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voor Wetenschappen en Kunsten

The Royal Academies for Science
and the Arts of Belgium

Belgian National Scientific Committees

Belgian Federal Science
Policy Office

BELGIAN NATIONAL SCIENTIFIC COMMITTEES
ANNUAL REPORTS 2014

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INTRODUCTION

The National Scientific Committees' missions are the promotion and coordination of various scientific disciplines in Belgium, mainly seen in an international context. The creation of a national committee is subject to the existence of an international scientific union affiliated to ICSU or a scientific body of ICSU (scientific committees, special committees, etc.) concerning the same scientific discipline.

The National Scientific Committees work under the patronage of the Académie royale des Sciences, des Lettres et des Beaux-Arts de Belgique¹ and the Koninklijke Vlaamse Academie van België voor Wetenschappen en Kunsten², which are gathered in RASAB.

The committees are subject to regulations adopted by the Belgian Academies of Sciences and Arts.

The list of the members of the Belgian Scientific Committees can be found on the RASAB's website: www.rasab.be.

¹ www.academieroyale.be

² www.kvab.be

NATIONAL COMMITTEE FOR ANTARCTIC RESEARCH

1. Introduction, mission, goals

According to its Terms of Reference, the goals of BNCAR are defined as follows:

[a] General Terms of Reference:

- Forum to bring members together to share information, identify common problems and to seek collective vision and endeavours for Belgian Antarctic (and Arctic) research.
- Strategy to identify scientific and operational issues of strategic importance with respect to Belgian Antarctic (and Arctic) research and activities.
- Voice to express a collective vision for the future Belgian Antarctic (and Arctic) research and activities in relation to developments in Belgium, Europe and the World.

[b] Specific National Terms of Reference:

- Participate in the Belgian coordination bodies concerning Antarctic research.
- Establish by means of invited speakers or surveys an overview (State of the Art) of Belgian Antarctic (and Arctic) research and activities.
- Organize - whenever appropriate – manifestations, symposia, etc. – to promote Antarctic (and Arctic) research.
- Voice – whenever appropriate or necessary – our concerns about the state of the environment in Antarctica (and Arctic) within the framework of sustainable development.
- Promote Polar science in general within the Belgian context.

[c] Specific International Terms of Reference:

- BNCAR is the official representing body of Belgium within SCAR (Scientific Committee on Antarctic Research, ICSU). This implies that BNCAR members can participate in SCAR meetings, contribute to establish the Belgian annual report to SCAR and respond to particular information requests from SCAR.
- Give advice or respond on matters raised within international bodies such as the ATCM (Antarctic Treaty Consultative Meeting) and its CEP (Committee for Environmental Protection), CCAMLR (Convention for the Conservation of Antarctic Marine Resources), CCAS (Convention for the Conservation of Antarctic Seals), EPB (European Polar Board).
- Promote (Belgian) Polar science at an international level.

2. Meetings of the Committee

[a] Plenary meeting of 10 November 2014

The agenda was:

1. Approval of the report of the meeting of 13 December 2013
2. Report on the past SCAR OSC and Delegates meeting, New Zealand 2014 (including organisation of the next SCAR Biology Symposium in 2017 in Brussels!)
3. Report on the output of the SCAR Horizon Scanning exercise
4. Reform of BNCAR membership
5. News from the Antarctic Treaty meeting
6. AISBL Princess Elisabeth Antarctica and the threats to the existence of BELSPO
7. Varia

Main conclusions

- Charlotte Havermans (RBINS) was the sole Belgian scientist invited at the **SCAR Horizon Scanning** in New Zealand. She is a young molecular biologist working on Antarctic diversity. As a result of the Horizon scan, a Nature paper was published with a synthesis of future science directions to take. The 6 research priorities decided upon during the Horizon Scan were sent to Maaïke Vancouwenberghe (BELSPO). This list should be seen as priorities for National Programmes, and foster collaboration with other countries.

- **Evaluation of BNCAR by the Academy.** The Academy is in the process to evaluate its committees on the basis of the international activities of each Mother organisation. We have submitted this information in 2014. It has been demonstrated that Belgian scientists are very active in SCAR at several organizational levels (see our report to RASAB). One problem is that the funding for our committees comes from BELSPO.

BNCAR could try to organise national activities, and therefore, it would be good to increase the number of active members (see below).

- **Consultation of Belgian scientists about documents for the Antarctic Treaty meetings.** Belgian scientists have experience in research that can be relevant for the Committee on Environmental Protection of the Antarctic Treaty. Therefore, A. Wilmotte sometimes sends a meeting document to ask for opinion and eventually to make an intervention. F. Pattyn asks that these requests would be done early.

- Reform of BNCAR membership

BNCAR currently counts 32 members of which 16 are full (effective) members. However, only few of the members regularly show up at meetings. Furthermore, not all research domains within Antarctic science are represented with the current member list.

It is proposed to modify Article 3 of our regulations to enlarge the associated members to all scientists actively involved in polar research and affiliated to a university (or Federal research Institute). Exceptions could be discussed during BNCAR meetings. APECS members should also be represented.

With the general agreement, it is proposed that BNCAR members send proposals of scientists who would deserve to become associate members before 20 November. This list will then be discussed by members and proposed.

Furthermore, it was found that some members wished to step down, due to retirement. G. Feller and C. Lancelot proposed to retire as effective members. They could become associate members if they wish.

The membership of BNCAR includes also the category of Honorary Members.

- Relation between Princess Elisabeth Antarctica and BELSPO

The following projects are running at the station and there will be field missions:

- ICECON: 5 pax (ULB-ROB)
- Inbev Latour (Utrecht): Jan Lenaerts
- BELATMOS: 2 pax RMI
- SMAIS: 1 pax ROB
- Geomagnetic obs: 1 pax RMI

There are plenty of scientists of other nations, from AWI (further geophysical survey towards Dome Fuji) and Switzerland (Konrad Steffen has one AWS (3 stations near each other), and his son might come).

Jean-Louis Tison had previously agreed to replace the sensors for the BELDIVA project (Open Top Chambers), but Alain Hubert has taken this work.

The future is uncertain and linked to the fate of BELSPO. The government agreement mentions BELSPO and PES.

For PES, an International ASBL will be created and Switzerland is mentioned. Prof. Konrad Steffen is leading one of the Swiss Federal Institutes. Moreover, the government is convinced that the station is not sustainable with only Belgian support, but partnerships with foreign countries should be sought.

In the framework of a future collaboration, both BELSPO and the International Polar Foundation (IPF) are active in contacting Swiss scientists. BNCAR should be involved in this process.

Also with respect to the government agreement, the future of BELSPO is unclear. Since Belgian Antarctic research is highly dependent on BELSPO funding, several researchers led by Prof. J.-L. Tison wrote a 'carte blanche' for Le Soir, 4 November, taking all the points of the government agreement into account. Parallel to this, a petition was launched.

J.-L. Tison insists that we need to do something. The public does not realise the value of BELSPO. BNCAR gives its full support to these initiatives.

The projects BRAIN-BE are organised at the level of the federal state, enabling good cooperation, and work with sufficient support. We want to continue work together, and with sufficient funding to participate to international efforts.

F. Pattyn will draft a letter and contact the federal minister of science policy, explaining the questions about the logistics, funding, exchanges.

3. General Assembly of the Scientific Union

[a] SSG meetings of the SCAR (23-29 August 2014) in Auckland, New Zealand

The Belgian representatives were:

- Frank Pattyn (SSG Geosciences, ISMASS representative and Belgian delegate)
- Irina Gorodetskaya (Belgian alternate delegate)
- Annick Wilmotte and Claude De Broyer (SSG Life Sciences)
- Anton Van de Putte (SCADM, Steering Committee of PAIS)

Main conclusions

- In the **SSG Life Sciences** (<http://www.scar.org/ssg-ls/lis-publications>), a major Belgian achievement is the publication of the **Biogeographic Atlas of the Southern Ocean** (Chief Editors Claude de Broyer and Philippe Koubbi, plus their editorial team).

Prof. Bruno Danis (ULB) has sent a proposal to host the next **SCAR Biology Meeting** in Brussels in 2017 and this bid was accepted by the SSG.

A new Action Group was created: **ANTOS** (Antarctic Near-shore and Terrestrial Observing System), which could be more or less the terrestrial counterpart of SOOS (South Ocean Observing System) and is multi-disciplinary (<http://www.scar.org/ssg/life-sciences/antos>). A workshop was organised before the OSC to discuss its organisation, and Elie Verleyen (Ugent) and Annick Wilmotte (Ulg) attended this workshop. Elie Verleyen was asked to be member of the steering committee.

EG Antarctic Biodiversity Informatics – EG-ABI is active for three main ongoing initiatives: the dynamic version of the Biogeographic Atlas of the Southern Ocean (dBASO; <http://atlas.biodiversity.aq>), the Microbial Antarctic Resource System (MARS) (<http://mars.biodiversity.aq>) and the Retrospective Analysis of Antarctic Tracking Database (RAATD, See EG-BAMM report for details). The MARS module is coordinated by Anton Van De Putte (Biodiversity.aq), hosted by RBINS.

- In the **SSG Physical Sciences**, the action groups ATHENA and ICESTAR came to an end. ASPeCT has become an Expert Group.

The ICED Expert Group is ecosystem-based, and is common with the SSG Life Sciences.

Two new Groups were proposed: SERAnt (Sun-Earth Relationships and Antarctica) and SnowANT (EG) focusing on Antarctic snow processes.

- In the **SSG Geosciences**, Geoconservation was underlined to recognize valuable geological and geomorphological values. One EG was created about Antarctic volcanism, two AG are now dealing with GeoHeritage and mapping.

A full report on the standing scientific groups can be found on the SCAR website (<http://www.scar.org/science>).

[b] Delegate Meeting of the SCAR (1-3rd September 2014) in Auckland, New Zealand.

Frank Pattyn and Irina Gorodetskaya were the Belgian delegates.

Main conclusions

- At the SCAR Delegate meeting, the Czech Republic and the Islamic Republic of Iran have become Associate members. Associate members only need to 'show interest' in Antarctic research. CZ is active since a long time in Antarctica, has a station and could easily become Full member. Iran has

lots of plans for exploiting ships, establish a basis... However, questions of SCAR delegates on the involvement of young researchers, and gender balance were not answered.

Two new vice-presidents: Azizan Abu Samah (Malaysia) and Terry Wilson (USA) were elected. The first one will organise the next SCAR meeting in 2016 and second is leading SERCE.

The SCAR medal of Excellence was awarded to Steven Chown (AUS) and Tim Naish got the Muse prize.

The next SCAR meeting will be in Malaysia (August 16) and the following in Davos (June 2018).

A full report on the SCAR delegates meeting can be found on the website (<http://www.scar.org/scarmeetings/meetings>)

4. Other activities

[a] SCAR Open Science Conference (25-28 August 2014)

Frank Pattyn and Annick Wilmotte have each been conveners of a Session at the OSC.

[b] Belgian SCAR representation and secretariat

As usual, BNCAR has pursued its role of SCAR representative in Belgium. The National Committee prepared the annual report to SCAR covering all Antarctic-related research done in Belgium. The report is distributed to the Antarctic researchers of SCAR country members through their SCAR National Committees.

BNCAR also forwarded to Belgian researchers all useful information from SCAR.

[c] Documentation and information

BNCAR has continued to represent the Belgian Antarctic research by answering to information requests at Belgian or international level. The distribution of books related to Antarctica and Belgium has been pursued.

On the other hand, the National Committee has continued to manage its Antarctic documentation as well as the archives of the *Belgica* expedition held at the Royal Belgian Institute of Natural Sciences and part of the archives of the Belgian and Belgian-Dutch Antarctic Expeditions.

[d] SCAR Horizon Scanning meeting

Charlotte Havermans (KBIN) was selected by SCAR and participated to the SCAR Horizon Scanning in New Zealand

[e] Antarctic Treaty Meeting

The XXXVI Antarctic Treaty Consultative Meeting has taken place from 27 April-9 May 2014 in Brasilia, Brazil. Annick Wilmotte was member of the Belgian delegation to the Committee on Environmental Protection of the ATCM and attended this meeting.

5. Future perspectives[a] SCAR meetings

- The XII International Symposium on Antarctic Earth Sciences is organised in Goa (India) from 13-17/07/2015.
- ISMASS workshop in August in Cambridge
- Southern Connections (<http://www.umag.cl/southernconnection2016/>) 18-23/01/2016.
- The next SCAR Biology meeting will be organised in Belgium in 2017.

[b] Other polar meetings

The 6th International Conference on Polar and Alpine Microbiology will be held from 6 to 10 September 2015 in České Budějovice, Czech Republic.

<http://polaralpinemicrobiology2015.prf.jcu.cz/>

Wim Vyverman and Annick Wilmotte will be chairpersons of sessions.

[c] Antarctic Treaty Meeting

The 38th Antarctic Treaty meeting will take place in Sofia (Bulgaria) from 1 to 10 June 2015.

Belgium is involved in the organisation of a ATCM Workshop on Education on the 31th May.

NATIONAL COMMITTEE FOR ASTRONOMY

1. Introduction, mission, goals

The formal basic goal of the committee is to coordinate the participation of Belgian astronomers in the activities of the International Astronomical Union (IAU), and in the triennial IAU General Assembly in particular. The committee also serves a role in the dissemination within the Belgian community of developments within other international organisations to which our country participates, such as ESA, ESO, and the journal *Astronomy and Astrophysics*. Finally, the meetings also offer opportunities to reflect together on matters affecting astronomical activities in Belgium.

2. Meetings of the Committee

The Committee gathered three times in 2014: on 11 February, 6 May, and 21 October. All these meetings took place at the Palace of the Royal Academies for Science and the Arts of Belgium in Brussels. Recurrent topics of discussion during these meetings were ESO matters, ESA matters, the Astronomy & Astrophysics Board, and the ARIES telescopes under construction in India, which are addressed in the sections below.

3. General Assembly of the Scientific Union

No Assembly of the Scientific Union in 2014.

4. Other activities

[a] *Astronomy and Astrophysics* (A & A)

After election, R. Van der Linden became the new Belgian delegate in the A&A board, replacing C. Sterken. BELSPO, and the BNCA, expressed their gratitude to C. Sterken for the work he has done as the Belgian delegate. An ESO workgroup was established to remedy several problems he pointed out and is preparing a draft for a new financial agreement between member states. This draft is expected to be submitted to the ESO Council in March or April 2015.

It was reported that the number of pages has remained constant but the number of papers has slightly diminished in 2013. Over 2000 manuscripts were submitted in 2013 to A&A, of which almost 200 were immediately rejected by the editors. The sponsoring countries contributed 82% of the manuscripts. 88% of the papers were accepted after review with an average acceptance

time of 79 days. Belgium published 67 papers in 2013, among which one was highlighted. The number of letters is decreasing. The average acceptance time for the Letters is 38 days.

In 2014, several vacancies in the A&A board were filled, one as managing editor (N. Aghanim from IAS at Orsay, France), 2 associate editors in stellar astrophysics (R. Kotak from Queen's University in Belfast, Ireland) and in high-energy astrophysics (S. Campana from Osservatorio Astronomico di Brera in Italy).

[b] ESO matters

ESO matters were reported to the BNCA by S. Pireaux (Belspo, ESO council member), J. Surdej (Chairman of the Belgian National ESO Committee, BNEC), S. Van Eck (secretary of BNEC), C. Waelkens (Scientific member of the ESO council, and of ESO's Strategy Working Group), and C. Aerts (ESO Observing Program Committee Chair). ESO council meetings took place in March and October 2014, while BNEC meetings were held on June 24 and December 2014.

In 2014, Belgian scientists were involved in a large number of ESO observing proposals, among which 21 had a Belgian PI.

The Brazilian senate still needs to ratify the formal accession agreement of Brazil to join ESO. Also Poland will decide soon about its membership. These memberships are important for the E-ELT budget.

In June, the top of the 3000-meter high mountain Cerro Amazons, Northern Chile, was blasted off and leveled to create a plateau for the E-ELT. A decision on the contract for the construction of the E-ELT is expected by November 2015. The construction will take between 11 and 19 years.

