# Independent Observer Report for the

# European Metrology Programme for Innovation and Research (EMPIR) 2018 Calls:

## Support for Networks (NET)

## Research Potential (RPT)

## Metrology Research for Pre- and Co-normative (NRM)

## Metrology for Health (HLT)

## Support for Impact Projects (SIP)

## SI Broader Scope (SIB)

### PART 1 – Public Report

## Dates of Evaluations: 6-15 November 2018

**Independent Observer: Xenia Theodotou Schneider**

**Present at the evaluation: 6 – 15 November 2018**

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# 1. Introduction and Role of the Independent Observer

This report covers the 2018 EMPIR Review Conference and Consensus Group meetings held in Monaco from the 6th to 15th November 2018. The report states the observations and monitoring of the independent observer, Ms Xenia Theodotou Schneider.

This report describes the process that was carried out to implement and execute the Review Conference and Consensus Group meetings for defining the Single Ranked Lists of proposals submitted for each of the EMPIR 2018 topics. The recommendations to EURAMET are included as a separate section to this report. This second section is confidential, whereas the first section may be published by EURAMET.

The independent observer (observer) was appointed by the European Commission to observe all steps of the EMPIR Review Conference 2018.

The role of the Independent Observer is described in Section 6.5 of the EMPIR Call Process Guide 6: "Evaluating EMPIR Projects" https://msu.euramet.org/downloads/documents/Guide6.pdf, which is publicly available:

*"The European Commission may send an 'Independent Observer' to the review conference and consensus group meeting(s). He/she does not participate directly in the evaluation procedure. He/she will have access to all areas of the evaluation process, and will report back his/her observations and opinions on the process to the European Commission."*

The observer's tasks were defined as follows:

1) To act as an independent observer during the EURAMET EMPIR Review Conference 2018 selection processes;
2) To prepare by reviewing the Call and Selection Documentation;
3) To attend the Monaco Review Conferences and Consensus Group Meetings;
4) To provide a draft report to the EMPIR Programme Manager for factual checking by the 5th of December;
5) To produce the draft report into two parts: a public part reporting on the evaluation processes and a confidential part for EURAMET with all recommendations;
6) To take due regard of comments made on the draft by the EMPIR Programme Manager. EURAMET comments will be limited to factual matters, the opinions remaining those of the observer;
7) To produce a final report by the end of December 2018.


Furthermore, it must be noted that:

1) The final report will be provided – unabridged – to the European Commission by EURAMET and shall be of a suitable quality for this purpose;
2) All relevant personnel, including the referees, will be instructed to provide full cooperation to enable completion of the task;
3) Full and unfettered access will be provided to all relevant aspects of the call and selection process to enable completion of the task;
4) The independent observer is bound by confidentiality. To that effect, the observer has signed the same *Form 6a: Code of Conduct and Declaration* as all referees participating in the EMPIR Review Conference 2018.
5) The observer shall only discuss the outcome and provide the report to those who have a legitimate right of access (which includes, should they so choose to contact him/her directly, the relevant Unit of the European Commission).
6) EURAMET reserves the right to publish the report.

# 2. Approach taken by the observer

All steps of the EMPIR Review Conference 2018 were followed by the observer for reporting on the practical workings of the evaluation process, on the conduct and fairness of the evaluation sessions, on the application of the marking criteria and on the procedures and their implementation.

In execution of her tasks, the observer took the following approach:

- Attended all welcome briefing meetings of the EMPIR Review Conference 2018;
- The majority of referee briefing sessions;
- Some proposal representative briefing sessions;
- Poster sessions of all calls;
- The majority of breakout sessions of referees;
- Formal question and answer sessions of referees and representatives;
- Marking Sessions of referees;
- Ranking List sessions;
- Closing sessions;
- Informal interviews of referees, representatives, moderators and MSU staff;
- Informal talks with the EMPIR Chair and Deputy Chair and the EC representative;
- Informal talks with the EMPIR Programme Manager and EURAMET General Secretary;
- Information files and data including briefing materials for experts.

When there were parallel sessions, the observer attended parts of all parallel sessions. The below table provides an overview of the observer's monitoring activity.

Table 1: Number of proposals, experts by topic, and observers' activity

| Calls | No proposals assessed | No of Prop. >Threshold | No of Referees/ Topic | No of Main Referees / Proposal | Observer's Activity* |
|---|---|---|---|---|---|
| Networks (NET) | 6 | 5 | 11 | 5-6 | WS, RS, PS, BrS, ReS, QA, MS, CS, EI, RI, ET, MSU |
| Research Potential Topic (RPT) | 4 | 3 | 8 | 5-6 | WS, ReS, PS, BrS, ReS, QA, MS, EI, RI, ET, MSU, MT |
| Pre- and Co-Normative (NRM) | 11 | 8 | 27 | 6 | WS, ReS, PS, BrS, ReS, QA, MS, CS, EI, RI, ET, MSU, MT |
| Support for Impact Project (SIP) | 5 | 3 | 7 | 3 | WS, RS, PS, BrS, QA, MS, CS, EI, RI, ET, MSU |
| Health Topic (HLT) | 20 | 20 | 38 | 6 | WS, RS, PS, BrS, QA, MS, CS, EI, RI, MSU, MT, EC |
| SI Broader Score (SIB) | 20 | 19 | 37 | 5-6 | WS, RS, PS, BrS, ReS, QA, MS, CS, EI, RI, ET, MSU, MT |

