

MINUTES OF THE MEETINGS OF THE INTERNATIONAL JURY

September 25 and 27, 2014
Palacio de la Magdalena, Santander, Spain

The following agenda items were discussed and decided upon:

- MEDALS TO BE AWARDED:** As per the statutes of IESO, it was decided to award the following number of medals: 9 gold, 17 silver and 25 bronze medals (i.e., 10%, 20% and 30% of 82 students that will take part in the 8th IESO). Besides, honorary bronze medals will be awarded to the best student of a country which will not bag any medal in the 8th IESO. **(ACTION: 8TH IESO ORGANISING COMMITTEE)**
- EMAIL ADDRESSES:** The organisers of the 8th IESO were requested to circulate the names and email addresses of all the mentors and observers who attended the 8th IESO in Santander. **(ACTION: 8TH IESO ORGANISING COMMITTEE)**
- REVISION OF IESO SYLLABUS:** The official syllabus for IESO was drafted several years ago. It was felt necessary to revise it now. Therefore, it was resolved to ask the IESO Syllabus Commission to revise the IESO syllabus urgently so that it can be implemented for the 2015 IESO. Mentors, Observers and IGEO Council Members were requested to email their suggestions for syllabus revision to Prof Nir Orion, Chair, IESO Syllabus Commission (Nir.orion@weizmann.ac.il) with a copy to the Chair, IGEO (rshankar_1@yahoo.com). **(ACTION 1: MENTORS, OBSERVERS AND IGEO COUNCIL MEMBERS; ACTION 2: CHAIR, SYLLABUS COMMISSION)**
- EARTH SYSTEM SCIENCE APPROACH IN IESO:** Planet Earth functions as a single system comprising subsystems, which interact and exchange matter and energy among themselves. The Earth System Science approach in framing questions was adopted in a limited way in the 2013 IESO and in an extensive way in the 2014 IESO. To make young students

across the world recognise and appreciate this fact early in their educational careers, it was resolved to formally adopt the Earth System Science approach in IESO testing for IESO 2015 and beyond. **(ACTION: EXAMINATION BOARD – SEE BELOW)**

5. PREPARATION OF QUESTION PAPERS FOR IESO:

Hitherto, the procedure and practice was for the scientific committee of the host country to prepare the question papers for IESO. The observation has been that there were some or many questions (a) that were not of school level but of university level (may be because questions were prepared by university professors and scientists and not school teachers or earth science educators), (b) that tested the memory of the students, (c) that did not test the thinking ability or analytical skill of students (d) that were outside of the official IESO syllabus, etc. This meant that IESO was veering off the course and direction in which it was supposed to be moving. Besides, preparation of question papers has always been a big responsibility for the host country, which demanded and diverted considerable time and attention from organisational work.

Therefore, it was resolved to have a small committee (hereinafter referred to as “Examination Board” consisting of about 4-5 people) of the Test Commission which will finalise the question papers for the 2015 IESO and beyond. The Chair, Scientific Committee of the host country, and mentors and observers of all countries are welcome to send questions and ideas in this regard to the Chair of the Examination Board. **(ACTION: CHAIR, SCIENTIFIC COMMITTEE OF THE HOST COUNTRY, AND MENTORS AND OBSERVERS OF ALL COUNTRIES)**. The Chair, IGEO, will nominate members of the Examination Board but will ensure that they will not be involved in training the national team of his/ her country for the particular year. The members should be such that they will be willing to give of their time, energy and efforts in good measure for the work of the Examination Board. They must also have adequate contacts with experts from across the world in different disciplines of earth sciences to ensure that the question paper reflects all aspects of the syllabus. **(ACTION: CHAIR, IGEO)**

The Chair, IGEO sought suggestions regarding names of school teachers, earth science educators, university professors and scientists who can be included in the Examination Board. **(ACTION: IGEO COUNCIL MEMBERS, MENTORS AND OBSERVERS OF ALL COUNTRIES).** These suggestions must reach the Chair, IGEO by October 30, 2014, after which he will nominate members to the new Examination Board. The Board will ensure that the questions:

- Will be of good quality to be included in IESO,
- Will be of school level and not of university level,
- Will not test the memory, but the thinking ability or analytical skills of students,
- Will conform to the Earth System Science approach and not the compartmentalised “sub-sphere” approach adopted so far,
- Will encompass all the different aspects of the syllabus, and not biased towards any aspect,
- Will pertain and conform to the official IESO syllabus,
- Will represent a fair balance between theoretical (written) and practical aspects,
- Will not have long introductory remarks which will make the translation work arduous and time-consuming, and
- Will ensure that the IESO editions in the future will stay on course, will be consistent and will serve and promote the goals of the IESO and IGEO,

Note: The Examination Board has to prepare additional questions so that, if necessary, these questions may be used. **(ACTION: EXAMINATION BOARD)**

Practical test/s: The host country will suggest appropriate questions/experiments for practical tests depending on the outcrops, opportunities and conditions available near the town/ city where IESO will be held. However, the Examination Board will ensure that questions for practical

tests too will satisfy the criteria mentioned above. **(ACTION: EXAMINATION BOARD)**

It was resolved to request the Chair, Test Commission to prepare sample/model questions using the Earth System Science approach for publication on the IESO and IGEO websites so that all nations involved in IESO can familiarise themselves with the new approach and train their respective national teams appropriately for the 2015 IESO and beyond. **(ACTION: CHAIR, TEST COMMISSION)**

Further, it was resolved that the host country of the 2015 IESO and beyond will waive the registration fee for the members of the Examination Board and the Chair, IGEO. **(ACTION: FUTURE ORGANISERS OF IESO)**

6. **INTERNATIONAL TEAM FIELD INVESTIGATION:** The host country will organise ITFI for teams of participants. However, this has to be done as per some established procedures and rubric for evaluation. The Chair, IGEO requested members of the Jury to email suggestions in this regard before October 20, 2014 so that they may be consolidated. **(ACTION: MENTORS AND OBSERVERS OF ALL COUNTRIES)**

7. **EARTH SYSTEM PROJECT:** This novel item was introduced for the first time at the 7th IESO in India. Dr Xavier explained that due to inadequate time that was available for the organisers, this project could not be planned and executed during the 8th IESO. It was resolved that the Earth System Project be continued in the future editions of IESO. **(ACTION: FUTURE ORGANISERS OF IESO)**

8. **DISCUSSION OF CORRECT ANSWERS:** After all the IESO exams are over, the members of the Examination Board should discuss with the students the correct answers for the questions and the procedure adopted to arrive at the correct answers. **(ACTION: EXAMINATION BOARD AND FUTURE ORGANISERS OF IESO).**

9. **ROLE OF MENTORS AND OBSERVERS:** The role of Mentors and Observers should be clearly defined and incorporated in the IESO statutes. (ACTION: IGEO SENIOR OFFICERS, COUNCIL MEMBERS, MENTORS AND OBSERVERS OF ALL COUNTRIES).

10. **REVISION OF ELIGIBILITY CRITERIA FOR PARTICIPATION IN IESO:** It was resolved that any student who has already participated in an IESO and who wants to participate in a subsequent IESO may do so only as a guest student and not as a student member of a national team. This means that he/ she will not be able to compete for any of the medals at the second and subsequent participation in IESO. (ACTION: FUTURE ORGANISERS OF IESO)

11. **QUESTION PAPERS (BOTH ENGLISH AND TRANSLATED VERSIONS) OF ALL EDITIONS OF IESO:** It was resolved to publish question papers (both English and translated versions) of all editions of IESO on the IESO and IGEO websites for the benefit of all countries, as they constitute an important resource. (ACTION 1: PREVIOUS IESO ORGANISERS; ACTION 2: IGEO AND IESO WEBMASTERS)

12. **HOST COUNTRY FOR THE 2015 IESO:** The Chair, IGEO brought to the notice of the Jury that as per an email from Prof Evgeny Nesterov, it was not possible for Russia to host the 2015 IESO at St Petersburg. Therefore, he urged members of the Jury to volunteer to host or to hold discussions with prospective host countries for the 2015 IESO. (ACTION: CHAIR, IGEO)

13. **GENERAL:**

- All the resolutions made in this Jury meeting will be used to revise the IESO statutes accordingly. (ACTION: CHAIR, IGEO)

- The revised statutes of IESO will apply for the 2015 IESO and beyond.

- The revised statutes of IESO will be published at the IESO and IGEO websites. (ACTION: IESO AND IGEO WEBMASTERS)