All 14 ESO member states joined the project. Big E-ELT contracts will be issued very soon and only those countries that have signed can be involved in the contracts.

A Strategy Working Group has been established within ESO to discuss ESO's future in particular with respect to large astronomical projects from other organisations involving ESO member states. These projects include the Cherenkov Telescope Array (CTA) and the Square Kilometre Array (SKA). Although such projects can enlarge the astronomical community, it was noted that new astronomy organisations might emerge from them and enter in competition with ESO, which may endanger other ESO projects. Therefore, ESO is studying the possibility to establish collaborations with several of these non-ESO initiatives. The CTA for example may later be installed at Paranal. ESO is also considering whether it should be involved to some extent in the American

Large Synoptic Survey Telescope (LSST), a 8.4 meter telescope with a unique wide field of view of 9.6 square degrees. Collaborations with LSST could also imply the ESO infrastructures for follow-up measurements.

The STC (Scientific Technical Committee) now consists of 3 subpanels: LPS (La Silla-Paranal), ESC (E-ELT subcommittee), ESAC (European Science Advisory Committee, ALMA).

[c] ESA matters

ESA matters were reported to the BNCA by W. Verschueren (BELSPO) and S. Pireaux (BELSPO). They reported on the development or/and delays of the different space missions. We join to the report an overview of the different missions in operation and in development at the end of 2014.

The International Mars Exploration Working Group (IMEWG) has created two new working teams, among which one on scientific matters. BELSPO has nominated Ann Carine Vandaele, who is PI of the NOMAD instrument on the ExoMars 2016 mission, as member of this working team.

ESA is planning a joint scientific space mission with the Chinese Academy of Sciences on a 50%-50% basis. ESA will open a call for a S-class (Small-class) mission early 2015.

CHEOPS (CHAracterising ExOPlanets Satellite) S1 mission was adopted, and is foreseen for launch in 2017. With the expected launch of PLATO in 2024, continuation in Exoplanet research is guaranteed.

SPICA (Space Infrared Telescope for Cosmology and Astrophysics), a mission led by JAXA (Japanese Aerospace Exploration Agency) in collaboration with ESA, has been judged as not viable. There is quite some Belgian involvement, also in industry. As a result of the review in which more international collaboration is requested, ESA cannot consider SPICA anymore for the Mission of Opportunity class and will propose the mission for M4, which means that it will be in competition with all other M4 candidate missions.

About ESA relations with Russia, it was noted that several missions depend on collaboration with Russia. So far, everything is proceeding reasonably well although there is a general complaint about the difficulty to get sufficient information from the Russian side.

[d] ARIES telescopes

The construction of the dome of the 3.6m Devasthal telescope started in 2013. In relation with the ARIES telescopes, two Indian scientists received a BELSPO postdoctoral position and started working at UGent and ULiège.

[d] New BNCA board

The new BNCA board was partially installed during the last meeting held on October 21. J. Surdej and Y. Fremat were called to replace C. Waelkens at the presidency and T. Van Hoolst at the secretary, respectively. All present BNCA members warmly thanked the previous board members for their outstanding job and their services to the community.

[e] A&A FNRS contact group meeting

R. Alvarez organized at the Planetarium of the ROB the FNRS A&A contact group meeting on April 30, 2014. 76 participants attended the meeting, 12 talks and 7 posters have been presented.

5. Future perspectives

The impact of the new science Federal policy and of the establishment of an "Interfederal Space Office" on astronomy research is being followed up with great attention.

NATIONAL COMMITTEE BELQUA (QUATERNARY RESEARCH)

1. Introduction, missions, goals

The purpose of BELQUA is to encourage the Belgian research on various aspects of the Quaternary period, either research conducted in Belgium or by Belgian scientists abroad. It aims to encourage young researchers and to promote scientific communication. All fields related to Quaternary research are welcome, e.g. geology, climate, archaeology, etc.

2. Meetings of the Committee

Dates: 5 March and 3 November 2014, both in Brussels.

Main conclusions:

- (1) [1] Election of new board and two new members; Evaluation of the 2014 workshop.
- (2) Discussion concerning:
 - The forthcoming BELQUA activities – workshop and fieldtrip planning;
 - Evaluation of the fieldtrip and 2014 workshop;
 - The annual 2014 report.

3. General Assembly of the Scientific Union

No Assembly of the Scientific Union in 2014.

4. Other activities

[a] BELQUA annual workshop

Description: The BELQUA Workshop of 5 March 2014 was a one-day event in Brussels. Vanessa Heyvaert (RBINS) and Elie Verleyen (UGent) convened the workshop. Prof. Dr. E. Wolff (Royal Society Professor at the University of Cambridge, UK) was invited as keynote speaker on the topic of “*Ice cores and interglacials*”. His lecture has been programmed just after the lunch break as an attraction point to stimulate the participants to remain present during both the morning and afternoon session. In addition to the keynote lecture, abstracts were submitted for 7 oral presentations, covering a very wide range of topics and disciplines.

Goal: The workshop is an opportunity to meet colleagues working in Quaternary Sciences in Belgium and Belgians working abroad. It is also an opportunity for students to present their PhD research.

Attendance: The attendance was slightly lower than the previous year with ± 30 participants. This might be due to the overlap with the spring holidays.

[b] Annual BELQUA fieldtrip

Description: The BELQUA field trip was held on the 3th of September 2014 in the Campine region (Mol-Dessel). In the morning, we were invited and guided by Dr. Koen Beerten at the SCK-CEN site. We visited a typical Holocene drift sand landscape which developed on a late glacial cover sand landscape. A soil profile was observed in which three soil formation phases, several aeolian deposition phases and a spectacular soil erosion phase were recorded. In the afternoon, we visited - under the leading of Koen Verbeeck - the trench that was excavated in August across the Rauw fault by ORB-KSB in cooperation with NIRAS-ONDRAF.

Attendance: 23 registered participants and the organisers Koen Beerten, Koen Verbeeck and Thierry Camelbeek.

(c) Participation in international meetings and conference

BELQUA members took part and convened sessions in several international meetings

- Nathalie Fagel, Sophie Verheyden and Marie-France Loutre convened a session on Paleoclimates records in continental archives at the EGU2014 meeting.
- Gert Verstraeten organised an international workshop on 'Towards a more accurate quantification of human-environment interactions in the past' in Leuven from 3-7 February 2014. The workshop was attended by over 90 participants from all around the globe.
- Marie-France Loutre, as INQUA treasurer, took part in the workshop 'INQUA meets young researchers', Rome, 21 February 2014.

[e] INQUA relationships

BELQUA is the Belgian contact for INQUA. Cecile Baetman is the Belgian representative at the International Council. Marie-France Loutre is the treasurer of INQUA. Information from INQUA is distributed amongst the Belgian Quaternary Community through the Belgian representative and BELQUA. It is for example the case for the newsletter that the INQUA Executive Committee

edited, for the calls for INQUA projects and medals, and for the table of content of the INQUA journal.

5. Future perspectives

[a] BELQUA annual workshop

The BELQUA 2015 workshop will be organised by Sophie Verheyden and Marie-France Loutre on the 3rd of March. Prof. Hans Renssen will be the invited speaker. The workshop will be open to all scientists interested in Quaternary research and will provide young scientists, including advanced MSc students, PhDs, and post-docs the opportunity to present their work.

[b] BELQUA annual Fieldtrip

To be decided

[c] EGU 2015:

BELQUA members will propose several sessions.

[d] INQUA 2015

The congress will be held in Nagoya (Japan). BELQUA members will propose several sessions. Belgium will be represented at the International Council. Vanessa Heyvaert will be the BELQUA delegate.

NATIONAL COMMITTEE FOR BIOCHEMISTRY AND MOLECULAR BIOLOGY

1. Introduction, mission, goals

The goal of the National Committee is to promote research in the field of Biochemistry and Molecular Biology, by organizing meetings and inviting outstanding internationally renowned scientists. Because of the increasingly interdisciplinary nature of the biological sciences, often symposia are organized together with other societies and National Committees.

Because of the common goals, the members of the National Committee on Biochemistry and Molecular Biology are also member of the board of the Belgian Society of Biochemistry and Molecular Biology and as such are involved in the preparation and of all the activities of this Society.

2. Meetings of the committee

The National Committee meets together with the board of the Belgian Society for Biochemistry and Molecular Biology. In 2014 two meetings took place on the 25th of January and on 29 November, both at the KUL in Heverlee, which were hosted by Prof Yves Engelborghs. In these meetings the planning for the coming year(s) was discussed and decided. Further organization and exchange of information and ideas was done by email. The actual organization of symposia was left to the local organizers.

3. General Assembly of the Scientific Union

No Assembly of the Scientific Union in 2014.

4. Other activities

The Society/National Committee has organized in 2014 the following two scientific meetings:

[a] 210th meeting of the Society. Prof. Jacques Piette in collaboration with the FRS/FNRS contact group on oxidative stress and anti-oxidants organized a meeting on “Reactive oxygen Species in Cell Metabolism” in Liège (GIGA building on the Sart-Tilman campus) on 25 April 2014. The meeting was well attended by some 80 participants. The Society’s general assembly was held at this meeting during the lunch break.

[b] 211th meeting of the Society. Prof. Annemie Lambeir organized, in collaboration with the Belgian Society of Cell Biology and Cell Differentiation, on 7 and 8 November, a two-day joint meeting in Antwerp on a subject related to epigenetics and stem cells, respectively. More than 100 participants attended this meeting.

[c] Other meetings

On the occasion of the 50th anniversary of FEBS in 2014 the national societies of biochemistry in Europe were requested to produce a virtual journal issue with the most relevant articles from each country taken from the three FEBS journals: FEBS letters, Eur J Biochem. and FEBS J. An ad hoc committee consisting of Yves Engelborghs, Jason Perret, Jan Gettemens and Fred Opperdoes have created such a virtual issue with the most cited Belgian biochemical papers that were published in the three FEBS journals. The virtual issue is available on the web.

5. Future perspectives

The Society has been involved in the organization of an international meeting in the VIB Conference series entitled “Structural Dynamics in Cellular Communication”. This meeting which was cosponsored by the Society was held on 9 and 10 February 2015 on the campus of the VUB.

Prof. Patrice Soumilion will organize, the next meeting of the Society in Louvain-La-Neuve on May 22nd, 2015. The topic will be “Biochemical Aspects of Evolution”.

Profs. Annemie Lambeir and Yves Engelborghs, in collaboration with prof. Christine Van Broeckhoven (U Antwerp) are planning a National Committee meeting in the Academies building in Brussels with as subject “Neurological Disorders”

NATIONAL COMMITTEE FOR BIOLOGICAL SCIENCES

1. Introduction, mission, goals

The national Committee of Biological Sciences is representing the Royal Academies (RASAB) towards the International Union of Biological Sciences (IUBS) and brings representatives of the Belgian biological research and research groups together. The Committee organizes contact fora and develops in collaboration with other organisations research projects towards the larger public.

2. Meetings of the Committee

One meeting of the committee took place on 26/06/2014.

3. General Assembly of the Scientific Union

No assembly of the Scientific Union in 2014. The next one will be held in Bremerhaven in 2015. Contacts and discussions took place via e-mail.

4. Other Activities

Planning of the national lichen survey.

In collaboration with researchers of Botanic Garden Meise, the national lichen survey has been developed. This project foresees in a 'citizen science'-survey to make the broad public aware of the importance of lichens as biological monitor of air quality.

5. Future perspectives

Finally, the rejuvenation the National Committee will be carried out in 2015, realising in the meanwhile a better representation of the different research disciplines as biological research has strongly evolved the last decennia.

NATIONAL COMMITTEE FOR BIOMEDICAL ENGINEERING

1. Introduction, missions, goals

Biomedical Engineering is the multidisciplinary field concerning engineering research, developments and applications in (bio)medicine.

The Belgian National Committee on Biomedical Engineering aims to bring together the Belgian academics, students, researchers and professionals, active in the broad field of biomedical engineering.

The aims of the National Committee are:

- Stimulating scientific and educational interactions;
- Linking with international organisations and societies in the field of biomedical engineering;
- Representation of the Belgian academic point of view;
- Setting up a research and valorisation forum for interested students and professionals.

2. Meetings of the committee

Dates: The Committee met January 31st, March 10th, June 16th, September 15th, October 1st and November 28th (Contact Forum in the Academies)

Main conclusions:

- Continuing efforts for a yearly Contact Forum.
- Involving young scientists and professionals, alumni of our master programs.
- Streamlining communications (updated informative website).
- Contacts with industry: mostly via the association UNAMEC.
- Continuing liaison efforts with European, worldwide associations.
- Need for continuing efforts in promoting research and development and an awareness of the community.

3. General Assembly of the Scientific Union

No assembly of the Scientific Union in 2014. . The International Union IUPESM will hold its next General Assembly in June 2015 during the World Congress on Biomedical Engineering and Medical Physics in Toronto (June 7th – 13th 2015), during which event the Federation's officers are elected, M. Nyssen is a candidate as Treasurer of IFMBE.

4. Other activities

[a] Belgian Day on Biomedical Engineering (November 28th, 2014)

Description: Contact Forum with 5 invited speakers, a poster session presenting new research results and prizes for 3 posters by young researchers; This year's theme: "From research to the application".

Goals:

- Bring Belgian researchers in contact with internationally recognized speakers (this year's theme: Bridging the gap between Engineering and Medicine) and allow them to present their work in a short presentation and poster (Belgian Day)
- Evaluate the future activities of EAMBES.

Attendance: 270 participants attended.

[b] Collaboration with UNAMEC

Thanks to the collaboration with UNAMEC, an evaluation of the complete biomedical engineering sectorial presence: in education, in research, and in the professional context has been realized in 2013.

Major contributions were made to the UNAMEC report concerning medical devices (in final stage): *Medical technology in Belgium*.

[c] Liaison with worldwide societies/activities

- Contacts between the National Committee, the World Federation IFMBE, the Union (IUPESM) and ICSU via Marc Nyssen.
- Contacts between the National Committee and EAMBES (European Level umbrella organisation) via Jos Vander Sloten.
- Contacts between the National Committee and ESEM (the European Scientific Society) via Pascal Verdonck.

- Contacts between the National Committee and UNAMEC (the professional umbrella association), with industry members of biomedical sector.
- Contact between the National Committee and IEEE-EMBS (the IEEE Engineering in Medicine and Biology Society) and its Benelux chapter via Sabine Van Huffel.

5. Future perspectives

[a] The committee aims at expanding the involvement of students and of captains of industry in the Committee's future activities.

[b] As there are now 5 “master in biomedical engineering” programs (UGent/VUB, KUL, ULB, UCL, ULg) the Committee wants to become the meeting place for communication in between these programs (also for PhD's linked to the masters), in order to strive to a full recognition of the title “Master in biomedical engineering”.

[c] A European meeting with the EAMBES members will be held at the Academy (Monday March 16th and Tuesday 17th, 2015).

[d] Keeping in contact with the alumni. A “Youngsters Board” was set up successfully in 2010 and was fully operational in 2012.

[d] Contacts with the professional field, amongst others through UNAMEC will be further consolidated.

[f] The preparations for the next Contact forum, November 27th 2015 have already started; Collaboration with the IEEE-EMBS Benelux Chapter and with European projects concerning Biomedical Education. This year's theme: “nanotechnology”.

6. Clarification of abbreviations

- IFMBE: International Federation for Biomedical Engineering: the “World Federation”
- IUPESM “International Union for Physics and Engineering Sciences in Medicine”, the UNION of which the IFMBE is 1 of the 2 components.
- EAMBES: European umbrella association, regrouping societies and teaching/research departments
- ESEM: European Society for Biomedical Engineering
- EAMBES: European Alliance for Medical and Biological Engineering and Science
- ICSU: International council of scientific unions (links with national Academies)

- IEEE: Institute of Electrical and Electronic Engineers
- EMBS: Engineering in Medicine and Biology Society

NATIONAL COMMITTEE FOR BIOPHYSICS

1. Introduction, mission, goals

The goal of the National Committee is to promote research in the field of Biophysics, by organizing meetings and inviting outstanding internationally renowned scientists. Because of the increasingly interdisciplinary nature of the biological sciences, often symposia are organised together with other societies and National Committees. Because of the common goals, the members of the National Committee on Biophysics are also member of the board of the Belgian Biophysical Society and as such are involved in the preparation and organisation of all the activities of this Society.