*Observers Activity Abbreviations:
BrS = Referee Breakout Session
CS = Closing Session
EC = EC Representative Talk
ET = EMPIR Representative Talk
EI = Expert Talk
MSU = MSU Talk
MS = Marking Session
MT = Moderator Talk
RS = Referee Session
ReS = Representative Session
PS = Poster Session
QA = Q&A Session

RI = Representative Talk
WS = Welcome Session

The observer has:
- Had an exchange of e-mails and telephone conversations with the EMPIR Programme Manager and the MSU team in charge of the EMPIR call 2018 conference;
- Received copies of the procedural emails sent to referees right before the conference;
- Read the Conference MSU book delivered during the review Conference in Monaco;
- Read the various guides, templates and forms available from https://msu.euramet.org/calls.html and http://msu.euramet.org/downloads/;
- Read the Independent Observer reports and recommendations for the 2015 and 2016 EMPIR Calls;
- Attended the Review Conference and Consensus meetings in Monaco (06 - 15 November 2018):
  - Support for Networks (NET) 6- 7 November
  - Research Potential (RPT) 8-9 November
  - Metrology Research for Pre- and Co-normative (NRM) 8-9 November
  - Support for Impact (SIP) 11 November
  - Metrology for Health (HLT) 12 and 13 November
  - SI Broader Score (SIB) 14-15 November
- Informally discussed during the Review Conference with referees, representatives, the EMPIR Chair and Deputy Chair, the EMPIR Programme Manager and Deputy Manager, the General Secretary, the European Commission Project Officer and members of the Management Support Unit (MSU).


# 3. Selection of Referees

The observer received a detailed briefing from the responsible MSU staff member about how referees are selected and how conflict of interest is handled. All personal data of referees are secured in the EURAMET Referee Database and only assigned MSU staff members have access.

Interested persons to become referees register and send their CVs, which are carefully reviewed. If the candidate referee has previously participated in any way in a EURAMET proposal, she/he is rejected due to ineligibility. Ineligibility can result also if the candidate is working or has previously worked in a national metrology institute (NMI). All registered referees were asked to specify their expertise using a dedicated form provided by the MSU, where they may be considered as specialists only if they declared at least four years of working experience in the relevant field or if they stopped working in the field but have current knowledge. If not, then the referees are considered as generalists.

The EMPIR 2018 selected referees were identified through the EURAMET Referee Database, which is continuously open to new referee candidates. The referees were identified through keyword searches based on the specific topics' competence requirements. In case the MSU cannot identify referees matching the required topics' competences, then it has limited access to the European Commission's Horizon 2020 Expert Database.

Once the referees have been identified, then their CVs are sent to the EMPIR Chair and Deputy Chair for approval. Once the two chairs have approved the referees, then these are asked for their availability and any potential conflict of interest. The first email sent to the referees was the 15/6/2018, one-day after the call topics (SRTs and SNTs) were open. Referees were asked to confirm their availability by the 20/7/2018. Reminder emails were sent on 9, 16 and 23 July 2018. The whole selection exercise takes into account qualifications, nationality, gender, industry/ academic background, and specific topic working experience.

The selection process for the EMPIR 2018 calls was based on matching referees to the specific call topics. The MSU together with the EMPIR Chairs select at least 3 primary referees for the evaluation of each proposal. For all topic evaluations of EMPIR Conference 2018, there were on average 5-6 primary referees for each proposal where at least 3 had specialist experience and the rest generalized experience. This type of information is based on the information provided by the referees themselves. It must be noted that in the referee panels, it is not distinguished who is who, and all referee comments are taken into account during the consensus meetings. This practice provides a good balance of expertise and ensures an in-depth and impartial proposal assessment.

The confirmed number of referees for the EMPIR 2018 conference was 85. Quite a number of referees participate in more than one topic.

The majority of referees have previous EURAMET experience (75%) and 68,2% participated also in EC evaluations. The majority comes from academic institutions and public research centers. The referees represent 28 countries where the countries with the highest percentages are: Italy with 14,8%, Germany with 12,5%, UK with 9,1%, and to be followed by France and Poland with 8%. Women are under-represented reaching 21,5% of the total number of referees. As far as possible, panels had at least one-woman referee, however, it was observed that a few panels had none. Two male referees pointed out to the observer that they would appreciate a better gender balance in their panels.

The following table shows an overview of the referee age, gender, nationality and affiliation profile.

