social scientist in WP3, and of the multiple rounds of revisions.
The collaboration between social scientists and historians provided structure, direction and meaning to the compilations produced by historians. The Guidance Framework has been practical and productive; it has helped us to understand the mechanisms that shape the interaction between nuclear industry and civil society. The framework is also simple enough to host data from very different political, social and ideological environments. In other words, the SCRs produced by HoNESt (D.3.6), through the many interactions procured in WP3, are a distinct product from what the historians or the social scientists would have produced on their own in the absence of the collaborative framework favored by the HoNESt structure.

**The external validation process** began before the first submission of the SCRs. Some of the SCRs received external feedback from stakeholders already during their initial writing process (for instance Sweden, Spain or the UK some the interviewees gave feedback on the early drafts which included members of supervisory authorities, industry, government and activist).

All of the SCRs were reviewed by an external reader prior to its first submission to the Commission in 2017. This expert reviewer had a background in nuclear engineering and a career in the nuclear field for many years. Yet, the authors of individual SCRs remain responsible for the final content of the reports, which are not necessarily the views of the Consortium or the Commission.

Table 1 Short country reports convergence

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<th>Scoping pilots</th>
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<td>31/8/16</td>
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<td>Nº of country reports</td>
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<td>13448</td>
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<td>standard dev</td>
<td>7606</td>
<td>9655</td>
<td>7002</td>
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<tr>
<td>CV</td>
<td>74%</td>
<td>72%</td>
<td>34%</td>
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Sources: HoNESt M-files.

Note: the coefficient of variation (CV) is a statistical measure of dispersion of a data series around the mean. It is calculated as the ratio of the standard deviation to the mean. In this case it reflects the fact that the length of the SCR reports varied less from each other in each consecutive version.
The 2017 versions of the SCRs were made available to the public on the website of HoNESt since September 2017 seeking to collect feedback from the stakeholders. The existence of the SCRs have also been brought to the attention of the stakeholders present at the stakeholder events that the Consortium held in Barcelona (for Southern Europe), London (for Central and Northern Europe) and in Munich (for Eastern Europe). The collected feedback from these and other interactions has now been introduced in the SCRs, all of which have been revised. These updated versions (July 2018 update) are the ones included in this deliverable.

At the MidTerm Review, the Project Officer requested the involvement of more stakeholders who have experienced these facts from different perspectives to make sure that HoNESt document/statements remain supported by evidence. A number of independent nuclear experts covering different fields of expertise, suggested by CIEMAT, have expressed interest in becoming part of the Reading Group, which together with several of the Working package leaders of HoNESt, and the authors of the SCRs, have been working during the second half of 2018 to achieve a version of the SCRs, with such aims in mind. This process has resulted only in small changes of style and detail. The final versions (after introducing the Reading Group changes) will be published on the website of the project www.honest2020.eu as they become available.

**Final Structure of the Short Country Reports (SCR)**

As the reports are designed to fulfil both the needs of historians and social scientists within HoNESt, and as they reflect various research cultures and writing styles, considerable efforts were required to generate a common structure for the SRC. It responds to a process that began with guidelines provided by the Guidance Framework (D.3.1) back in September 2015. The scoping exercises and the first drafts of the SCR revealed the need for further adaptations and upgrades of the structure in order to meet the several objectives the SCRs had to achieve. The updated Guidance Framework (D.3.1 issue 4) clarified issues of terminology, scope and provided some empirical examples for each of the sections. This allowed WP2 leadership to adjust the instructions to historians - agreed in Berlin in January 2016 - about the structure and contents of the short country reports. After several rounds of interaction, the final structure was fixed at the
consortium meeting held in Barcelona in October 2016. It just slightly altered the original design followed in previous drafts. The 20 SCRIs available at the HoNESt webpage, and to which this deliverable refers, have an identical structure shown in Figure 1.

**Figure 1. Structure of HoNESt SCRs**

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<th>Executive summary</th>
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<tr>
<td>1. Historical context (narrative)</td>
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<td>2. Showcase</td>
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<td>3. Events</td>
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<td>4. Facts and Figures</td>
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<td>5. References</td>
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For dissemination purposes, each SCR is designed as a stand-alone document. As a consequence, all of them are introduced with identical initial paragraphs in their Executive Summary section about their shared nature within HoNESt, before succinctly summarising the specific contents of each report.