2. Meetings of the Committee

Non-specified

3. General Assembly of the Scientific Union

Prof. Marc de Maeyer attended the General Assembly of the International Union for Pure and Applied Biophysics, August 2014, Brisbane, Australia.

4. Other activities

[a] *Mass Spectrometry in Structural Biology*³

On Tuesday May 27, 2014, Ghent University – Fac. Of Pharmacy. A co-organization of the Belgian Biophysical Society and the Interuniversity Attraction Pole – Integrative protein science.

[b] 12th one-day symposium on *Protein Folding and Stability*⁴

Organized by the Belgian Biophysical Society, further supported by the Graduate School “Structure and Function of Biological Macromolecules, Bioinformatics and Modelling”, on Friday the 29th of August 2014, at the University of Liège.

³ See page 78

⁴ See page 79

[c] *Modern Biophysical Techniques for the Life Sciences*⁵

The National Committee for Biophysics, as part of the Royal Academies for Science and the Arts of Belgium, further supported by the Belgian Biophysical Society, the F.R.S.-FNRS, the contact group on Structural Biology and the Graduate School "Structure and Function of Biological Macromolecules, Bioinformatics and Modelling" organized a symposium on "Modern Biophysical Techniques for the Life Sciences", on 20-21 October 2014 in the Academies Palace, Brussels.

5. Future perspectives

- The next folding meeting, organized in Liège, is planned for the 4th September 2015 with speakers Rudy Glockshuber (ETH), Dominika Gruszka (UCambridge), Vincent Raussens (ULB), Jean-Francois Collet (UCL), Peter Tompa (VUB). Contact person: A. Matagne.
- Autumn school/workshop. Drs. Steven Martin and Marieke Schilstra (Mill Hill) will give a series of lectures on various spectroscopies (fluorescence, CD, etc.), binding equilibrium, binding kinetics, instrumentation, data analysis, curve fitting, computer modelling, etc.. This has been planned for the week 14-18 September 2015. Contact person: A. Matagne.
- Workshop on scattering methods (SAXS, lights cattering...) including the theory and use of Synchrotron radiation (e.g. X-Ray free electron laser...). Probably in November 2015. Contact person: S. Savvides.

⁵ See page 80

NATIONAL COMMITTEE FOR CHEMISTRY

1. Introduction, mission, goals

- Federate the messages of chemistry (Universities, Technical Colleges, Essenscia, CEFIC, SRC, KVCV, JSC, etc.).
- Inform the public, improve and develop the image of chemistry in Belgium in all the aspects. Be the bridgehead of IUPAC in Belgium (input and output)
- Make the promotion of chemistry and sciences to the young generations at the early age, high schools.

It is becoming more and more obvious that these issues and concerns are shared by many ones (all) in the network of organizations in Belgium. So our wish is to be specific, and bring an efficient contribution to the common effort vis-a-vis the public and the young generation. In other words our actions must be complementary to others considering our limited budgets. The Comité National de Chimie/Nationaal Comité voor Scheikunde team is particularly well connected with the “chemical” network in Belgium can impact and spread our ideas and projects.

2. Meetings of the committee

Dates: June 12th, October 3rd.

[a] Meeting, June 12th

Main conclusions

Consensus with the main goal of the Committee target “Towards a New Contract between Chemistry and Society”. A list of proposed actions here below:

- **Setting up a working group with representatives of the teachers**, the “political arm”, the Committee, ...with the objective to stimulate the young generation interest for chemistry based on a strong background, society impact and “multi sciences” input like: “Solar Impulse Project “, “The car of the Future”, “Genetically Modified organisms” etc..
- **Organize “Science days” at the Academy** dedicated to the relevant theme. Prepare documented information to support the projects.

- Develop better **information regarding the professions open to chemists**. It is to be remembered the initiative of the Chemical Industry Federation, Essenscia: the existing Programme: “ Les jeunes, la chimie et les sciences de la vie” via lectures (150/200 in the last ten years to 60.000 young students) formatted specially for the high school students (15 themes in 2014/15).
- Emphasize **the role of chemists in our society and improve the image of chemists**; i.e. invite young students (High schools) at the Academy with Belgian Prizes laureates (Francqui, Prize of Chemistry, laureates of the Olympiads, etc).
- Initiate with faculties, Universities, Hautes Ecoles, Hogescholen in Belgium the **coordination of ongoing sciences promotion actions** to improve the visibility and optimize the synergy and ideas
- **Organize an International conference “Chemistry in Belgium “together with KVCV, SRC, CNC/NCS, Essenscia, Euchem, C.B.B./C.G.B... with “society themes” like Chemistry and Energy, Chemistry and Materials, Chemistry and Life, Chemistry and Environment**
- Paul De Bièvre and Ludo Brandt **regarding perception, teaching and education**.

The “food for thought” suggested could be converted into a sharp direct message like “Chemistry is our Life, chemistry is our Future and everyone must know it and be aware of it”.

The “chemistry stakeholders” responsible or and concerned i.e. “education organizations, industry, the media and the “Political world” must be alerted of the poor and negative trend of the science/chemistry in our country, our society.

[b] Meeting, October 3rd

Main conclusions

- Corine Petry gave a most interesting summary of the project ‘Breaking Science’ as elaborated by Essenscia. She suggested her audience to consult the relevant pages on the site, e.g. <http://www.essenscia.be/nl/agenda/evenement/194>.
- Paul Baekelmans and Christian Vandercammen obtained the co-operation of Solvay to launch a solar impulse project during 2015 - 2016.
- Vera Meynen and Ludo Brandt expressed their willingness to excite the interest for chemistry in young students by organizing events and also by bringing the students who participated at the Olympiade for Chemistry to the RASAB.
- Daniel Peeters accepted to coordinate a manifesto on chemistry to be divulged to the press and interested parties. He will convene the Committee members within a couple of weeks.

- Paul Debièvre is deeply involved in the discussion of the new definition for the mol. He prepares a reply to IUPAC. On his request there was a preliminary meeting attended by Paul Baekelmans and Rita Cornelis on October 10th.

3. General Assembly of the Scientific Union

No Assembly of the Scientific Union in 2014. Participation at the General Assembly of the IUPAC in Korea (August 2015) as representative of Belgium (President), member of the COCI and Rita Cornelis as Vice President Chemistry and Human Health Division; **As a consequence of the non-payment of the Annual Fee by Belgium to the IUPAC for 2014, Belgium will be banned. The attendance of our delegation is still under consideration since it is highly preferable to have a low profile at the time we will be publicly excluded.** In 2014, we wrote:

Support to the participation to the General Assemblies

It is clear from the above that “Belgium” has an International status in Chemistry and is recognized as a significant player in the world of Chemistry and Chemists.

- Any withdrawal from IUPAC organization would be extremely badly perceived with as a consequence:
- Withdrawal from the Divisions, Committees and projects of all acting Belgian delegates. Most negative perception of Belgium because of its aura of a highly industrialized country deserting IUPAC, such a highly estimated International Scientific Organization, would be incomprehensible.
- Poor recognition not only within IUPAC but also at the same time within all other Scientific International Organizations including ICSU.

As a consequence, the existence of our committee, considering the rules of the Academy is threatened.

NATIONAL COMMITTEE FOR CRYSTALLOGRAPHY

1. Introduction, mission, goals

Crystallography is the study of the atomic and molecular structure of diverse substances using microscopy and diffraction techniques in order to understand the relationship between atomic structure and properties of these materials.

The objectives of the National Committee of Crystallography are to promote cooperation in crystallography, to contribute to all aspects of crystallographic research, to catalyze the relations of crystallography to other sciences, to promote crystallography for the general public, and to represent Belgian crystallographers in international associations.

The committee has its own web site⁶, which are administered by Johan Wouters, and organizes a yearly crystal growing competition for pupils at secondary schools.

2. Meetings of the Committee

[a] The first meeting took place on 12 March 2014. During this meeting the program of the Eighth Belgian Crystallography Symposium BCS-8 (Brussels, 15 October 2014) was finalized. The list of activities in Belgium related to the International Year of Crystallography IYCr2014 was updated and practical considerations for the new initiative 'Invite a crystallographer' further discussed. An overview of the inscriptions and preparations of the Belgian Crystal Growing Competition was given and the date of the prize awarding ceremony in the Academy Palace was fixed at 21 May 2014. Finally, the Belgian representation for the Council Meeting of the European Crystallographic Association (ECA) and the IUCr General Assembly in Montreal has been discussed.

[b] The second meeting on 14 October 2014 was opened with the reports of the ECA Council Meeting and IUCr General Assembly meeting in Montreal by the Belgian representatives. The final preparations for the Belgian Crystallography Symposium BCS-8 and the preliminary timing of the 2015 edition of the Belgian Crystal Growing Competition were made. The status of the initiatives of the National Committee of Crystallography related to the International Year of Crystallography was discussed further.

Both meetings took place in the Academy Palace in Brussels.

⁶ sites.google.com/site/xallobe and www.iycr2014.be

3. General Assembly of the Scientific Union

The 23rd General Assembly of the International Union of Crystallography (IUCr), Montreal, Canada, 5–12 August 2014⁷. Belgian delegation: Y. Filinchuk, J. Hadermann. L. Van Meervelt has attended the meeting as General Secretary and Treasurer of the IUCr.

The following countries have been accepted as new IUCr members: Costa Rica, Pakistan, Turkey, Uruguay, Venezuela, Morocco, Malta, Cameroon, Algeria. The membership of Chilli has been cancelled (membership fees have not been paid). A new Regional Associate formed by South-American countries has been accepted.

Extensive reports of the activities of the Executive Committee, the IUCr Journals and the financial report of the IUCr in the period 2011-2013 have been presented. The 10th Ewald prize has been awarded to Prof A. Janner and T. Janssen for the development of superspace crystallography and applications in the field of aperiodic crystals.

The composition of the new commissions was approved. The Belgian elected members are:

- J. Hadermann (Commission on Aperiodic Crystals; Commission on Mathematical and Theoretical Crystallography);
- F. Hatert (Commission on Inorganic and Mineral Structures).

The General Assembly has indicated Prague as venue for the Congress and General Assembly in 2020. Hyderabad in India was confirmed as venue for the next General Assembly in 2017.

As new members of the Executive Committee were elected R. Kuzel, M. Takata and S. Garcia-Granda. M. Hackert has been elected as new IUCr President, with M. Glazer as vice-president and L. Van Meervelt as General Secretary and Treasurer.

4. Other activities

[a] The National Committee of Crystallography has organized in 2014 with support of both academies and sponsor Acros Organics a successful fourteenth edition of the Crystal Growing Competition for pupils of the secondary schools⁸. For this edition alum has been chosen as crystallizing compound. The judging of the submitted crystals took place on 3 May 2014 in Namur.

⁷ See a short report on page 81

⁸ <http://www.chem.kuleuven.be/bcc/>.

During the proclamation on 8 May 2014 in the Academy Palace in Brussels also the videos submitted for the IYCr2014 video competition have been projected.

[b] Dominique Maes has represented the Committee at the Council Meetings of the European Crystallographic Association ECA in Montreal. Joke Hadermann has also participated as member of the Executive Committee of the European Crystallographic Association to these meetings. Frederic Hatert is co-chair of the Special Interest Group on Mineral and Inorganic Crystallography. Yaroslav Filinchuk is secretary of the Special Interest Group on Crystallography under Extreme Conditions.

[c] Frederic Hatert and Joke Hadermann are active members of respectively the IUCr Commission Inorganic and Mineral Structures and the IUCr Commissions Aperiodic crystals and Electron Crystallography. L. Van Meervelt has participated as General Secretary and Treasurer to the meetings of the IUCr Finance Committee in Leuven and IUCr Executive Committee in Montreal. As councillor D. Maes has participated to the meetings of the International Organization for Crystal Growth.

[d] A delegation of the Belgian National Committee of Crystallography has attended the Opening Ceremony of the International Year of Crystallography at the UNESCO headquarters in Paris (20-21 January 2014).

[e] A delegation of the Belgian National Committee of Crystallography was present at the official emission of the Belgian IYCr2014 stamps of bpost in Charleroi on 7 June 2014. The stamps were also presented and commented in PhilaNews, the bpost magazine for philatelists (see annex).

[f] Other IYCr2014 activities organised by or in collaboration with the National Committee for Crystallography include:

- organisation 'Invite a crystallographer' (lectures by a crystallographer in schools)

Leuven

- Lecture series Faculty of Sciences with Nobel laureate D. Shechtman, L. Van Meervelt, B. Goderis, C. Ulens, K. Temst and JM Garcia-Ruiz
- Structural Biology Symposium (17 maart 2014) with Michael Rossmann

Kortrijk

- Exhibition 'Op reis in een kristal' - November 2014 - SPINA

Louvain-la-Neuve

- Lecture by Y. Filinchuk (27 mars 2014)
- Exhibition 'Voyage dans la cristal' (mars 2014)

Antwerpen

- Exhibition in Diamond Pavillion MAS
- Mineralogische Kring Antwerpen - crystallography course

Namur

- Festival Nature - 10-19 Octobre 2014: exhibition and lecture by J. Wouters (La cristallographie au quotidien)

Gent

- Exhibition 'Kristallen verhelderd' from 10 October 2014 to 30 April 2015
- group visits for schools + lectures + publication book 'Kristallen verhelderd'

Liège

- Association des Geologues Amateurs de Belgique - 2 lectures by F. Hatert (8 and 9 November 2014)

5. Future perspectives

[a] Organisation of the fifteenth Belgian Crystal Growing Competition in 2015

[b] participation at the Legacy meeting of IYCr2014 in Rabat (april 2014).

Annex from **PhilaNews** 2014 - No. 2 - pages 12-13⁹

⁹ See page 82

NATIONAL COMMITTEE FOR GEODESY AND GEOPHYSICS

1. Introduction, mission, goals

The BNCGG serves as a link between IUGG and the Belgian scientists working in the fields of Geodesy and Geophysics. This activity reaches a climax every four years at the IUGG general assembly. The BNCGG is then charged to propose to the Academy the national delegates to IUGG and to its eight Associations:

- International Association of Cryospheric Sciences (IACS);
- International Association of Geodesy (IAG);
- International Association of Geomagnetism and Aeronomy (IAGA);
- International Association of Meteorology and Atmospheric Sciences (IAMAS);
- International Association of Hydrological Sciences (IAHS);
- International Association of the Physical Sciences of the Ocean (IAPSO);
- International Association of Seismology and Physics of the Earth Interior (IASPEI);
- International Association of Volcanology and Chemistry of the Earth Interior (IAVCEI).

In the meantime the BNCGG organises regularly conferences by known Belgian or foreign scientists.

The BNCGG tries also to encourage the participation of young scientists to the IUGG General Assemblies by attributing grants.

Belgium was among the 9 countries that established the International Union of Geodesy and Geophysics (IUGG) on July 28, 1919 in Brussels. The Belgian National Committee for Geodesy and Geophysics (BNCGG) was created shortly after in 1921. The running expenses were covered until 1950 by the National Cartographic Institute and later on by Royal Academy of Belgium, now split into the "Koninklijke Vlaamse Academie van België voor Wetenschappen en Kunsten" and the "Académie royale des Sciences, des Lettres et des Beaux-Arts de Belgique".

In parallel with the BNCGG, exists since 1955 an "Association sans buts lucratifs de droit belge" called "Comité National Belge de Géodésie et de Géophysique, Bruxelles". It is charged to administrate the finances of the Committee.

2. Meetings of the Committee

The traditional annual BNCGG General Assembly has been held on January 22 in the Meridian room of the Royal Observatory of Belgium. The introductory conference was given by Prof. Pierre Delmelle, Earth and Life Institute, Université Catholique de Louvain.

A second BNCGG meeting was organized on June 19 at the Royal Observatory of Belgium with two conferences given resp. by Dr. Steven Dewitte (RMI and BNCGG vice-president) and Dr. Frédéric Clette (ROB).