**Table 1: Referee Overview showing gender, age interval, nationality, organisational type and previous referee experience. 85 Referees participated in the EMPIR 2018 Conference.**

| | | | | | |
|---|---|---|---|---|---|
| Male | 69 | 78.4% | Nationalities | 28 | |
| Female | 19 | 21.6% | | | |
| | | | Austria | 1 | 1.1% |
| Average age | 53 | | Belgium | 1 | 1.1% |
| | | | Bosnia and Herzegovina | 1 | 1.1% |
| Age <30 | 0 | 0.0% | Bulgaria | 1 | 1.1% |
| Age 30-34 | 4 | 4.5% | Canada | 1 | 1.1% |
| Age 35-39 | 5 | 5.7% | Croatia | 2 | 2.3% |
| Age 40-44 | 8 | 9.1% | Denmark | 1 | 1.1% |
| Age 45-49 | 19 | 21.6% | Finland | 4 | 4.5% |
| Age 50-54 | 15 | 17.0% | France | 7 | 8.0% |
| Age 55-59 | 13 | 14.8% | FYR of Macedonia | 1 | 1.1% |
| Age 60-64 | 11 | 12.5% | Germany | 11 | 12.5% |
| Age 65-69 | 3 | 3.4% | Greece | 3 | 3.4% |
| Age 70-75 | 9 | 10.2% | Israel | 1 | 1.1% |
| | | | Italy | 13 | 14.8% |
| Org country | 11 | | Lithuania | 1 | 1.1% |
| | | | Malta | 1 | 1.1% |
| Consultancy firms | 0 | 0.0% | Netherlands | 4 | 4.5% |
| Higher Education Establishments | 38 | 43.2% | Poland | 7 | 8.0% |
| Non-research Commercial sector including SMEs | 14 | 15.9% | Portugal | 2 | 2.3% |
| Non-research International Organisations (Association of States) | 2 | 2.3% | Romania | 2 | 2.3% |
| Non-research Public Sector | 0 | 0.0% | Serbia | 1 | 1.1% |
| Private / Commercial Research Centres | 9 | 10.2% | Slovakia | 1 | 1.1% |
| Private Non-profit Research Centres | 0 | 0.0% | Slovenia | 2 | 2.3% |
| Public Research Centres | 16 | 18.2% | Spain | 5 | 5.7% |
| Others | 0 | 0.0% | Sweden | 2 | 2.3% |
| No information given | 0 | 0.0% | Switzerland | 2 | 2.3% |
| | | | Turkey | 2 | 2.3% |
| Previous EURAMET referee | 66 | 75.0% | United Kingdom | 8 | 9.1% |
| Previous EC evaluator | 60 | 68.2% | | | |

# 4. Overall impression

## Scale of complexity of the assessment tasks

Given the number of topics and their proposals, groups of referees and proposal representatives, the EMPIR evaluation process may be considered a complex exercise. All evaluation phases require a great commitment from all actors: from the identification and availability requests to referees, allocation of proposals to referees, remote individual evaluation of proposals, conference preparation and organisation, poster sessions, referee question preparation sessions, question and answers (Q&A) sessions with the representatives, marking sessions to closing ranking sessions. All these steps require an accurate timetable, allocation and organisation of resources, coordination, clear definition of concepts and tasks, and effective and efficient execution. All actors questioned: independent referees, representatives, EMPIR representatives and EURAMET MSU staff confirmed that the process was executed accurately, efficiently and effectively in accordance with all EURAMET rules, guiding principles and Code of Conduct.

## Transparency of the procedures

The referees and representatives recognized the transparency of the evaluation procedures and results, which is also confirmed by the independent observer. The general and specific briefings were clearly presented and they were useful to the referees and representatives. The poster sessions, Q&A sessions and marking sessions within the topic panels were carried out with transparent activities and in an open and positive atmosphere. All proposals received equal treatment and time slots. Representatives answered openly and sincerely. Referees discussed each proposal respecting each other's different points of view and they were motivated to reach consensus. The discussions and decisions of the marking and ranking panels were all executed clearly and transparently.

## Throughput time and efficiency of the processes

The throughput time and the efficiency of the EMPIR 2018 processes were very satisfactory. All six-call assessments of the EMPIR Review Conference 2018 were completed within the planned time frame. Their processes were efficiently planned, organised, moderated and followed by the MSU staff making sure that all six calls and their topics finalised without any delays whatsoever.

## Organisation and implementation of the procedures:

The EMPIR Review Conference 2018 was very well organised. All sites, rooms and poster locations were clearly marked. The handouts for the representatives and the referees were concise, clear and helpful. The nametags were clearly written and colour-coded indicating representatives, referees, MSU staff, EMPIR representatives and observer. The general welcoming briefings and specific group briefings explained the procedures and their sequence. Each referee panel received adequate briefing material in the beginning of the remote evaluation to execute their individual assessments. Representatives appreciated that all evaluation procedures were available online. All information was fully accessible and the procedures well explained. The moderators were well prepared having handbooks to guide them if needed. No delays or any equipment malfunction was observed.

## Conformity of the evaluation process, impartiality, fairness and confidentiality:

The evaluation procedures were conducted in accordance with the Guide 6: Evaluating EMPIR Projects. All assessments were carried out fully, impartially and fairly to the best of the abilities of the referees. The facilitators were attentive in ensuring that each proposal was evaluated in consensus and within the allocated time slot. In each panel, all proposals were allocated the same amount of time.

Referees evaluated the JRPs, JNPs and SIPs on a personal capacity and not as representatives of their organisation, their country or any other entity or affiliation. They were reminded several times that they must act independently, impartially and objectively. They must maintain the confidentiality of the documents before, during and after the Review Conference and Consensus Group meetings.

Confidentiality was fully respected during the EMPIR Conference. During each welcoming session, the EMPIR Programme Manager reminded all referees, representatives and observer that they were all bound to the same confidentiality rules and that all had signed the Form 6a "Code of Conduct and Confidentiality".  At the end of each topic panel session again the EMPIR Programme Manager requested all representatives to keep their confidentiality and to return all papers in the bin for shredding and to delete all electronic copies from their equipment.