The Historical Context (narrative) section (Section 1) provides the basic historical context to the interaction between nuclear industry and civil society in each country case. Because HoNESt focuses on the interaction between nuclear industry and society, the contextual narrative draws attention to how the nuclear sector related to society, how society perceived the nuclear sector, and how citizens participated in these debates (broadly referring to what the social science team highlighted as engagement, perception and participation). This section also includes a specific section listing the main actors involved with nuclear developments in each case, which is essential for the accessibility of the report. Unifying the actors under a single heading facilitates the analysis for the social sciences team besides helping stakeholder readers who may not be familiar with actor constellations in different countries.
Nuclear industry has developed differently in every country. The Showcase (section 2 of the report) introduces one case that demonstrates the peculiar character of the interaction between nuclear industry and civil society in each country. The reasons behind the choice of each case are made explicit at the beginning of the section. The showcase is described and analysed in greater detail and with somewhat more context than the five events of the next section. The showcase illustrates nuclear-societal relations for each country in a particularly compelling manner. When choosing the showcases, the historians were asked to bear in mind the following considerations: a) the case provides valuable information to either comparative or transnational analyses of the interaction between nuclear industry and civil society. b) The case is well documented and there is enough evidence demonstrating the interaction between nuclear industry and civil society.

In section 3, for each country, historians provide a selection key events that affected the relationship of nuclear energy and society in each of the countries since 1950. Historians are inherently reluctant to select specific events in their historical analyses, but in order to facilitate the work of the social scientist, it was agreed that every SCR must include a selection of up to 5 events. We relied on the specific expertise our partners had about their cases, and aimed for a broad coverage of nuclear history, benefiting from an open inductive approach to our event selection. Thus, partners had the freedom to choose the list of events, with no explicit instruction to include any particular type of event in their selection of events. Historians tend to avoid absolute statements about what definitely happened in the past, since that is generally impossible except on trivial points (e.g., there is no doubt when the first nuclear plant connected to the grid). Historians instead prefer to present the argument that best accounts for the largest amount of relevant evidence with the least number of suppositions. Historians favour the most parsimonious interpretation that takes account of the most available evidence. Thus, their choice of events, leads to the construction of arguments that builds on the historical evidence collected. Yet, it is important that all choices are transparent and there is a reason why this set of events was chosen and not another one. To made explicit the reasons behind the choices made, section 3 begins with a critical view of the selection process of the five events. Subsequently, the five events are analysed in depth one by one zooming in on the specifics of actors, engagement and communication activities, etc. The analyses are done through the lens of the analytical
framework provided by the social science team (D.3.1 issue 4). The common framework guarantees that there will be enough comparative material available for the next step of the project.

WP2 partners came forward with almost a hundred events, which have been important for understanding the evolution of the relationship of society and nuclear energy in each of the countries, according to their deep knowledge of the nuclear history of each case. The picture that emerges provides full historical coverage with events proposed expanding across the whole timeline of the development of civil uses of nuclear energy in Europe and beyond (from the early 1950s to 2016). The events also cover a rich variety of occasions marking the development of the nuclear sector, including purely national events, events impacted to a varying degree by international/transnational events and factors, and events leading to support for, or rejection of, nuclear power. Events also varied with regard to technological, sociological and political aspects.

Section 4 of the SCRs, includes a basic set of facts and figures about the nuclear industry and the electricity/energy sector in each country. In most cases, it also includes a brief chronology of events and abbreviation list. The Facts and Figures section was unified for all countries thanks to the efforts made by Dr. Aisulu Harjula from the LUT team.

Finally, all reports include a reference section including the bibliography, archives and interviews utilized by the researchers in the elaboration of the report. We must highlight the breadth and depth of the sources used by the members of the consortium in the preparation of their reports: Consortium partners carried out research in almost 100 archives, including industry, government and other national agencies, private foundations and, scientific institutions. Special mention should be made of the section of oral history. Over 200 interviews have been carried out within the HoNESt project, adding to the over 100 pre-existing interviews which views had also been included in the reports. Interviews include members of the nuclear industry, politicians, scientists, activists, and civil society representatives.
List of validated SCRs

**Austria**

**Published as:**

**Belarus**

**Bulgaria**

**Denmark**

**Published as:**

**Finland**

**France**

**East Germany/GDR**
West Germany/FRG

Published as:

Greece

Hungary

Published as:

Italy

Published as:

Lithuania

Netherlands

Portugal
Russia

Published also as:

Spain

Sweden

Published as:

United Kingdom

Ukraine

United States of America
The preferred citation is to individual SCRs, acknowledging the authorship to the responsible partners, but recognising the nature of the document as a HoNESt Consortium deliverable output. As a general guideline, we propose the following:


Indicating the version is required given that we anticipate potential updates to the contents of the SCRs as the interaction with stakeholders develop in the subsequent phases of the project. Shall these occur, the updates to the SCRs will be published on the website of the project www.honest2020.eu, making clearly visible the date of the update.

Yet, some of the SCRs have been subsequently reworked and published elsewhere. When this happens, the published version, rather than the deliverable shall be cited.