A third meeting was organized on Oct. 16 with conferences given resp. by Dr. Arnould Beth (Institut de Recherche en Astrophysique et Planétologie, Toulouse) and Dr. M. Crucifix (Earth & Life Institute and Georges Lemaître Centre for Earth and Climate Research).

The summary of the talks that were given to the Committee follows:

[a] Volcanic flank collapse and ocean fertilization by volcanic ash: is there a common denominator?

By Pierre Delmelle, Earth & Life Institute, Université Catholique de Louvain, January 22, 2014.

Subsurface magmas that feed active volcanoes expel sulphur and halogen gases either passively or explosively. At non-erupting volcanoes, these gases can form highly acidic condensates which further interact with the country rock. By drastically altering the mineralogy of the original rock, these hydrothermal reactions also modify the rock mechanical properties. There is evidence that the presence of hydrothermally altered rocks in a volcanic edifice decreases its stability and therefore, increases the risk of catastrophic flank collapse. However, our understanding of the relationship between volcanic flank collapse and hydrothermal alteration is still poor. At erupting volcanoes, a mixture of hot magmatic gas and silicate ash materials is suddenly injected in to the atmosphere. Various reactions between sulphur and halogen gases and ash particles take place within the eruption column, and later during lateral dispersion of the ash cloud. These interactions are not well documented but may have a dramatic impact on the capacity of ash to deliver key nutrients upon deposition in the surface ocean. This seminar presented recent research activities aimed at obtaining new insights into the role of chemical rock alteration and (i) volcanic flank collapse and (ii) volcanic fertilization of the ocean.

[b] Total Solar Irradiance measurements: quantification of the solar radiative forcing of the earth's climate from 30 years of observations from space

By Steven Dewitte, Royal Meteorological Institute of Belgium and BNCGG Vice-President,
June 19, 2014

The Total Solar Irradiance (TSI) quantifies the amount of the energy the earth receives from the sun, normalized for the annual sun-earth distance variations. Variations of the TSI therefore correspond to a solar radiative forcing of the climate on earth. The TSI is measured from space since 1978, with a stability that gradually increased in time. We will present our current best understanding of the long-term TSI variations. The current solar cycle 24 is unusually low, and it followed an unusually long minimum after solar cycle 23. It appears that the 11 year solar cycle TSI variation, with an average amplitude around 1 W/m^2 is itself modulated with a 100 year modulation of 1 W/m^2 . TSI variations do not seem to explain the Little Ice Age around 1700, or the 'break in global warming' since around 2000.

[c] The sunspot number time series: a full recalibration of the primary 300-year record of solar activity

By Dr. Arnaud Beth (IRAP, Institut de Recherche en Astrophysique et Planétologie, Toulouse),
October 16, 2014

The external part of the atmosphere, the exosphere, is not a well-known region. The densities are too low for many instruments compared with their detection capabilities, and the modeling of the particles dynamics can be complex. During his PhD thesis, A. Beth focused on two problems: the production of "satellite" particles from the scarce collisions in the lower exosphere and the influence of the radiation pressure on the exosphere structure. In the first part of his talk, he presented the results about the influence of the scarce collisions near the exobase on the density profiles at higher altitudes for the Earth, Titan and Mars, through the production of "satellite" particles, that are neglected in the collision less models. In a second part, he showed the effect of the radiation pressure on the structure of the exosphere with a semi-analytical approach. The radiation pressure changes the ballistic particle density profiles and implies strong asymmetries at high altitudes. It increases also the thermal escaping flux, which we determined analytically at the subsolar point. Finally, the presentation also showed its influence on the Three-Body problem and on the stability of the atmospheres, in particular for hot Jupiter exoplanets.

[d] Analytical modeling of terrestrial planets' upper atmospheres: analysis of the scarce collisions and influence of the stellar radiation pressure

By Dr. Arnaud Beth (IRAP, Institut de Recherche en Astrophysique et Planétologie, Toulouse),

October 16, 2014

The external part of the atmosphere, the exosphere, is not a well-known region. The densities are too low for many instruments compared with their detection capabilities, and the modeling of the particles dynamics can be complex. During his PhD thesis, A. Beth focused on two problems: the production of "satellite" particles from the scarce collisions in the lower exosphere and the influence of the radiation pressure on the exosphere structure. In the first part of his talk, he presented the results about the influence of the scarce collisions near the exobase on the density profiles at higher altitudes for the Earth, Titan and Mars, through the production of "satellite" particles, that are neglected in the collisionless models. In a second part, he showed the effect of the radiation pressure on the structure of the exosphere with a semi-analytical approach. The radiation pressure changes the ballistic particle density profiles and implies strong asymmetries at high altitudes. It increases also the thermal escaping flux, which we determined analytically at the subsolar point. Finally, the presentation also showed its influence on the Three-Body problem and on the stability of the atmospheres, in particular for hot Jupiter exoplanets.

[e] *Understanding the current challenges in climate modelling: dynamics, thermodynamics and statistics*

By Dr. M. Crucifix (Earth & Life Institute and Georges Lemaître Centre for Earth and Climate Research), October 16, 2014

From the 26th to the 29th August 2014 a workshop entitled 'Advances in Climate Theory' was held at the Belgian Royal Meteorological Institute. The workshop was organized and funded by the European Research Council, through the Starting Grants 'ITOP' and 'Namaste', focusing on the dynamics of the Pleistocene climate, and on the thermodynamics of the climate system, respectively.

The STOCHCLIM project started in 2014 and funded by the Belgian Policy Office, and the BNCGG, were also associated to this workshop.

The workshop gathered approximately 50 participants, including 15 international invited speakers. Retrospectively the Workshop could have been called 'Advance in climate theories': the climate is a physical, complex system that poses challenges to many areas of physics, mathematics, statistics and engineering. There is not a theory, but rather many theoretical frameworks that may be mobilized to answer specific questions.

This conference first provided an overview of these different frameworks and then gave a

critical summary of important objectives and challenges faced by climate science today. Specifically, the frameworks are illustrated by examples taken from talks delivered during the workshop, the present objective to demonstrate the variety of possible approaches for studying and characterizing climate dynamics: mean field theory, dynamical system analysis, spectral analysis of observations, climate simulation and parameterisations, and Bayesian statistical inference. While every framework comes with its own technical challenges, cross-cutting subject definitely emerge as recurrent thematic: multi-scale (and fractal) dynamics, prediction, regional dynamics and interdecadal variability.

3. General Assembly of the Scientific Union

No Assembly of the Scientific Union in 2014.

Possible organization of a IUGG GA in 2019 in Brussels

On March 26, 2013 the BNCGG Bureau met the Secretary General of the International Union of Geodesy and Geophysics (IUGG), in the presence of the Director General of the Royal Observatory of Belgium. The object of his visit in Brussels was the following: In 2019 IUGG will turn to be 100. IUGG was born in Brussels and the executives of IUGG thought that perhaps it would be a good idea to celebrate this wonderful event in Brussels on or around 28 July 2019 (the date of the birth of the Union). He was asked by the IUGG Bureau to negotiate with us about any potential actions.

After a vote amongst the effective BNCGG members, the BNCGG decided not to organize an IUGG General Assembly because no suitable locations in Brussels for the conference could be found.

4. Future perspectives

[a] The next BNCGG General Assembly is planned on January 22, 2015.

[b] The next IUGG General Assembly will be held in Prague, Czech Republic in 2015.

[c] The mandates of our effective and associated members have to be renewed every 4 years. The last time was in 2012, so it will be the case again in 2016. Letters for renewal will be sent in November 2015.

NATIONAL COMMITTEE FOR GEOGRAPHY

1. Introduction, mission, goals

The National Committee for Geography represents Belgian scientists working in the field of Geography in the work of IGU. This Committee is a forum for exchanging views on the landscape of Geography in Belgium.

2. Meetings of the committee

The National Committee for Geography met two times in 2013: 5 March and 18 October.

A striking aspect of discussion during the meetings of the current year is the lack of visibility of the geography in Belgium. Themes discussed at the meetings:

[a] Organization of the *Belgian Geography Days*

The Belgian Geography Days 2015 will be organized by the VUB. The Belgian Geography Days is an initiative of the CNG, organised in turn by the different Belgian universities. This activity 2013 is an opportunity for Belgian geographers to present their research and exchange ideas and results. This activity is designed specifically for young researchers geographers who can present their researchs to scientists from other Belgian universities. This is an important opportunity to get to know each other better.

[b] The position of geography in FNRS, FWO and other scientific institutions

The recognition of the geographical discipline within institutions such as the FNRS , FWO,... has weakened since it is no longer distinguished as an own discipline, but finds itself - and only partially - in other disciplines. This means that it is harder to geographers researchers to gain research funds or mandates in these institutions, as geographers are evaluated in Commissions where sit only a few or no geographers.

[c] Doctoral schools and a doctoral school for geography

The situation is different for the Dutch and French universities. For the first, doctoral schools are organized by university. The geographers doctoral students are often in schools in natural sciences. For the French-speaking community, there is a transversal structure organized by discipline, not by university. It seems very difficult to get intercollegiate doctorale schools within the French Community. And in the case of geography, nobody takes the initiative. The effort is

evaluated too large relative to the expected participations. However, there are a series of initiatives in each university. It should therefore be great to integrate it, and perhaps make known these activities by the Dutch side.

[d] Participation of the NCG in the activities of the IGU (International Geographic Union) and ICA (International Cartographic Association)

The payment of the IGU contribution seems to be assured by the Academies . The payment of the ICA contribution has some problems of delay. The members of the subcommittee found a solution by which ICA issues partial invoices to the different universities, the IGN and the two regional geographic information instances. The IGU celebrates its anniversary congress in Paris in 2022 with the theme "Times for Geography". The President of the French Committee contacted the NCG to solicit the direct participation of Belgium in this organization. Two members of the NCG follow the preparations.

[e] The number of Geography Students

There is a downward trend in the number of students in Bachelor and Master in the French Community. One interpretation would be linked to the crisis, students preferring choose subjects with a clear job prospect. Competition with degrees bearing the term "environment", including agronomists (bio-engineers) that have the advantage of providing the title of engineer, also plays. For the Master, it seems that part of the drop is related to the departures of geography graduates to other masters. In the Flemish Community, the number of students remain below the numbers of a few years ago.

3. General Assembly of the Scientific Union

No Assembly of the Scientific Union in 2014.

4. Other activities

[a] Subcommittee National Atlas

The third Atlas of Belgium is made through the 'ATLAS' program of the Belgian Science Policy. The volumes *Economic Geography* and *Population* will be published late, in the first half of 2015, due to difficulties with the authors and the publisher. For the last book that has to be published, about *Urban geography*, no specific date has been given by the authors.

Through the project assigned by the Belgian Science Policy to Professor Donnay, the Digital Atlas has become a reality. However, it must be supplemented with other cards and existing maps have to be updated. Subsidies allocated to the committees of the Academies by Science Policy should allow, if necessary, to allocate small amounts to departments of geography that provide new documents as well as to the cartography department of the ULg, which bring these documents and data online. The atlas can be accessed on the website: www.atlas-belgique.be.

A part of the subsidy was also used in 2013 for digitizing maps of the first and second Atlas of Belgium with all their reviews (separated in French and Dutch for the first atlas and available in 4 languages on the back of the cards for the second). All these documents will be posted on the website of the Atlas in 2014 by the cartography department of the ULg. Also, some cards for 1st and 2nd atlas were transformed as WMS, which allows adding many features. They will be online on the Atlas site in the first half of 2015.

[b] Subcommittee for Cartography and SIG

The subcommittee for Cartography-SIG welcomed last year a number of new members: Sophie Vanwambeke (UCL), Frédérique Spitaels (NGI) and Leen De Temmerman (AGIV).

Ten institutions are currently represented: VUB, ULB, UCL, ULg, KUL, UGent, SPW, Région Bruxelles, NGI and AGIV. Prof. Frank Canters (VUB) succeeded, with Prof. Yves Cornet, to Prof. Philippe De Maeyer as president.

The activities of the sub-committee are essentially within the framework of the International Year Map, which will be held in 2015-2016. For this event, a website has been developed (with all planned events, additional information, etc).

In the same context, the biennial art competition was also organized in Belgium. This year is expected the possibility of voting by the general public on a few selected drawings. The online vote was integrated into the IMY webpage. In addition, the Committee plans to integrate IMY in some upcoming events in 2015-2016 (days geographers, geo-Olympiad, Spring sciences, etc).

[c] Subcommittee for Geomorphology

- Board of the BAG 2013-2017: A. Demoulin (President), J. Nyssen (Vice-President), O. Dewitte (Secretary);
- Representation of the BAG to the round table meeting "Geomorphology in Europe", IAG 2013, Paris (A. Ozer, G. Verstraeten) and the round table meeting for coordination between

the EGU Geomorphology Division and IAG, EGU General Assembly 2014, Vienna (O. Dewitte, J. Nyssen);

- Organization of the 17th Joint Geomorphological Meeting (co-promotion of the Belgian, French, Italian, Romanian and Greek geomorphology groups) in Liège (A. Demoulin as organizer), 30.06 to 01. 07.2014, on the theme "The geomorphology of natural hazards - hazard analysis, mapping, prevention and mitigation"- 81 participants from 14 countries;
- BAG day, Liège, November 2014: 1/2 day with communications from young geomorphologists and the annual administrative session. On this occasion was officially launched the book series "World geomorphological landscapes" published by Springer, dedicated to the geomorphology of Belgium - A. Demoulin is coordinator of 33 experienced authors.

NATIONAL COMMITTEE FOR GEOLOGICAL SCIENCES

1. Introduction, mission, goals

The National Committee of Geological Sciences forms part of the "Classe des Sciences de l'Académie Royale de Belgique" and the "Klasse der Wetenschappen van de Koninklijke Academie van België". The mission of the committee is to promote geology and to co-ordinate at a national and international level, the activities of the geological departments that are present in the different Belgian academic and scientific institutions. Members of the committee also act as representatives of Belgium in the International Council of Scientific Unions (ICSU). At present, the national committee co-ordinates the activity of a number of commissions and working groups such as the National Commission on Stratigraphy (sub-divided in specific sub commissions) and the Working group on Structural Geology. The National Committee of Geological Sciences of Belgium has close relationships with the International Union of Geological Sciences (IUGS), which is also a member of ICSU. The IUGS is a non-governmental organization that promotes and encourages the study of geological problems, especially those of worldwide significance.

2. Meetings of the committee

The National Committee of Geological Sciences met in 2014 during two sessions on May and November. The National Committee has sought in 2014 to better understand the role of Geological Sciences at Belgian institutions, in respect with the national representatives. The National Committee has invited Pascal Godefroit, Director of Operational management "Earth and History of life" of the Royal Institute of Natural Sciences and Isabelle Cojan, Professor at the Ecole des Mines de Paris, President of the Geological Society of France to introduce the recent reform of the representation of the geology in France.

3. General Assembly of the Scientific Union

No Assembly of the Scientific Union in 2014.

Prof. J. Lavreau attended to the 2014 IGCP meeting (International Geoscience Programme) as representative of the committee (Paris, February 2014)¹⁰.

¹⁰ See report on page 83

4. Other activities

[a] National Commission for Stratigraphy

At the initiative of the National Stratigraphic Commission a TS Creator Stratigraphy School was organized on 25-27 March 2014 at the Laboratory of Stratigraphy, KU Leuven with the support of the Arenberg Doctoral School, Leuven. Instructors have been Prof. J. Ogg and Prof. G. Ogg, Purdue University, USA. The software for further application has been put at the disposal of the different institutes involved in stratigraphy in Belgium. 26 participants of different universities and scientific institutes of Belgium have participated.

Two meetings of the National Commission for Stratigraphy have been held: on 10th of June in Brussels and 28th of November with a written procedure and replies to be returned before 15th of December.

In the June meeting a note on the future lines of activity of the National Commission for Stratigraphy was discussed: subcommissions will start adding to the website the formal description of lithostratigraphic members and as well as key chronostratigraphic information. Subcommissions are invited to propose and organise public meetings on their activities.