The observer can confirm the conformity of all observed procedures, presentations, assessments and consensus sessions as well as ranking sessions to the prescribed rules and ethics of EMPIR.

## *Overall quality of the evaluation process:*

The EMPIR Review Conference 2018 of proposal assessments was successfully completed, fully in line with all the norms and guiding principles. The outcome is that the best proposals have been marked and ranked in a transparent, fair and impartial way. No breaches of confidentiality have been observed or brought to the attention of the observer.

The process of poster presentations by the proposals' representatives and the hearing sessions that followed based on consensus questions proved to be efficient for the proposals assessment and ranking. Both representatives and referees appreciated this process and even have recommended applying it in other European Commission high-profile proposal evaluations as for example 2-stage evaluations with proposals requesting multimillion budgets.

Recommendations are provided in a separate report to EURAMET to further enhance the assessment of proposals and their selection for funding.

# 5. Preparations and Remote Stage

## *Documentation provided to Referees*

The briefing documentation sent to referees was clear and complete. The briefing documentation included examples of suitable wording of comments. All referees received via email the link and login information for getting access to the proposals per topic.

Furthermore, the representatives received from MSU access to the following EMPIR guides:

- Proposers' Guide depending on the nature of the call such as:
  o Guide 4: Writing Joint Research Projects (JRPs) or
  o Guide 11 for NET proposals or
  o Guide 7 for SIP projects;
- Guide 6: Evaluating EMPIR Projects: describes the evaluation process, role and marking guidance for JRPs
- Form 6a: Code of Conduct and Declaration
- Form 6b: Payment to Referees
- Form 6c: JRP Evaluation (marking sheet) or Form 6f for Networks or Form.
- Call Budget and Features: EMPIR Call 2018
- Logistics information for the Review Conference or Consensus Group Meeting including agenda and hotel/travel information
- Reminder to declare any potential Conflict of Interest as soon as they discovered it.

All interviewed referees mentioned that the material received were clear and sufficient for the completion of their task. Concerning the "Support for Networks" NET topic, which has been

embedded in the EMPIR Programme for the first time, representatives mentioned that they would have like to have more information as to how to evaluate this type of proposals. For example, what kind of keywords they should have focused on.

## *Remote Evaluation*

The independent observer did not monitor the remote evaluation while this took place.

The closing date for stage-2 proposal submission was October 01, 2018 for TPs (Health, Networks, Research Potential, Pre & Co ‐ Normative, SI Broader Scope) and September 24, 2018 for Support for Impact (SIPs).

The remote evaluation commenced in October with an email on October 17, 2018 to all referees for all JRPs and JNP from the EMRP ‐ MSU and on October 9 2018 for SIP. The emails thanked the Referees for agreeing to participate in the review conferences. The emails were customised and targeted depending on the Targeted Programme (TP) that the referee had to focus on. The emails were very informative providing:

- Full list of proposals that they would evaluate;
- Link to a password ‐ protected web ‐ page containing the Information for referees, including all the proposals for their TP;
- Matrix showing which proposals and the initials of each referee that would specifically focus on at the Review Conference;
- Preview of what they would be required to do at the Review Conference or Consensus Group Meetings (and what documentary material would be provided);
- Guidance on selective reading;
- Concluding remarks on what they should do if they discover a conflict of interest;
- E-mail address and telephone number for the EMRP ‐ MSU.

A number of referees were asked to assess proposals other than their specialisation in order to ensure that at least 2 "specialists" and one "generalist" assess each proposal. This meets EC requirements, aiming to balance the tendency to mark favourite subjects slightly higher. It is remarked that most of the proposals in all topics had 3 specialists and 2-3 generalists.

Referees were instructed to focus on the assessment of proposals in their own group, but also familiarise themselves with the proposals in other groups to enable meaningful plenary discussions. The majority of referees concentrated on their own group's proposals, but a number also familiarised themselves with the other's groups proposals.

Remote evaluation for SIPs commenced also in October with an email (on October 9, 2018) providing the selected referees with relevant information (guides, evaluation forms) and asking them to confirm their availability and to return the signed declaration (form 6a). They were also requested to fill in and return the specific SIP evaluation form (form 6d) to MSU at the latest by the 22nd of October 2018.

It was observed during the EMPIR Conference, that some referees used the marking sheets to guide their assessments. Those that used the marking sheets were among the most active assessors.

The password ‐ protected web ‐ pages specific to each Targeted Programme or SIP were available to referees and contained more detailed information, including:

For JRPs:

- Guide 4: Writing Joint Research Projects (JRPs): a set of instructions given to the proposers on what to include in their proposal.
- Guide 6: Evaluating EMPIR Projects: explains how the evaluation process will work, explains role and gives marking guidance for JRPs.
- Form 6a: Code of Conduct and Declaration;
- Form 6b: Payment to referees;

- Form 6c: JRP Evaluation (marking sheet).
- Call Budget and Features: EMPIR Call 2018
- JRP Proposals in zip files: documents submitted by the proposers together with the SRT supporting document published by EURAMET listed by Group.
- Logistics information for the Review Conference or Consensus Group Meeting including agenda and hotel/travel information.
- Link to the Call web page so that they could see the briefing information for the proposers.

For NETs:

- Guide 6: Evaluating EMPIR Projects: explains how the evaluation process will work, explains role and gives marking guidance for JRPs.
- Form 6a: Code of Conduct and Declaration;
- Form 6b: Payment to referees;
- Form 6f: JNP Evaluation (marking sheet).
- Guide 11: Writing Joint Network Projects
- Call Budget and Features: EMPIR Call 2018
- JRP Proposals in zip files: documents submitted by the proposers together with the SRT supporting document published by EURAMET listed by Group.
- Logistics information for the Review Conference or Consensus Group Meeting including agenda and hotel/travel information.
- Link to the Call web page so that they could see the briefing information for the proposers.

For SIPs:

- Guide 7: Writing Support for Impact Projects (SIPs): explains how to write a Support for Impact (SIP) proposal for an EMPIR Call.
- Guide 6: Evaluating EMPIR Projects: explains how the evaluation process will work, explains role and gives marking guidance for EMPIR Projects.
- Form 6a: Code of Conduct and Declaration;
  Form 6b: Payment to referees;
- Form 6d: SIP Evaluation (marking sheet);
- Call Budget and Features: EMPIR Call 2018;
- SIP Proposals in zip files: documents (Protocol and Support Letters) submitted by the proposers;
- Logistics information for the Consensus Group Meeting including agenda and hotel/travel information;
- Link to the Call web page so that they could see the briefing information for the proposers.

## Information provided for the Representatives

All topics were clearly announced on the EMPIR participant portal https://msu.euramet.org/current_calls. All interviewed representatives stated that the information and guides provided here are sufficiently clear to prepare their proposals. Moreover, the representatives appreciated having access to the evaluation guidelines and forms in order to better understand and target the evaluation procedures.

## The process of the individual evaluations and the actors involved

Interviewed experts and panels of experts said that the process of individual evaluations was quite smooth. Most asked referees said that they have allocated more than half day per proposal. A few said that it takes them more than a day.

# 6. EMPIR Review Conference 2018 Procedures in detail

The EMPIR Review Conference 2018 was scheduled over 10 days from 6 to 15 November 2018 in Monaco. The conference was organised in sections of 2 days dedicated for each topic except for the SIP that lasted one day (Sunday 11 November). Saturday 10 November was a free day. Thus, the conference was organised per topic-sessions as follows:

- 6- 7 November Support for Networks (NET)
- 8-9 November Research Potential (RPT)
- 8-9 November Metrology Research for Pre- and Co-normative (NRM)
- 11 November Support for Impact (SIP)
- 12 and 13 November Metrology for Health (HLT)
- 14-15 November Support for Impact Broader Score (SIB)

Participants were the EMPIR Chair and Deputy Chair, the EURAMET General Secretary, the EURAMET Programme Manager and Deputy Programme Manager, an EU Commission representative, the MSU staff, the Referees, Proposal Representatives and the Observer. Some of them attended only relevant parts. Many referees participated in several topics.

Each topic session begun with registration of referees and representatives where a specific driver-document was handed-out detailing the agenda, proposal groups, map for the posters, and allocation of referees to proposals.

## *On-site briefing sessions*

Each topic session had two days (except for the SIP topic that had one day), where the first day started with a welcoming address and general briefing session by the EMPIR Programme Manager, who highlighted the goals of EURAMET, the EMPIR Programme and its objectives, its funding, the call process, the expected outcome of the review conference, the requirements for confidentiality and other referee obligations, and the programme of the day (to both Referees and Representatives).

After the general welcoming session for referees and representatives, there were specific sessions highlighting the evaluation procedures for the referees; and the assessment procedures and what to expect if funded for the representatives. Representatives were recommended to be attentive of the referees' questions and use the free time they had to call their consortium for more clarifications if needed. Representatives could show pictures, draw and/or use handouts, but no videos, to clarify important points of their proposal.

The referee-group briefings were chaired by the group facilitator, who invited the referees to introduce themselves. Then the facilitator assigned one specialised referee per proposal to act as mini-chair for the Q&A session. The facilitator briefly reiterated the assessment procedures and invited the referees to ask questions.

The observer attended all welcoming briefing sessions and either the referee or representative sessions depending on the size of the topic. For the larger topics with more than one group of referees, the observer chose to follow a group with a facilitator that she had not followed before. The briefing sessions (welcoming and topic specific) were well prepared, comprehensive and clearly presented.

## *Referee understanding of the call (context, topics), of the evaluation process and their role, the criteria and marking scheme*

Overall, referees understood well their role, process, criteria and markings. For referees, who attended for the first time, the process was not completely clear and those asked by the observer said that they did not know really what to expect. One of the experts said that she was "*terrified as to what to expect".* When asked again at the end of the conference said that the process was very interesting, they were glad that they actively participated and that they had learned a lot.

Interviewed referees participating in the NET assessments suggested that they would have liked to have more explanation about the goal of the topic and what key-points to focus on while assessing the NET proposals.

It was observed several times during the NET and the NRM that referees had to remind themselves during consensus sessions the goal of the call, in order to refocus their criticisms. Asked referees said that they wished to have had a review of the call text during the topic briefing session focusing on key consideration points before starting the assessment.