Full meeting reports can be consulted at the website:

<http://natstratcommbelgium.drupalgardens.com/>

[b] The webpage of NCGW/CNGS¹¹ is linked to the IUGS webpage. It contains more detailed information on the NCGS objectives and activities.

¹¹ <http://www.ncgw-cnsg.ugent.be>

NATIONAL COMMITTEE FOR LOGIC, HISTORY AND PHILOSOPHY OF SCIENCES

1. Introduction, mission, goals

According to the mission of the National Committees, as stipulated in the Royal Decree of 2 April 1979, the National Committee aims to promote and coordinate research activities on Logic, History and Philosophy of Science in Belgium, primarily with regard to the international representation of Belgian scholarship in the International Council of Scientific Unions.

The National Committee is the Belgian member of the International Union of History and Philosophy of Science (IUHPS), both of its Division for History of Science and Technology (DHST) and its Division of Logic, Methodology and Philosophy of Science (DLMPS).

In practice the National Committee acts along three axes:

1. To represent Belgian scholarship on the international level by being present as a member or spokesperson with international organisations (IUHPS, European Society of History of Science).
2. To coordinate Belgian scholarship by setting up collaborations and joint projects with other institutions (National Centre for the History of Science [KBR], Gewina [Belgian Dutch Society for the History of Universities and Science], BSLPS [Belgian Society for Logic and Philosophy of Science]).
3. To promote the integration of historical and philosophical studies of science.

In addition to these goals, the National Committee also acts to promote general interest in the history of (Belgian) science, and to disseminate the results of contemporary scholarship to a wider audience.

2. Meetings of the Committee

During 2014, the Committee held two administrative meetings, on May 23 and November 21. Apart from deliberations on administrative matters and correspondence, several scientific papers were presented.

3. General Assembly of the Scientific Union

No Assembly of the Scientific Union in 2014.

4. Other activities

[a] On July 7, the National Committee was co-organizer of an international workshop “Early eighteenth-century experimental Philosophy of Science,” set up by Steffen Ducheyne (VUB) at the Academy.

[b] On September 26 and 27, the National Committee organized, in collaboration with the Belgian Society for Logic and Philosophy of Science, the fourth Young Researchers Days. The conference was combined with the 3èmes Rencontres doctorales internationales en philosophie des sciences, organized by the Société de Philosophie des Sciences (France), in Louvain-la-Neuve.

[c] The National Committee supported the organization of a two-day conference “Science en guerre et guerre des savants: politique et réseaux scientifiques internationaux durant la Première Guerre mondiale”, organized by Kenneth Bertrams as part of the Collège Belgique (November 13-14).

[d] Bestor:

Bestor¹² is an online database on Belgian science and technology developed both for consultation by the general public and as a research instrument for the specialist scholar. It aims to provide a forum for historical research on (recent) Belgian science, to update historiographical sources with newer publications, and to promote the interest in the (history of) Belgian science.

Bestor contains records on Belgian scientists, scientific institutions and scientific societies of the last three centuries, both in French and in Dutch. The different items are interconnected through links, which enable the visitor to follow up on the network of relations between people and institutions. In many cases, historical information is supported by direct links to online available sources. The records also provide references to secondary sources and recent publications.

The information presented in Bestor is supplied and assessed by a small team of collaborators (National Centre for History of Science, members of National Committee, individual collaborators, etc.), under the direction of the National Committee of Logic, History and Philosophy of Science. Administrative support and housing facilities are provided by RASAB. The Bestor database is

¹² www.bestor.be

physically located on the server of the Faculty of Arts of KU Leuven, where matters of technical maintenance are taken care of.

Bestor is supported by an annual subsidy of Belspo, which has been generously accorded to the Committee since 2008.

Staff and management

During 2014 Bestor employed one scientific collaborator. Lyvia Diser (1 FTE) is manager of the project, dividing her time between writing new records, coordinating collaborators, making translations, assuring the maintenance of the website, public relations and promotion.

The National Centre for the History of Science (KBR) contributed to Bestor by producing records on scientific societies, based on the library collections of the Royal Library. Apart from this, members of the National Committee have volunteered to read and correct some records of Bestor.

Supervisor of the project is Professor Geert Vanpaemel (KU Leuven), secretary of the National Committee.

Outcome 2014

During 2015, 73 new records have been made. As of February 2015, Bestor contains 987 French (F) and 945 Dutch (N) records. There is no strict equality between French and Dutch records. It remains Bestor's ambition to have two equivalent sets of records in both languages, but this is not a short-term priority, as it would proportionally take up too much time of the total workload of the collaborator(s).

Fig. 1 - Total number of records

Most of the records are biographical. Bestor includes 595 French and 581 Dutch biographies. Furthermore, there are 131 (F) and 63 (N) records on scientific societies, 34 (F) and 92 (N) on scientific institutions and 15 (F) and 39 (N) on scientific journals.

Fig. 2 - Chronological distribution of biographical records (by date of birth)

Several records were made to accompany events of public interest. On the occasion of the launching of the Lemaître satellite in June 2014, Bestor highlighted this Belgian father of the Big Bang on its homepage and in the newsletter. The celebration of the Vesalius year was also given special attention, amongst other things by providing a special record on Andreas Vesalius and his work, and a gallery of Belgian anatomists. Other special records drew the public's attention to birthdays and other commemorative dates of lesser known but important Belgian scientists and science events.

Due to staff constraints, translations were not given high priority. Translations were made of the 2013 Bestor project on the Royal Museums. Furthermore, the User Portal was made available in French.

Next to that, two major new projects were developed. One focused on women in the history of Belgian science, the other on Science and the Great War.

The project on female scientists in Belgium sheds light on a group of scientists that until now had been dramatically overlooked in the classic biographical works of reference in the Belgian historiography of science. The output of the project consisted of the creation of 28 new records, of which 17 are now accessible online. The remaining records will be made available in June, an event to coincide with the international workshop on networks of women scientists. Also, a thematic record for the broader audience was put online.

The second project took advantage of the opportunity given by the massive public attention to the commemoration of the beginning of World War I. Throughout 2014, three thematic records on science and war were published, both in French and in Dutch. These records shed a light on some little known facts concerning the war period, such as the short lived Belgian university at Amersfoort. The war theme proved to be very successful: the thematic record "Science under Occupation" received over 350 views in the first 4 months of its publication on the site. This was even before the promotion of the story was started.

Promotion and visibility

In 2014 the quarterly Bestor Newsletter made its first appearance. Three editions have come out since, in French and in Dutch. The newsletter draws the attention to curious stories, significant dates and unknown facts on the history of Belgian Science. It also presents updates on Bestor records and brings important recent publications into focus. In order to appeal to a broad readership, an attractive and user-friendly newsletter template was designed for inclusion in

email messages. Short announcements contain links to the website pages for further reading.

The editing of the Newsletter is done by Diser, the translation is taken care of by the National Centre for History of Science. The newsletter is sent out to contacts, but can also be read online, on the website. An extensive mailing list was created, which contains most science history societies as well as individual scholars, amateurs, teachers and students. The number of views of the hyperlinked pages increases significantly in the days and weeks following the dissemination of the newsletters. Promotion for the newsletter is done through the folder, on the website and through publications, newsletters of congenial organisations, mailing lists of other organizations (Mémosciences), etc.

The Bestor publicity folder was distributed at scholarly national and international conferences, teacher seminars, etc. Digital folders were sent out to various organizations and societies with an interest in history. They were asked to add a reference to Bestor or a Bestor project in their mailing list. In the case of the Flemish teachers' organization VVLG, a special announcement of Bestor with folder was sent to almost 1000 contacts, resulting in a significant rise of the number of hits on the home page in the following days.

Bestor has significantly gained in visibility. The visitors' statistics tool now lists 1.5 million views for the French site and over 600,000 for the Dutch site. Apart from the home page, the page most often viewed was the Category of Scientists: 52,714 (F) and 18,055 (N). Each of the ten most viewed pages (N and F) is consulted on a daily basis. With the exception of Quetelet and Lemaître, the top ten consists mostly of twentieth century born scientists, probably because of the fact that there are no other easily available sources on them. On the French site 991 pages had more than 100 views, and 305 pages have even received more than 1,000 views (respectively 919 and 98 pages for the Dutch site). Bestor pages are well represented in Google queries.

5. Future perspectives

[a] Meeting at conferences

Every year, the National Committee holds two administrative meetings, during which business matters and scientific projects are discussed. Extensive reports of these meetings are available.

In 2015, the National Committee will organize two scientific conferences. On June 13, an international colloquium, *Lonesome Journeys? Travel and transnational networks of women scientists* will be held, in collaboration with KU Leuven, AVG-Carhif and the European SPICE project. The National Committee will also contribute to this colloquium with a presentation on the

representation of women networks in Bestor, and the methodological issues concerning the tracing of these networks through biographical records.

In the fall of 2015, the National Committee will hold its second conference on the historiography of science (following the successful commemoration of Sarton in 2011). The theme of the conference is Critical Values. The influence of historians' judgments on the appreciation of past science. It addresses the question of the demarcation of science in confrontation with historical categories. Several members of the National Committee will participate. The papers will be disseminated through the Bestor website.

In 2016, the National Committee will again organize, with the BSLPS, the fifth Young Researchers days. To commemorate the 150th birthday of the first volume of the *Biographie Nationale*, the National Committee also plans to organize an international conference on the theme of biographies. This will also serve as a critical presentation and discussion of Bestor, in relation to other national and international biographical databases on the history of science.

Finally, the National Committee will seek to collaborate with partner institutions and societies. Possible collaborations may take place with UGent (conference on early modern science and religion), KU Leuven/Louvain-la-neuve (commemoration of Georges Lemaître 2016), Gewina (organization of joint meetings)...

[b] Representation

In 2015 the General Assembly of the Division of Logic, Methodology and Philosophy of Science of the IUHPS will convene at Helsinki. The National Committee will send a delegate to represent Belgium.

Similarly, the National Committee will attend the 7th International Conference of the European Society for the History of Science, to be held on 22-24 September 2016 in Prague.

[c] Publications

Several papers, presented at past conferences organized by the National Committee have been published in scholarly journals or books. It is the ambition of the National Committee to prepare also some introductory documents on historiographical issues or overviews of current research, in order to support e.g. teaching, science communication or amateur research, or to promote collaboration. Such material can be placed on Bestor, but, depending on the financial means available to the Committee, a separate publication may be opportune.

NATIONAL COMMITTEE FOR MATHEMATICS

1. Introduction, mission, goals

The National Committee aims at stimulating and coordinating in Belgium research in mathematics, both in pure mathematics and applied mathematics, including education in mathematics. In fact the distinction in pure and applied mathematics is not always easy to make. In pure mathematics we think of algebra, geometry and analysis, but also these areas overlap and do not cover the whole domain. One can think of logic, combinatorics, topology, set theory, etc. Applied mathematics, consisting among others of numerical analysis, statistics, mathematics related to physics, is currently expanding and covers areas such as econometry and finance, informatics, biomathematics, etc.

One of the main goals of the committee is to form a bridge between the International Mathematical Union (IMU) and the Belgian scientists who work in the area of Mathematics. As such we choose the delegates that could represent Belgium at the General Assemblies of the IMU and propose their names to both Academies. Together with the Belgian Mathematical Society we take care of informing the Belgian mathematical community by means of the *Newsletter of the Belgian Mathematical Society and the National Committee for Mathematics*.

We aim at having 16 members, respecting linguistic parity, taking care of a good gender representation and having a well balanced participation of the different universities and important mathematical domains.

2. Meetings of the Committee

During 2014 the National Committee for Mathematics had one meeting on March 12. Thomas Brihaye (Umons) gave a talk on Banach Mazur games. After that the committee had some discussions on the International Congress of Mathematicians in Seoul and on the IMU General Assembly in Gyeongju.

Moreover, the members of the Committee have regularly been informed, by e-mail, about initiatives of the IMU or about the proposals of the IMU for which the opinion of the NCM was requested. All members and honorary members of the NCM received the Electronic IMU-Newsletter and the IMU-Bulletin.

3. General Assembly of the Scientific Union

Prof. Simone Gutt took part in the general assembly of the IMU in Gyeongju (August).

4. Other activities

[a] The BMS (with NCM) organized a symposium around the Fields medals on November 12, 2014. It was very successful. More than 100 participants registered and the room which was booked at the Palace of the Academies in Brussels had become too small. On short notice an alternative location had to be found : room at the Vrije Universiteit Brussel (VUB). The invited speakers were Athanase Papadopoulos (Université de Strasbourg), Lenny Taelman (Universiteit van Amsterdam), Sylvain Crovisier (Université d'Orsay Paris-Sud) and Lorenzo Zambotti (Université Pierre et Marie Curie, Paris VI).

[b] The Newsletter appeared five times in 2014 and was distributed both electronically and in a paper version. F.Bastin (secretary of the NCM) is in charge of the Newsletter.

NATIONAL COMMITTEE FOR MECHANICS

1. Introduction, mission goals

The Committee aims at promoting the Mechanical Engineering through inter-university Students and Staff exchanges, organization of a bi-annual National Congress of Theoretical and Applied Mechanics, organization of a Doctoral School (GrasMech), development of relationships with European and International Mechanical Engineering non-profit associations or initiatives (ECCOMAS, EURASEM, IUTAM, IACM...) and awarding the (Belgian) “best thesis” in Mechanical Engineering on an annual basis.

2. Meetings of the Committee

Two administrative meetings were organised in 2012 on: 27 March and 13 November.

[a] 27 March, Main discussions:

- Dirk Lefeber (VUB) has been appointed as Vice-President.
- Improvements of GRASMECH doctoral school have been discussed.
- NCTAM award has been appointed.
- Relations with ECCOMAS have been discussed in order to improve collaboration.
- All members have accepted that BNCTAM should apply to IACM (International Association for Computational Mechanics - <http://www.iacm.info/>)
- Financial situation has been discussed.

[a] 13 November, Main discussions:

- Launch of the call for the NCTAM Award of the best thesis in 2014 (Reward = 1000 euros). In case the topic also deals with computational Mechanics the laureate will also be presented at the ECCOMAS best thesis award as the Belgian representative.
- A new course for Grasmech has been decided (A.M. Habraken)
- Financial situation has been discussed.

3. General Assembly of the Scientific Union

No Assembly of the Scientific Union in 2014.

4. Future perspectives

- Election for the “Best (Belgian) Thesis in Mechanical Engineering” for 2014 (March 2015)
- Proposal of an ECCOMAS price winner Belgian candidate from the NCTAM for 2014 (scheduled March 2015)
- Organization and improvement of the doctoral school for Mechanical Engineers (GRASMECH)
- Organization of the National Conference for Theoretical and Applied Mechanics (Liège 2015-2016)

NATIONAL COMMITTEE FOR MICROBIOLOGY

1. Introduction, mission goals

The Committee for Microbiology represents Belgian scientists conducting research in the field of biological sciences in the work of the International Union of Microbiological Societies (IUMS).

2. Meetings of the Committee

The meetings of the NCM were joint meetings with the board of the Belgian Society for Microbiology (BSM), of which some members are also member of NCM and all members of NCM are involved in the advisory board of BSM.

Two administrative meetings were organised in 2014 on: 27 February and 16 December.

[a] 27 February, main discussions:

1. Preparation of the annual meeting Date 18 November 2014; Topic "Cell signaling – host-microbiome interactions" - Suggestions for speakers
2. BELVIR - BSM: invited Hans Nauwinc
3. AOB

[a] 16 December, main discussions:

1. Evaluation of Symposium 2014
2. Possible topic Symposium 2015
3. Possible other activities in 2015
4. Newsletter- suggestion for a rotation of editors for each newsletter?
5. FEMS matters: call for new representative for BSM in FEMS
6. Nomination of a Belgian microbiologist for the FEMS – Lwoff award: deadline January 15
7. AOB

3. General Assembly of the Scientific Union

No Assembly of the Scientific Union in 2014.

4. Other activities

[a] Symposium: *Cell signaling in host-microbe interactions*

Date: 18th November 2014, Academies Palace.

Attendance: About 150 scientists attended the meeting and the poster awards were obtained by the following contributors and contributions:

Virology

1. Belspo-BCCM Award for the best poster of the BSM meeting 2014 (Virology)
Muhammad Bilal Latif, Bénédicte Machiels, Alain Vanderplasschen, Laurent Gillet.
"Murid herpesvirus4 ORF63 is involved in the translocation of incoming capsids to the nucleus"
2. BSM poster award 2014 (Virology)
Maria Pontes, B. Devriendt, H. W. Favoreel.
"Pseudorabies virus gE causes ERK1/2 activation in primary porcine T lymphocytes and subsequent cell aggregation and migration"
3. BSM poster award 2014 (Virology)
Evelien Vanderlinden, Hugo Klaassen, Arnaud Marchand, Patrick Chaltin and Lieve Naesens
"Identification and mechanism of action of a novel influenza virus fusion inhibitor"

Bacteriology

1. Belspo-BCCM award for the best poster of the BSM meeting 2014 (Bacteriology)
Thibaut Hallaert, E. Seyll, S. Zadek, D. Monteyne, S. El-Kirat-Chatel, Y.F. Dufrêne, D. Perez-Morga and L. Van Melderen.
"Bridging metabolism and cell envelope homeostasis in *E. coli*"
2. BSM award 2014 (Bacteriology)
Jessy Praet, Ivan Meeus, Guy Smaghe, Peter Vandamme
"The Gut Microbiota of Pollinators: an unknown and unexplored treasure chest of biodiversity"
3. BSM award 2014 (Bacteriology)
Jozef Dingemans, Aurélie Crabbé, Rob van Houdt, Anne Malfroot, Pierre Cornelis
"Effect of shear stress on *Pseudomonas aeruginosa* isolated from the cystic fibrosis lung"
4. ASM award 2014
Elodie Tenconi, Charline Hoebreck and Sébastien Rigali
"Prodiginines, secondary metabolites associated with the programmed cell death of *Streptomyces coelicolor*"

NATIONAL COMMITTEE FOR OCEANOLOGY

1. Introduction, mission, goals

The Committee deals with all topics related to research and education in the field of Oceanography. It is an interdisciplinary community involving hydrodynamicists, chemists, geologists, and biologists working in estuarine and coastal systems as well as in open oceans in cold, temperate and tropical environments.

2. Meetings of the Committee

Non-specified.

3. General Assembly of the Scientific Union

No Assembly of the Scientific Union in 2013.

4. Other activities

[a] *Ocean Sciences and Horizon 2020: Opportunities and Concerns (May 2014)*

December 12th, 2013, the European Commission opened the first calls of Horizon 2020. Opportunities to develop cross-boundary, collaborative research in ocean science are found under “Tackling Societal Challenges” mainly in the area “Climate action, environment, resource efficiency and raw materials” and in the calls for the focus area “Blue Growth: unlocking the potential of Seas and Oceans”. Some opportunities for collaborative research further show up under “Excellent Science”, in particular in the area of “European research infrastructures”. Both the Marie Skłodowska-Curie and the ERC schemes, providers of high-level individual research grants, have been consolidated by increased budgets.

Quite a few scientists, both newcomers and veterans of earlier Framework Programmes, may have discovered in the Horizon 2020 Work Programme 2014-2015 tackling Societal Challenges a new language, a different culture and some unfamiliar rationale. Some programme instruments may look familiar, while other ones, like the new ERA-NET Cofund, may contribute to profound changes in the tissue of European research and society. In the focus area ‘Blue Growth’, a couple of calls have been opened in 2014 for industry-driven exploitation of marine derived biomolecules and biomaterials (BG3 and BG4-2014), and two calls relate to technologies essential to the study of deep-sea ecosystems (BG6 and BG9-2014). On the Atlantic, two large integrative calls blend

scientific and technological challenges to develop in-situ Atlantic Ocean Observations for a better management and exploitation of the marine resources (BG8-2014) and to build an Atlantic Ocean Cooperation Research Alliance (BG14-2014). Remarkably, vast thematic areas are left unaddressed, and the Mediterranean, Black Sea, Baltic and Arctic seas remain largely out of the picture.

To what extent does Horizon 2020 meet the expectations of the scientific research community, in particular university research centres, which have the mandate to deliver year after year the brainpower needed for shaping an innovative society?

This question stood central in a study day organized by the Belgian National Committee of Oceanology of RASAB in May 16th, 2014 in Brussels, Palace of the Academies, in collaboration with The Belgian Science Policy Office and the European Marine Board.

After an introduction by Prof. W. Baeyens, Chair, Prof. J.P. Henriët (Ghent University) first drafted a historical overview of collaborative research in Europe in the fields of ocean and polar sciences: “From Grand Challenges to Grand Challenges - 20 years of wave crests and troughs in collaborative ocean research in Europe”.

Prof. C. Lancelot (Liège University) introduced the “Future Earth” initiative (ICSU). Funding opportunities, provided through the Belmont Forum, range between 200 kEuro and 1 MEuro.

Dr. F. Monteny (BELSPO - Science Policy Office, Belgian Federal Govt.) next conveyed in his talk “Belgian Policy in Marine Sciences” an overview of the BRAIN.be programme (Belgian Research Action through Interdisciplinary Networks). The first phase of this recurrent framework programme, with a budget of 117 MEuro, encompasses the period 2012-2017. Relevant thematic areas are (1) Ecosystems, biodiversity, evolution, and (2) Geosystems, universe and climate. The framework programme is based on the financing of two types of research projects: (a) Four-year network projects with the possibility of two-year projects and (b) Pioneer projects lasting a maximum of two years.

Dr. N. Wouters (European Marine Board) made a presentation on “From Navigating the Future IV to Horizon 2020”, and J.P. Henriët (Ghent University) followed up with a SWOT analysis of H2020, from an academic researcher's perspective.

In conclusion of this meeting, a clear need was expressed for “more bottom-up, less top-down” opportunities for collaborative research in Horizon 2020. It would be explored to what extent

messages could be passed in the scoping paper for the next phase of the Horizon 2020 Work Programme (2016-2017).

[b] Evaluation of the National Committees (August-September 2014)

In the framework of the evaluation of the National Committees by RASAB (August-September 2014), the National Committee of Oceanology responded with an overview of some 15 Belgian research projects directly linked to SCOR programmes (GEOHAB, IMBER, GEOTRACES, SOLAS), most of them funded by BELSPO. In addition, a vast number of actions took place in the framework of EU framework programmes or ESF (EUROCORES) programmes.

The “return on investment” of an affiliation to SCOR is for Belgian ocean science impressive, as was illustrated by a numerical example. Without the association to international programmes like those under the auspices of SCOR, Belgian scientists would have little or no access to the world oceans. A very significant part of Belgian global oceanological research focuses on the Southern Seas, key to Climate Change and its impact on the Biosphere. These seas are only accessible with large, ice-strengthened vessels or icebreakers. On top of that, Belgian scientists get access to valuable foreign analytical land-based infrastructures. Considering the number of sea-going Belgian scientists in the framework of SCOR-associated projects, one can state as initial guess that an annual fee to SCOR in the order of magnitude of some 5.000 \$/Euro generates a minimal annual return to Belgian science of some 500.000 \$/Euro – e.g. two orders of magnitude.

[c] Follow-up

When the organizers of the study day could get access to the draft Scoping Paper for Horizon 2020 Societal Challenge “Food Security, Sustainable Agriculture and Forestry, Marine, Maritime and Inland Water Research, and the Bioeconomy”, it was already declared finalized. Phrased in very general terms, the document apparently does not contain fundamental changes of tack with respect to the first phase. Proposed focus areas for the calls of Societal Challenge 2 in 2016-2017 are: (1) Sustainable Food Security - Resilient and resource-efficient value chains, and (2) Blue Growth – Demonstrating an ocean of opportunities.

End of 2014, messages from various sources raised concerns about the continuation of the support of BELSPO to international scientific programmes. In Flanders, the Class of Natural Sciences of the Royal Flemish Academy of Belgium for Science and Arts (KVAB) will prepare a Position Paper “Flanders’ participation to international research programmes, in a Federal frame and a European perspective (coordinator: prof. J.P. Henriët, Vice-Director, Class of Natural Sciences, secretary, Committee of Oceanology).

In addition, the question of a future Belgian oceanographic vessel in replacement of the aging R/V Belgica is being put on the agenda of exploratory international contacts, in due concertation with BELSPO and the Belgica Operational Management. Considering the recognized need for a European partnership and critical mass for building and operating such a vessel, which should exceed the capacity and operational range of the present R/V Belgica, the present analysis focuses a.o. on the new European legal instrument – ERIC – for the joint building and operation of European large infrastructures. In coherence with the conclusions of the May 16th study day, due attention is paid to the full picture of (a) a new vessel, (b) leading edge instrumentation, (c) sustainable operability and (d) sustained support to science through open calls with European (ERANET) co-funding.

NATIONAL COMMITTEE FOR PHYSICS

1. Introduction, mission, goals

The Belgian National Committee on Pure and Applied Physics has been created by the Royal Academies for Science and the Arts of Belgium (RASAB). It contributes to the promotion and coordination of Belgian activities concerning Pure and Applied Physics. At the international level it ensures Belgium's representation in IUPAP, the International Union for Pure and Applied Physics. Its activities can be followed on its website¹³.

2. Meetings of the Committee

Meetings were held on 13 March and 9 September. The main interest points of these meetings were:

- Preparation of the Colloquium 2015.
- Updating of the publication *Research in Physics in Belgium*.
- Preparation of the 28th General Assembly of IUPAP.

3. General Assembly of the Scientific Union

The General Assembly of the International Union for Pure and Applied Physics (November 2014, Singapore) was attended by Prof. Roger Weynants¹⁴.

4. Other activities

[a] Preparation of the 2015 colloquium of the NCPAP

The NCPAP will organize its next bi-annual colloquium on March 28, 2015 in the Palace of the Academies, with the title "Particle Physics after the 2013 Nobel Prize – a Colloquium dedicated to Francois Englert and Robert Brout". The choice of topic is a "natural" sequel of the awarding of the Nobel Prize 2013 in Physics to Profs. François Englert and Peter Higgs for their theoretical discovery in 1964 of a mechanism that contributes to our understanding of the origin of mass of subatomic particles, and which in 2012 was confirmed through the discovery of the predicted fundamental particle at CERN's Large Hadron Collider. This first Belgian Nobel prize in Physics

¹³ <https://sites.google.com/site/physbel/>

¹⁴ See report on page 93

honored the work that Robert Brout (deceased in 2011) and François Englert performed in common at ULBruxelles on what is now known as the Brout-Englert-Higgs Boson.

A Scientific Committee, composed of Giacomo Bruno (UCLouvain), Barbara Clerbaux (ULB), Dirk Ryckebosch (UGent, chairman), Alexander Sevrin (VUB), Michel Tytgat (ULB), Nick van Remortel (UAntwerpen) and Pierre Defrance, Philippe Herquet and Roger Weynants (all from NCPAP) proposed a program around the following speakers and topics:

- Prof. Gian Francesco GIUDICE, CERN: The Standard Model of Particle Physics and its Shortcomings.
- Prof. Paris SPHICAS, CERN and university of Athens: The Physics of the Large Hadron Collider.
- Prof. Francis HALZEN, University of Wisconsin: The Physics of Neutrinos.
- Prof. Kathryn ZUREK, University of Berkeley: The Hunt for Dark Matter.

As customary, a poster session by the Belgian research groups working in the domain will be held during the Lunch break.

[b] Update of Research in Physics in Belgium:

The NCPAP initiated for the first time in 2005 the compilation of short reports on the main physical research topics in Belgium, both theoretical and experimental. Fifteen of these were written by prominent Belgian researchers, actively involved in the IUPAP Commissions, and were published in 2006 in *Physica Magazine* and posted on the websites of the NCPAP and of the Belgian Physical Society¹⁵.

The NCPAP considered that a regular updating is in order and has, between 2011 and 2014, revised 14 of the original contributions. These were published on-line in *BPhy Magazine*, the successor of *Physica Magazine*, and are incorporated with the remaining reports¹⁶.

[c] 28th General Assembly of IUPAP

The General Assembly of IUPAP took place on 5-7 November 2014 in Singapore and was attended by the NCPAP chairman Roger Weynants, who submitted a travel report to RASAB.

The NCPAP went in 2014 through the process of finding Belgian candidates to be proposed to the GA as possible members to one of the 18 IUPAP Scientific Commissions for the period 2015-2017. The following Belgian physicists were elected as Commission members by the General Assembly.

¹⁵ <http://sites.google.com/site/belgianphysicalsociety/>

¹⁶ <https://sites.google.com/site/physbel/Physics-in-Belgium>

- Nuclear Physics (C12): P. Van Duppen (KUL)
- Physics for Development (C13): C.S. Iorio (ULB)
- Plasma Physics (C16): J. Ongena (KMS-ERM)
- Mathematical Physics (C18): A. Sevrin (VUB)

The number of members reflects the Belgian share in the IUPAP financing.

NATIONAL COMMITTEE FOR PHYSIOLOGY AND PHARMACOLOGY

1. Introduction, mission, goals

The goal of the Committee is to organize national and international scientific meetings in which Belgian Physiologists and Pharmacologists (and eventually their guests) can present and bring up for discussion the results of their recent research in the fields of Physiology and Pharmacology.

Because of the common goals, the members of the National Committee for Physiology and Pharmacology are also member of Physiology and Pharmacology and as such are involved in the preparation and organization of all the activities of this Society.

2. Meetings of the Committee

17th October: General Assembly held in Brussels (Palace of the Academies).

3. General Assembly of the Scientific Union

The General Assembly of the International Union of Pharmacology (July 2014, Cape Town, South Africa) was attended by Prof. Johan Van de Voorde.

4. Other Activities

[a] Co-organisation of the Second Benelux Congress on Physiology and Pharmacology (Maastricht, NL. – 4-5 april 2014 – our members Vincent Seutin, Dirk Snyders, Johan Van de Voorde were members of the Scientific and Organizing Committee of the congress).

[b] The National Autumn meeting of the Belgian Society of Physiology and Pharmacology, October 17th in Brussels (Palace of the Academies), aiming to bring together the physiologists and pharmacologists from Belgian laboratories. About 80 scientists attended the meeting¹⁷.

[c] Prof. Dr. J. Van de Voorde represented the National Committee at the General Assembly of the International Union of Pharmacology held in Cape Town (South Africa) on the occasion of the 17th World Congress of Basic and Clinical Pharmacology (13-18 July 2014).

¹⁷ <http://users.ugent.be/~jvdvoord/physiology&pharmacology>

5. Future perspectives

- National Spring Meeting (Brussels, April 24, 2015)
- National Autumn Meeting (Brussels, November 6, 2015)

NATIONAL COMMITTEE FOR PSYCHOLOGICAL SCIENCES

1. Introduction, mission, goals

The goal of the Committee being to undertake, promote and coordinate psychological scientific research, focusing in particular on long term, intercollegiate or interdisciplinary projects and to serve psychological scientific interests in Belgium from a national as well as an international point of view.

2. Meetings of the Committee

The Committee held two meetings in 2014: 26 April & 22 November.

3. General Assembly of the Scientific Union

The General Assembly of the International Union of Psychological Sciences (June 2014, Paris) was attended by Prof. Géry d'Ydewalle¹⁸.

4. Other activities

[a] The committee organizes bi-annual symposia. No symposium was organized in 2014. The next Symposium will be organized by Axel Cleeremans and Eva Vandenbussche (VUB) on November 27th, 2015 and will be dedicated to the topic of consciousness.

[b] The committee also assists, every year, the Belgian Association for Psychological Science in selecting the recipient of its "Best Thesis Award". The 2014 competition is currently underway. A jury composed of committee members and presided by A. Vandierendonck will make the final selection during the month of March.

[c] Finally, this year the committee was also involved in suggesting Belgian personalities as speakers for the forthcoming IUPsyS meeting, to take place in 2016 in Yokohama (JP). Pr. P. Peigneux and Pr. R. Kolinsky will both represent our country at the meeting.

[d] Finally, this year the committee was also involved in suggesting Belgian personalities as speakers for the forthcoming IUPsyS meeting, to take place in 2016 in Yokohama (JP).