Some representatives, who were non-native English speakers, said that the call wording was quite complicated. They also said that when they asked the MSU for clarification, they received an answer within 2-days, which was sufficient for them. The MSU has made provisions on the EMPIR Portal to provide Q&A per Call. However, all the documents providing Q&As are empty.

## The process of poster sessions

The poster sessions were well organised with clearly marked positions for each poster. The hand-outs included tables indicating each poster-proposal-code, representative and assigned referees. Each poster session lasted either 25 minutes or 20 minutes depending on the pre-allocated time-slot. The last poster session was open to referees to visit other posters not assigned to them. This last exercise enabled referees identifying similar proposals. The representative had 5 minutes to present her/his project-poster and then the referees had 15-20 minutes of informal questions. It was observed that most of the time the poster presentation lasted 10-15 minutes depending on the representative.

The MSU staff made sure that the time-slots were kept and that referees visited their allocated representatives. It was observed that all actors, representatives and referees, were motivated to listen, question and discuss the presented proposals. The meeting room layout fitted the sessions well, given the small informal meeting style of 1 or 2 referees simultaneously with the Representative. There was sufficient space between posters to allow undisturbed discussions around each poster, even though very few referees said that the rooms were very noisy and had difficulty to listen. One representative with a hearing impairment was well taken care of in order to facilitate his poster session.

All interviewed representatives and referees appreciated the poster sessions finding them very useful to further understand the proposed projects and to clarify any doubts.

It was observed that posters, which were clearly illustrated with only relevant information and large font facilitated further the discussions and understanding of the referees.

## Preparation of the formal questions and answers session

After the poster sessions, the Representatives had three hours prior to the formal Q&A sessions, allowing them to consider the content of the poster sessions and to contact their consortium if needed.

The referee breakout sessions were chaired by the MSU facilitators and assisted by the MSU note-takers. The facilitators explained the process of defining consensus questions for the representatives. The facilitators explained the purpose of the session, which was to define and reach consensus on a shortlist of typically 7 to 8 questions for the formal Q&A sessions with the each proposal representative.

The observer attended several sessions by either following all proposals within a group, if there was only one group for the topic, or 1-2 proposals per group but covering all groups of a specific topic.

The MSU facilitator moderated the session, so that referees formulated concise questions based on a short discussion. The order of questions was reviewed and adjusted accordingly. The mini-

chair referee for each proposal was invited to initiate the elaboration of the first question(s), and then all referees were invited to actively contribute to the development of questions and to agree on their importance and order in which they should be asked. Once the questions were formulated after a short discussion among referees, the facilitator asked the referees to review all the questions. The sequence of the questions was carefully checked and questions were moved up or down in the ranking. The notetaker was writing online the questions, which were displayed for all referees. When all questions for all proposals were finalised, the facilitator printed out the list of questions, which were given to the respective mini-chair. The questions were not printed for the rest of the referees. Some referees commented that they would have wished to have a copy for recording the answers during the formal Q&A session.

During this EMPIR Conference, only the mini-chair was allowed to read the questions to the representative and no other referee may ask supplement questions or clarification questions, as these would not represent the consensus of the group. Each proposal Q&A formulation session was time-boxed to 35 minutes. The facilitators were effective in keeping the timing.

It was observed only on one occasion that a referee had to step outside due to a conflict of interest and not take part to the question formulation.

## Formal Question and Answer sessions with the Representatives

The MSU staff gathered the representatives outside the Q&A rooms in sets of three. The representatives were briefed by the Q&A facilitator of what to expect: that they would be questioned by only one referee, the mini-chair, and that they had 15 minutes to answer the questions.

The MSU facilitator, who was assisted by a note-taker, chaired the formal Q&A sessions. The facilitator instructed the referees to take their own notes on each question, since the MSU was not going to provide the representatives' answers to the referees. The referees were reminded that they should not interact with the Representatives after the Q&A sessions.

Both the facilitator and the note-taker wrote down the answers provided by the representative. Each Q&A session was time-boxed to15 minutes. The representative would sit alone in front of the group panel, which had the form of a U. In some rooms there was a chair and a table for the representative and but in most rooms there was only one chair.

The facilitator reiterated the process of the Q&A session, the 15 minute-duration of the session, and that only the mini-chair would read the questions. The moderator told the representative how many questions she/he must answer and she/he was free to decide how long, within the specified time slot, she/ he would spend answering any question. Furthermore, the facilitator said that she/he would signal the representative when there would be 5 minutes left and if there was still some time left, the representative could make some comments/statements as she/he wished. Some facilitators explained to the representatives that the note-taker and the facilitator would be recording the answers and not marking the representative. This statement put somehow at ease the representatives.

It was observed that the majority of representatives answered all of the questions with confidence and competence. When there was time left after the questions and after prompted by the facilitator, several representatives took the opportunity to clarify, correct or complement the information delivered to the referees during the poster sessions.

In one session only, one referee, who was not the mini-chair, after the last question and answer "broke" the rule to provide some information to the representative based on their poster discussion. The facilitator immediately intervened asking the referee to stop.

All Q&A sessions, except for the TP NET, were planned following the proposals' numbers in ascending order.

The observer followed the majority of the Q&A sessions. Where there were parallel Q&A sessions, the observer followed as much as possible, those sessions that she had followed their poster sessions and their Q&A preparation sessions. It was observed that the moderator and the notetaker were writing the answers. These answers were not shown to the referees in the next steps of the process. The mini-chair had a double role, to ask the question and to write down the answer. Some mini-chairs were able to do this but some did not manage to record some of the answers. Other referees that were not mini-chairs did write down the representative's answers.

It was observed that the timers used by the moderators were either counting up or down.

When asked referees said that the Q&A session is very valuable to them. Some if even suggested to have more than one representative present at the Q&A session to cover the most critical competences required convincing the referees.

## Marking Sessions Criteria and scoring scheme: appropriateness, completeness, relevance, clarity and consistency in application.

After the formal Q&A sessions, the facilitator, notetaker and referees met in the same meeting rooms, the following day in order to reach consensus and mark all allocated proposals. At the start of the sessions, the facilitators reminded the criteria and weight of scores for evaluation. The facilitator asked the representatives to evaluate the proposals as they are and not as they could be such as improvements, change of work-plan etc. Representatives were asked to take into consideration the information provided during the poster sessions and the formal Q&A sessions. Most evaluation sessions were planned to last between 35 – 40 minutes. The majority of the consensus sessions were completed within this time frame. Proposals with wide-consensus took less time. Furthermore, the Facilitator explained that the comments of the assessment report were useful to MSU for the contractual phase. The referees were asked to be as blunt and concise as possible since MSU would rephrase the comments before they are sent to the representatives.

The MSU facilitators initiated the discussion by inviting, on each criterion, the mini-chair referee to start by expressing his/her comments resulting from all inputs received. Other referees join the discussion with their arguments. The notetaker was responsible for drafting on-line comments of consensus report that were displayed for validation by the referees.

The marking scheme used was the same as the one used for H2020 evaluations and it was visibly hanging in the room. The referees were urged to use the whole range of scores from 0 to 5. Half marks were allowed.

The criteria and sub-criteria were recognized as relevant and the referees used them. Facilitators prompted the referees with the sub-criteria keywords to facilitate the consensus and the marking. Referees and facilitators consulted regularly the scoring scheme. When referees were not reaching 100 % consensus at once the facilitator was marking the score with a star, a plus or a minus so that the mark was revisited at the end until agreement was reached. The mark was always reviewed based on the consensus comments and clearly marked under the corresponding criterion for each proposal. All marks for all proposals were clearly displayed on the proposals marking table on the flipchart in the room. Many referees did seem to understand the difference between a shortcoming and a weakness.

During the drafting of the consensus reports, notetakers were highlighting negative comments in bold to help the marking.

When all proposals were marked, the facilitator asked the referees to review together the marking table. Proposals' marks with star, minus or positive signs were revisited by the panel, adjusted accordingly and finalised. Then the notetaker would display an excel sheet with all group's proposals' marks, total mark and weighted mark. If there were any ties, then these would be examined and untied if necessary. Then the group-ranking list would be produced. The facilitator always asked the referees if they agreed with the ranking list. It was observed that

only in one panel, the ranking list was modified by the referees to better fit their opinion for the best projects.

Each marking session, ended by printing the consensus reports and signed by each of the referees.

During the marking sessions, the Programme Manager circulated between the Groups to collect emerging marks for obtaining a preliminary view of the Single Ranked List and to prepare for the subsequent presentation of the ranked list to the referees.

## *The process of the Closing Session*

The Closing Session took place on the second day of each JRP sub-conference and during the afternoon of the single day of SIP. The purpose of the Closing Session was to review the Single Ranked List, untie any tied proposals, approve and sign the final single ranked list.

The EMPIR Programme Manager chaired the session. All referees of each sub-conference were present. The deputy EMPIR Programme Manager also assisted the EMPIR Programme Manager. The EMPIR Chair or deputy EMPIR Chair was present at each sub-conference. The EC representative was present only during the HLT and SIB closing sessions.

The EMPIR Programme Manager displayed the Single Ranked List for the JRPs/JNPs/ SIPs that was a consolidation of the group ranked lists. The EMPIR Programme Manager explained the procedure to untie proposals with equal scores, and the line where the cumulated requested funding reached the available budget. There were some tied proposals above the funding line and the EMPIR Programme Manager requested the referee panel to approve their sequence without untying since both proposals were going to be funded. The referees accepted.

Untying proposals is a critical task for proposals very close to the funding cut off line. Tied proposals are proposals with equal total weighted scores. The EMPIR rules for untying proposals are: 1) Rank first the proposal with the highest weighted Impact for Health, Normative and Research Potential. In the case of Networks and SI Broader Scope, the proposal with the highest weighted Excellence goes first. 2) If the proposals are still tied, then proceed by ordering them by the level of external participation that would lead to an external participation amount closest to the topic target.

There were no situations where proposals very close to the line had to be untied. All referees agreed with the proposed ranking and signed it. All single ranked lists were to be submitted to the EURAMET EMPIR Committee for final approval and funding decisions. This meeting was schedule to take place on 19 November 2018.

At the end of each closing session, all referees had to sign the final single ranked list. The EMPIR Programme Manager and the EMPIR Chair/ Deputy Chair invited referees for any comments and last thanked the referees for their contribution.