¹⁸ See report on page 96

5. Future perspectives

No new initiatives are currently planned beyond the continued involvement of the committee in its current activities, namely (1) communicating with the IUPsyS and with the Belgian Association for Psychological Science (BAPS), (2) organizing a bi-annual symposium, and (3) handling the final stage of the BAPS Best Thesis Award.

NATIONAL COMMITTEE FOR RADIO-ELECTRICITY (URSI)

1. Introduction, mission, goals

The activities of the Belgian URSI Committee are related to the domain of radio-electricity. The main goal of the committee is to promote and in some extend to coordinate for Belgium the scientific activities of its members in this field of interest. The committee meets regularly at the Academy and organizes yearly, in collaboration with the URSI committee of Netherlands a 'URSI Forum' where young doctorandi have the opportunity to present their researches and to exchange their scientific and technical experience. Effective members of the committee are representing Belgium in the different scientific commissions of URSI.

2. Meetings of the Committee

The Belgian URSI Committee has met three times in the facilities of the Academy: on 21 January, 28 May and 7 November.

[a] *21 Januari 2014*

André Vander Vorst gave a presentation entitled "*GSM, WiFi, Bluetooth, micro-ondes: danger?*"

After his presentation an election took place. Thierry Gilles and Philippe De Doncker were elected unanimously as associate members. Then the administrative part of the meeting went on with the organization of the BENELUX URSI forum 2014 in Belgium and the coming URSI General Assembly in Beijing.

[b] *28 May 2014*

Thierry Gilles gave a presentation entitled "*Near and Far Field HF antenna parc characterization*".

After his presentation, the administrative part of the meeting went on with the organization of the BENELUX URSI forum 2014 and the coming URSI General Assembly in Beijing.

[c] *7 November 2014*

Wout Joseph gave a presentation entitled "*Exposure due to Electromagnetic Fields of LTE (4G) and New Wireless Technologies in Different Environments*".

After his presentation, a final series of elections took place. Paul Lagasse was elected as an honorary member, Peter Van Daele was elected as an effective member and Wout Joseph was elected as an associate member. Then the new URSI Belgian Board was elected.

Christine De Mol was elected as a chairman. Viviane Pierrard was elected as a secretary. Peter Van Daele has accepted to be a vice-chairman and was elected. There was no candidate for an assistant secretary at that moment.

Then the administrative part of the meeting went on with the organization of the BENELUX URSI forum 2014 in Belgium and the debriefing of the URSI General Assembly in Beijing.

3. General Assembly of the Scientific Union

The General Assembly of the International Union of Radio Sciences (16-23 August 2014, Beijing) was attended by Prof. Emmanuel Van Lil¹⁹.

The 1st URSI Atlantic Radio Science Conference is scheduled on 18-22 May 2015 at Gran Canaria in Spain and in 2016 with AP-RASC in Korea. Those conferences will fill the gap between the triannual General Assemblies.

4. Other activities

The eighth edition of the Benelux URSI forum was organized by the team of UCL on 18 November at Louvain-La-Neuve. It is worthwhile to note that the laureate of the best AP Benelux Chapter poster contest was Ben Witvliet from the University of Twente and the laureate of the best URSI Belgium poster contest was Eric Mersch from the Royal Military Academy.

5. Future perspectives

In 2015, the BENELUX URSI forum will be organized by the Dutch URSI committee.

¹⁹ See report on page 97

NATIONAL COMMITTEE IGBP

1. Introduction, mission, goals

The committee represents IGBP (International Geosphere/Biosphere Program of ICSU). The national committee stimulates the participation of Belgian scientists in IGBP projects. It also organizes activities (workshops, conferences, preparation of research plans, etc.) in Belgium in the domains covered by these programs.

2. Meetings of the Committee

No formal meeting but several e-mail consultations of the membership.

3. General Assembly of the Scientific Union

No Assembly of the Scientific Union in 2014.

4. Other activities

[a] Contacts with the ICSU and IGBP secretariats regarding the new “Future Earth” program, which is intended to absorb IGBP.

[b] It was agreed to propose to RASAB to discontinue the financial contribution to SCOPE but to maintain that to IGBP, pending the decision to establish a new national committee, with a broader disciplinary representation (eg social and natural sciences) for the “Future Earth Program” of ICSU.

NATIONAL COMMITTEE FOR SOIL SCIENCES

1. Introduction, mission, goals

The NCSS was set up in 2002, following long lasting activities of the Soil Science Society of Belgium (started in 1924) and with the purpose to bring soil science to the attention of the broader public with particular focus on the young people. This original mission of SSSB/NCSS is more relevant now than it has even been - soil and soil suitability comes daily in the media and in the public debate: trade-offs between food production versus agro-fuels, the preservation of our pristine soils, the conservation of our soil heritage, the rehabilitation of marginal lands and the remediation of polluted soils. The NCSS is the representative organization for all soil scientists active in Belgium and is the official Belgian representative into the International Union of Soil Sciences (IUSS).

2. Meetings of the committee

Dates: 26 February, 5 December.

Main conclusions: the NCSS organizes 5 activities per year:

- Day of the Young Scientists in February;
- A field excursion in May or September;
- A Thematic Day in December
- Two boards (one in February, together with the Day of the Young Scientists, one in November, together with the Thematic Day).

3. General Assembly of the Scientific Union

Dates: IUSS Board meeting, Jeju Korea, June 8 – 13th 2014 at the occasion of the 20th World Congress of Soil Science²⁰.

Main conclusions: K. Vancampenhout is member of the IUSS Board. Stefaan Dondeyne and Seppe Deckers are in the Board of the IUSS Working Group WRB on international soil classification, which published the new version of WRB 2014 during the congress. Seppe Deckers is also chairing the Ad-Hoc Selection Committee of the bi-annual IUSS-Guy Smith Medal Award.

²⁰ See report on page 104

4. Other activities

[a] *Day of the Young Soil Scientists* at the Palace of the Academies, 26 February, attended by 55 people.

[b] International excursion to Wageningen, The Netherlands, 2 & 3 June 2014 (Organization: Seppe Deckers, Karen Vancampenhout, Jetse Stoorvogel (Wageningen University) and Stephan Mantel (ISRIC International Soil Museum). The excursion was well attended with 23 participants

[c] BAG excursion *Direct and indirect anthropogenic impact on the geomorphology of Eastern Belgium* to La Préalée – Petite Bacnure coal tip, Roosberg (Zichen-Zussen-Bolder): Kattenroth (Voeren/Fourons), Berwinne Valley, Retinne, Hasard spoil heap Dalhem and Thier des Vignes (Organisation: Jan Nyssen), 15 June.

[d] Thematic day at RASAB organized by Prof. Sarah Garre (University De Liege, Gembloux), attended by 70 people⁴

[e] Participation to the EGU 2013 at Vienna, Austria from 27/04/14 – 02/05/14

[d] Participation to the World Soil Conference in Jeju, Korea (June 2014)

5. Future perspectives

As each year, NCSS will organize 5 core activities:

- 2 board meetings (April & December).
- Day of the Young Scientists (26 February 2014).
- International excursion (end of May – beginning of June 2014)
- As one of the action points to mark the "International Year of the Soil", the Soil Science Society of Belgium has taken the initiative to organize an exhibition of "Africa in Profile" from 4th December 2015 through to January 31st 2016. The exhibition will be hosted in the Pandgang of the Arenberg Library, Sciences campus of the KU Leuven University. In the margins of the exhibition a number of scientific events will be organized:
 - Launch of the French version of the Soil Atlas of Africa on December 4th 2015
 - Thematic Day of the Soil Science Society of Belgium on December 4th 2015
 - Opening reception on December 4th 2015
 - Url: <http://ees.kuleuven.be/africa-in-profile/index.html>

In addition, other activities will be under the NCSS umbrella:

- Global Soil Partnership: initiative by FAO to harmonize global soil data: E. Van Ranst will be the official contact point.
- EGU conference, Vienna, April 2014: will be attended by many SSSB/NCSS members.

INTERNATIONAL UNIONS

The existence of a national committee is subject to the existence of an International Scientific Union or scientific body affiliated to International Council for Science — ICSU²¹ (scientific committees, special committees, etc.) concerning the same scientific subject.

▪ Committee on Space Research (COSPAR)	www.cosparhq.cnes.fr
▪ International Astronomical Union (IAU)	www.iau.org
▪ International Geographical Union (IGU)	www.igu-net.org
▪ International Geosphere-Biosphere Programme (IGBP)	www.igbp.net
▪ International Federation for Medical and Biological Engineering (IFMBE)	www.ifmbe.org
▪ International Mathematical Union (IMU)	www.mathunion.org
▪ International Union for Physical and Engineering Sciences in Medicine (IUPESM)	www.iupesm.org
▪ International Union for Quaternary Research (INQUA)	www.inqua.org
▪ International Union of Biochemistry and Molecular Biology (IUBMB)	www.iubmb.org
▪ International Union of Biological Sciences (IUBS)	www.iubs.org
▪ International Union of Crystallography (IUCr):	www.iucr.org
▪ International Union of Geodesy and Geophysics (IUGG)	www.iugg.org
▪ International Union of Geological Sciences (IUGS)	www.iugs.org
▪ International Union of History and Philosophy of Science (IUHPS),	
○ Division of History of Science and Technology (IUHPS-DHST)	
○ Division of Logic, Methodology and Philosophy of Science (IUHPS-DLMPS)	www.dlmps.org
▪ International Union of Microbiological Societies (IUMS)	www.iums.org
▪ International Union of Pharmacology (IUPHAR)	www.iuphar.org
▪ International Union of Physiological Sciences (IUPS)	www.iups.org
▪ International Union of Psychological Science (IUPsyS)	www.iupsys.net
▪ International Union of Pure and Applied Biophysics (IUPAB)	www.iupab.org
▪ International Union of Pure and Applied Chemistry (IUPAC)	www.iupac.org
▪ International Union of Pure and Applied Physics (IUPAP)	www.iupap.org

²¹ www.icsu.org

- International Union of Radio Science (URSI) www.ursi.org
- International Union of Soil Sciences (IUSS) www.iuss.org
- International Union of Theoretical and Applied Mechanics (IUTAM) www.iutam.net
- Scientific Committee on Oceanic Research (SCOR) www.scor-int.org
- Scientific Committee on Solar-Terrestrial Physics www.yorku.ca/scostep

LISTS OF MEMBERS OF THE NATIONAL COMMITTEES²²

The complete list of the members of the National Belgian Scientific Committees can be found on the website of RASAB: www.rasab.be

²² Last update : 25 April 2015. See also the lists on www.rasab.be.

APPENDIXES

1st announcement :

The Belgian Biophysical Society and the IAP network iPROS organize a workshop on



Mass spectrometry in Structural Biology

Ghent, Tuesday, 27 May 2014



Preliminary list of speakers : Bart Devreese (Ugent), Tassos Economou (KULeuven), Frank Sobott (UA)

This workshop aims to illustrate how mass spectrometric approaches can aid in biomolecular structure determination. The speakers will show applications on the different methodologies including native mass spectrometry, ion mobility spectrometry and the use of chemical cross linking.

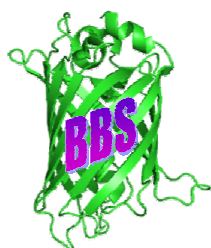
Given the informal character of this meeting the number of participants is restricted to 30.

Places will be available at a first subscribed-first served basis.

Subscription is open via the website of the Belgian Biophysical Society from April 1st.

Venue : Ghent University, Faculty of Pharmacy, Seminarieaal 1

The meeting is free for members of the Belgian Biophysical Society, Non-members pay 10 Euro. Info on membership on the website .



The BELGIAN BIOPHYSICAL SOCIETY
Further supported by the Graduate School
“Structure and Function of Biological
Macromolecules, Bioinformatics and Modelling”
ORGANIZES THE 12th ONE-DAY SYMPOSIUM ON
PROTEIN FOLDING AND STABILITY



ON FRIDAY THE 29th OF AUGUST 2014

AT THE UNIVERSITY OF LIEGE
AMPHITHEATRE 204, “Amphithéâtres de l’Europe”
DOMAINE UNIVERSITAIRE DU SART TILMAN
BATIMENT B4



09:45-10:00 Welcome

Chair : Carlo van Mierlo (University of Wageningen, [The Netherlands](#))

10:00-10:50 **Elke Deuerling** (Mol. Microbiol., University of Konstanz, [Germany](#))

“Ribosome-associated chaperones as key players in proteostasis”

10:50-11:20 COFFEE BREAK

11:20-12:10 **Jochen Reinstein** (Max-Planck-Institute Med. Res., Heidelberg, [Germany](#))

“Family business - the folding of NMP-Kinases.”

12:10-13:00 **Xavier Salvatella** (ICREA and IRB, Barcelona, [Spain](#))

“Order disorder transitions in the androgen receptor: implications for the onset and treatment of prostate cancer”

13:00-14.00 LUNCH

14:00 –14:50 **Ben Schuler** (Dept. Biochem., University of Zürich, [Switzerland](#))

“Single-molecule spectroscopy of protein folding dynamics”

14:50-15:40 **Daniel Ozen** (iNANO, Dept. Mol. Biol. Gen., Aarhus University, [Denmark](#))

“Coupling between stability and aggregation in the development in corneal dystrophy”

15:40-16:10 **Kris Pauwels** (VIB Dept. Struct. Biol., Free University Brussels, [Belgium](#))

“Structural basis for increased toxicity of pathological A β 42:A β 40 ratios in Alzheimer's Disease”

15:45 RECEPTION

Contact: Prof André Matagne (amatagne@ulg.ac.be). **Registration is required via www.biophysics.be** . Admission is free for members; non-members of the Biophysical Society (<http://www.biophysics.be>) should pay their membership (10 EUR to be paid to the account of the Belgian Biophysical Society, IBAN BE73 0000 1463 3660, BIC BPOTBE1, P/A Yves Engelborghs, Celestijnenlaan 200 G-box 2403, B3001 Leuven).

Registration

Advance registration is required:

www.biophysics.be

Important Dates

September 21: Deadline for Poster Abstract Submission

October 1: Deadline for registration

Cost

Members of the Bel. Biophys. Soc: 50 EUR

*Non-members: 60 EUR

Travel Awards

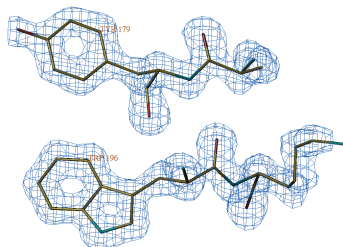
Four stipends of 250 EUR each will be awarded by the BBS and the EBSA to PhD students from foreign universities to attend the symposium.

Contact

For more information please contact Mélanie Vander Geeten

E-mail: melanie.vander.geeten@ulb.ac.be

*(including the 2014 membership fee)



Organizing and Scientific Committee (SC): Kristin Bartik (ULB) (SC), Gilles Bruylants (ULB) (SC), Yves Engelborghs (BBS-KUL) (SC), Remy Loris (VUB) (SC), Annemieke Madder (UGent) (SC), André Matagne (BBS-ULg) (SC), Steve Smits (TA Instruments) (SC), Malin Suurkuusk (TA Instruments), Mélanie Vander Geeten (ULB)

Supported by:

SFMBM



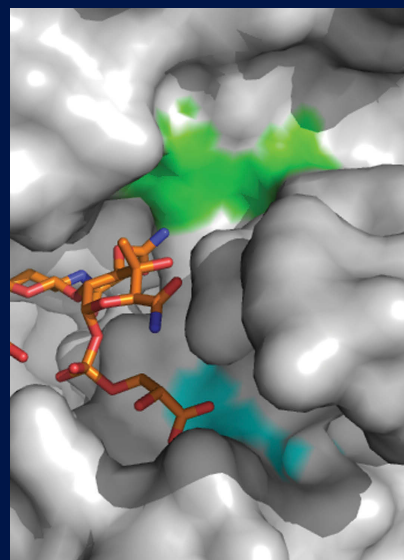
www.tainstruments.com



Biophysics Conference MODERN BIOPHYSICAL TECHNIQUES FOR THE LIFE SCIENCES

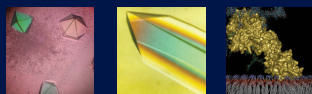
October 20-21, 2014

Academy Palace, Rue Ducale/Hertogstraat, 1, 1000 Brussels



MODERN BIOPHYSICAL TECHNIQUES FOR THE LIFE SCIENCES 20-21 October 2014

The National Committee for Biophysics, as part of the Royal Academies for Science and the Arts of Belgium, further supported by the Belgian Biophysical Society, the F.R.S.-FNRS, the contact group on Structural Biology, the Graduate School 'Structure and Function of Biological Macromolecules, Bioinformatics and Modelling', and TA Instruments invite you to participate in a symposium on: modern biophysical techniques for the life sciences

**Monday, October 20, 2014**

9:30 Opening Remarks

9:40-12:40 TA Instruments Workshop on Microcalorimetry in Life Sciences

Microcalorimetry is an essential technique for understanding the interactions in and between biological macromolecules and biological systems. Isothermal titration calorimetry (ITC) provides complete thermodynamic characterization of binding reactions, while differential scanning calorimetry (DSC) provides structure and stability information for biomolecules and biomolecular assemblies. This half-day workshop will give an overview of microcalorimetric techniques and an introduction to the practical use of microcalorimetry for the study of proteins and other biological macromolecules, lipids and microorganisms.