Finally, all experts were reminded of their binding confidentiality and they were asked to hand in all conference documentation and to delete all electronic files prior to departure. They were also invited to fill in a questionnaire to provide a feed back to the MSU team on their opinion about all aspects of the evaluation process.

The observer attended all closing sessions. All sessions were orderly and well executed. The ranking lists were produced based on the scores of the proposals.

## *Evaluation summary reports and final funding ranking list*

The MSU staff reworded all proposal consensus reports in order to provide suitable messages to the representatives. The observer did not see the ESRs.

The EMPIR Programme Manager explained during the briefing sessions that the EMPIR Committee would decide the final funding ranking list between the 19 and 23 of November

2018. The funding ranking list is based on the single ranked list decided in plenary by the referees.

## *The occurrence and handling of Conflicts of Interest during the EMPIR 2018 Conference*

EURAMET takes conflict of interest (COI) very seriously and MSU has clear procedures how to handle COI when it arises.

The definition of COI is when one or more of the following situations arises:

- was involved in the preparation of the proposal stands to benefit directly or indirectly if the proposal is accepted;
- has a close family or personal relationship with any person representing an applicant legal entity;
- is a director, trustee or partner or is in any way involved in the management of an applicant legal entity;
- is employed or contracted by one of the applicant legal entities or any named subcontractors;
- is a member of one of the Technical Committees of EURAMET.

In the following situations, EURAMET decides whether a conflict of interest exists, taking account of the objective circumstances, available information and related risks when a referee:

- was employed by one of the applicant legal entities in the last three years;
- is involved in a contract or grant agreement, grant decision or membership of management structures (e.g. member of management or advisory board etc.) or research collaboration with an applicant legal entity or the fellow researcher, or had been so in the last three years;
- is in any other situation that could cast doubt on their ability to participate in the evaluation of the proposal impartially, or that could reasonably appear to do so in the eyes of an external third party.

In case of a COI is reported by the referee or established by EURAMET, the referee must not evaluate the proposal concerned, or take part in any discussions related to the proposal. If a conflict becomes apparent at any stage of the evaluation, the referee must immediately inform EURAMET. If a conflict is confirmed, the referee must stop evaluating the proposal concerned. Any comments and scores already given by the referee will be discounted. If necessary, the referee will be replaced. If it is revealed during an evaluation that a referee has knowingly concealed a conflict of interest, the referee will be immediately excluded. Any consensus group in which they have participated will be declared null. The consensus group meeting will be reconvened and the proposal(s) concerned will be re-evaluated.

During the EMPIR Review Conference 2018 eight COI incidents occurred during EMPIR Review Conference 2018 assessment to the knowledge of the observer and the following actions took place by EURAMET:

- One of the referees was sent home due to a personal COI; there was no need to replace him since there were a sufficient number (10) of referees on the panel.
- The other seven referees were excluded from those proposals' discussions but allowed to participate in the ranking list discussion and later in the closing session.
- One of these seven referees became aware of the COI because he had read the proposals over the weekend and not in the designated period as the MSU had instructed. He was present during the panel meeting.

## *Overall conduct of staff: responsiveness, competence, hospitality …*

The overall conduct of staff was exemplary. All MSU staff members: facilitators, notetakers, support staff, the EMPIR Programme Manager exhibited a very high degree of skill, diplomacy,

competence and humour. Everyone felt welcomed and the whole atmosphere of the EMPIR Conference 2018 was positive and constructive.

The facilities, catering and hospitality services were very satisfactory.

### *Honorarium of referees*

Only one expert made a comment regarding the honorarium mentioning that it is not interesting for someone coming from an SME and for Western Europe.

## 7. Conclusion

After attending the whole EMPIR Review Conference 2018, the observer can conclude the following:

The process and procedures were carried out in accordance with the rules established in Decision No. 555/2014/EU of the European Parliament and of the Council on participation of the Union in EMPIR (15 May 2014), Regulation (EU) No. 1290/2013 of the European Parliament and of the Council laying down the rules for participation and dissemination in Horizon 2020 (11 December 2013, with one derogation for the funding rate) and the draft Horizon 2020 Model Delegation Agreement for Article 185 Initiatives (September 2014).

The overall evaluation process was conducted in an effective and efficient manner and the referees carried out their work with seriousness and in full compliance with the guiding principles of impartiality, accuracy, independence and consistency.

The Call documentation and all correspondence with the Referees were comprehensive.

The Review Conference was well organized, timed and executed.

The topic outcomes in the Single Ranked Lists were based on excellence of execution, impact and implementation criteria and they were well-suited for submission to the EMPIR Committee for funding consideration and approval.

The overall call process and assessment procedures are following the Horizon 2020 guidelines. Based on the feedback received from representatives and referees, it is clear that the poster sessions and formal Q&A sessions prior to the consensus meetings are highly appreciated and regarded as necessary steps for an impartial assessment. This type of assessment may be considered in the Horizon Europe planning for second stage proposals with large investment budgets.

For an observer, who has participated in FP7 and H2020 calls, I can confirm that the proposals have received equal assessment; that the EMPIR Review Conference 2018 was conducted in compliance with the EMPIR guidelines with diligence, professionalism and timeliness; and that the organisation, logistics and execution of the conference were outstanding.

## 8. Acknowledgements