13:00 Lunch

Monday, October 20, 2014**Drug Discovery**

(Chair: Georges Feller, University of Liège)

14:00 **John Ladbury** (The University of Texas, Houston, U.S.A.) *Thermodynamic input to drug development: positives and negatives*

14:40 **Marc Vanhove** (ThromboGenics, Leuven, Belgium) *Inactivation of ocriplasmin in eye vitreous: a complex mechanism unraveled by mutational analysis*

15:20 Coffee break and poster session

16:20 **Ernesto Freire** (Johns Hopkins University, Baltimore, U.S.A.) *The Thermodynamics of HIV-1 Cell Infection and its Inhibition*

17:00 **Elisabetta Chiarparin** (Astex Pharmaceuticals, Cambridge, U.K.) *Challenges and Opportunities in Fragment Based Drug Discovery with Protein-Protein Interaction Targets*

Tuesday, October 21, 2014**Large Macromolecule Complexes: Structure and Stability**

(Chair: Bart Devreese, Ghent University)

9:30 **Gijsje Koenderink** (AMOLF, Amsterdam, The Netherlands) *Living soft matter*

10:10 **Radu Aricescu** (University of Oxford, U.K.) *Mind the gap: synaptic protein networks to learn and remember*

10:50 Coffee break and poster session

11:40 **Savvas Savvides** (Ghent University, Belgium) *Plasticity and cooperativity of cytokine-receptor assemblies important in inflammation and cancer*

12:20 **Jonathan Chaires** (University of Louisville, U.S.A.) *Calorimetry Outside the Box: Plasma Thermograms for Use in Clinical Diagnosis*

13:00 Lunch and poster session

Young Scientist Presentations

(Chair: Johan Wouters, University of Namur)

14:00 Young scientist #1

14:20 Young scientist #2

14:40 Young scientist #3

15:00 Coffee break

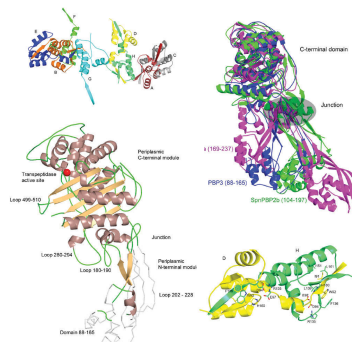
From in vitro to in vivo

(Chair: Marc De Maeyer, University of Leuven)

15:30 **Jelle Hendrix** (University of Leuven, Belgium) *Probing biomolecular structure and function with single-photon sensitive fluorescence imaging*

16:10 **Lila Gierasch** (UMass Amherst, U.S.A.) *Towards Enhanced Understanding of Protein Folding in the Cell*

16:50 *Closing reception: a unique beer-food-pairing experience*



Report on the 23rd General Assembly of the International Union of Crystallography (IUCr)

Montreal, Canada, 5–12 August 2014

Volgende landen werden aanvaard door de General Assembly als nieuwe leden van de International Union of Crystallography: Costa Rica, Pakistan, Turkey, Uruguay, Venezuela, Morocco, Malta, Cameroon, Algeria. Het lidmaatschap van Chili werd beëindigd omwille van niet betaalde lidgelden. Er is wel een nieuwe Regional Associate gevormd uit Zuid-Amerikaanse landen, naast ACA, AsCA en ECA.

Vervolgens werd er verslag uitgebracht van de activiteiten van de executieve commissie, waaronder een verslag over de tijdschriften die worden uitgebracht door de IUCr. Er was onder andere een verhoging van de abonnementskosten voor *Acta Crystallographica*, *the Journal of Applied Crystallography* en *Journal of Synchrotron Radiation* elk van de laatste drie jaren.

Er werd nadruk gelegd op het feit dat voor de aanvragen van sponsoring de aanvragen best 1 jaar op voorhand worden ingediend, ook al is de deadline officieel op 9 maanden gesteld.

Een uitgebreid financieel verslag werd gemaakt, waaruit blijkt dat er in 2011 en 2012 een kleine winst was, maar in 2013 verlies, dat te verklaren is door de kosten gemaakt voor het Internationale jaar van de Kristallografie (2014).

De tiende Ewald prijs, voor voortreffelijke bijdrage aan de kristallografie, werd uitgereikt aan Prof. A. Janner en Prof. T.W.J.M. Janssen, voor hun ontwikkeling van superspace crystallography en zijn toepassing op de analyse van aperiodische kristallen.

Verder werd er de nieuwe commissies goedgekeurd. In de verschillende commissies zitten nu volgende leden uit België:

J. Hadermann (Commission on Aperiodic Crystals; Commission on Mathematical and Theoretical Crystallography)

F. Hatert (Commission on Inorganic and Mineral Structures)

Er werd gestemd over de toekomstige plaatsen voor de Congress and general Assembly, en er werd gekozen voor Praag in 2020. India was reeds in de vorige General Assembly gekozen voor 2017.

Uiteindelijk werden nieuwe leden voor het Executive Committee aangesteld, namelijk R. Kuzel, M. Takata en S. Garcia-Granda. Waarvan R. Kuzel en S. Garcia-Granda beiden Europeanen zijn.

Marvin Hackert werd verkozen als nieuwe President van de IUCr, met als vice-president A.M. Glazer.

Verslag opgemaakt door Prof. Dr. Joke Hadermann, Belgische afgevaardigde in de 23rd General Assembly of the IUCr.

Mission report to the 2014 IGCP meeting (Open session of the scientific board).

J. Lavreau

V-president of the NCGS, delegate to the IGCP

The 2014 IGCP meeting (Open session of the scientific board) has been held in UNESCO headquarters in Paris the February 19th 2014.

A panel composed of members of the IGCP Executive committee has been chairing the meeting.

Besides the IGCP board members (from the 5 scientific themes), the representatives of the national committees, the audience also comprised members of the national delegations and ambassadors to UNESCO.

The Secretary-General of the Exact Sciences Sector has presented the recent changes in the organization of UNESCO as a result of the dramatic budget cuts (30%) that have been imposed to the organization as a whole and have subsequently been applied to the sectors and the programs.

Moreover, Earth Sciences have received the lowest priority: a disastrous decision taken at the highest level of UNESCO.

In accordance with these constraints, the IGCP board has decided

1. To keep the admissible number of research themes to five, namely
 - Earth resources: sustaining our society,
 - Global changes and evolution of life: evidence from the geological record,
 - Geohazards: mitigating the risks,
 - Hydrogeology: geoscience of the water cycle,
 - Geodynamic: control of our environment.
2. To keep the limitations put on the duration of each proposal and the financeable activities.

As it will appear in the list of funded project (see further), it is clear that the SWEDISH INTERNATIONAL DEVELOPMENT COOPERATION AGENCY (SIDA) has become the main contributor to the IGCP program. A similar role has been plaid by Belgium, 20 years ago.

According to UNESCO statistics, Belgium is participating in 12 IGCP projects, but leads only one (i.e.nr 580).

	Country	Project n°	Total
9	Belgium	567, 580, 588, 591, 592, 594, 596, 597, 598, 599, 601, 606	12

Agenda

1. Mot de bienvenue de la Sous-Directrice générale pour le Secteur des sciences exactes et naturelles de l'UNESCO
2. Mot de bienvenue du Président et du Secrétaire général de l'Union internationale des sciences géologiques (IUGS)
3. Rapport sur le Programme par le Secrétaire exécutif du PICG
4. Résultats de l'analyse statistique du PICG et de l'enquête des chefs de projet PICG
5. IUGS en bref: Ressourcement des Générations Futures (RGF), une nouvelle initiative internationale de plusieurs organisations
6. Vue d'ensemble de tous les projets évalués par la Présidente et le Rapporteur du Conseil scientifique du PICG
7. Présentation des meilleurs projets dans chaque thématique
8. Comités nationaux du PICG : Rapports et discussion
9. Présentation des projets et réunions supportées financièrement par l'Agence suédoise de coopération internationale (ASDI) via l'UNESCO
10. Projet supporté financièrement par ASDI: Cartographie et évaluation des impacts environnementaux et sanitaires des mines abandonnées dans les pays d'Afrique sub-saharienne
11. Commission de la carte géologique du monde : rapport et information
12. Divers (Pour information: 17/18 février 2014 sessions privées, salle XVI)

Report of the IGCP Executive Secretary.

1. Introduction

UNESCO is the only UN Organization with a mandate in interdisciplinary research and capacity-building in geology and geophysics and the nearly 42 years of cooperation with IUGS through the International Geoscience Programme (IGCP) reflect the Organization's long-term commitment in disseminating and sharing geological knowledge between developed and developing nations in the service of society. The IGCP was founded in 1972 as a joint endeavour of UNESCO and IUGS (International Union of Geological Sciences) and its primary aims are to facilitate international collaboration amongst geo-scientists,

particularly between those from more industrialized and those from developing countries. Through long-term joint research efforts, meetings, field studies, and workshops, IGCP promotes the use of geosciences in global issues including, but not limited to, sustainable development, the health and safety of humanity and the reduction of the adverse effects of natural disasters and resource extraction.

In 2013, IGCP operated through supporting of 30 peer reviewed projects in the 5 IGCP themes: Earth Resources, Global Change, Geohazards, Hydrogeology and Deep Earth. Project participants came from 125 countries, including 32 African countries, Africa being one priority of UNESCO.

Countries are: Algeria, Angola, Argentina, Armenia, Australia, Austria, Bangladesh, Barbados, Belarus, Belgium, Bolivia, Botswana, Brazil, Bulgaria, Burundi, Cambodia, Cameroon, Canada, Central African Republic, Chad, Chile, People's Republic of China, Colombia, Costa Rica, Croatia, Cyprus, Czech Republic, Democratic Republic of Congo, Denmark, Dominican Republic, Ecuador, Egypt, Eritrea, Estonia, Ethiopia, Fiji, Finland, France, Germany, Ghana, Greece, Guatemala, Hungary, India, Indonesia, Iran, Iraq, Ireland, Israel, Italy, Jamaica, Japan, Jordan, Kazakhstan, Kenya, Republic of Korea, Kuwait, Kyrgyzstan, Latvia, Lebanon, Libya, Lithuania, Madagascar, Malawi, Malaysia, Mali, Malta, Mexico, Mongolia, Morocco, Mozambique, Myanmar, Namibia, Nepal, the Netherlands, New Zealand, Nigeria, Norway, Oman, Pakistan, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Poland, Portugal, Puerto Rico, Republic of Congo, Romania, Russia, Rwanda, Saudi Arabia, Senegal, Serbia, Sierra Leone, Singapore, Slovakia, Slovenia, Solomon Islands, South Africa, Spain, Sri Lanka, Sudan, Sweden, Switzerland, Syria, Taiwan of China, Tajikistan, Tanzania, Thailand, Timor-Leste, Tunisia, Turkey, Uganda, Ukraine, United Arab Emirates, United Kingdom, United States of America, Uruguay, Uzbekistan, Venezuela, Vietnam, Zambia, Zimbabwe

2. Information on IGCP projects 2013

In 2013 21 projects received financial support as well as seven projects under Sida (Swedish International Development Cooperation Agency). Two projects were On Extended Term (OET). Due to the overall funding agreement between Sida and UNESCO, the funds of 2014 needed to be allocated before end of December 2013. Therefore the Sida projects were invited to submit their final project meetings before end 2013. These funds are earmarked to profit to scientists from Sida prioritized countries (Africa, Iran, Bolivia, Arab countries).

IGCP Projects according to their year of termination:

2013: 565 (OET), 571, 572 (OET), 574, 580,581,582 (five plus two OET) 2014: 575, 585, 587, 588, 594 (Sida), 598 (Sida), 599 (Sida), 600 (Sida), 601 (Sida), 606 (Sida), 616 (Sida) (four plus seven Sida projects) 2015: 591, 592, 596, 597, 604 (five) 2016: 589,618(two) 2017: 608,609,610,624,628 (five)

3. Statistics on past IGCP projects

In 2013, in order to prepare a comprehensive process of evaluating IGCP future orientations, the IGCP Secretariat has been carrying out a statistical study covering past IGCP project annual reports during time periods (1981-1982, 1991-1992,2001-2002, and 2011-2012) which were studied to analyse the evolution in IGCP project topics changes in for example region of study, participating countries, involvement of developing countries and gender. equality. We would like at this point to acknowledge with great thanks the professional work provided by Dr Katrien Heirman who during her time as a Post Doc in UNESCO contributed essentially to raising and evaluating these data. The results of this survey will be studied and analysed at the end of January 2014.

4. Survey of the added value of the IGCP name and seed funding

A short online survey was recently been built to understand the added value of the IGCP name and IGCP seed funding to scientific research and collaboration projects. IGCP project leaders of the past 5 years were contacted to complete this survey and were asked to answer a set of questions concerning this topic. The results of this survey will be studied and analysed at the end of January 2014.

5. Finances

Funds to support IGCP project workshops were coming from IUGS and UNESCO, while UNESCO has continued to successfully raise funds for this purpose from Sida -the Swedish International Development Cooperation Agency, and the Chinese National Commission.

During the difficult past two years at UNESCO due to dramatic reduction in its budget of 30% essentially contribution from the UNESCO Emergency fund (158,000 USD) permitted the program to hold the two statutory Scientific Board meetings and support 34 projects over the past two years period.

6. IGCP Projects active in 2013

30 active, 28 funded, 2 OET

565 GEODETIC MONITORING OF THE GLOBAL WATER CYCLE Project leaders: Hans-Peter Plag (USA), Richard S. Gross Markus Rothacher (Germany), Norman L. Miller (USA), Susanna Zerbini (Italy), Chris Rizos (Australia)

Duration: 2008-2012 (GET in 2013)

<http://www.iag-ggos.org/igcp565>

571 RADON, HEALTH AND NATURAL HAZARDS Project leaders: Gavin K. Gillmore (United Kingdom), Robin G.M. Crockett (United Kingdom)

Duration: 2009-2013

<http://www2.northampton.ac.uk/info/200272/radon-and-health-in-the-built-and-natural-environment/1008/unesco-igcp-project-571>

572 PERMIAN-TRIASSIC ECOSYSTEMS Project leaders: Zhong Qiang Chen (Australia), Richard J. Twitchett (United Kingdom), Jinnan Tong (China), Margaret L. Fraiser (USA), Sylvie Crasquin (France), Steve Kershaw (United Kingdom), Thomas J. Algeo (USA), Kliti Grice (Australia)

Duration: 2008-2012 (GET in 2013)

<http://www.igcp572.org/>

574 BENDING AND BENT OROGENS, AND CONTINENTAL RIBBONS

Project leaders: Stephen T. Johnston (Canada), Gabriel Gutierrez-Alonso (Spain), Arlo Weil (USA)

Duration: 2009-2013

<http://www.brynmawr.edu/geology/faculty/aweil/IGCP-574/>

575 PENNSYLVANIAN TERRESTRIAL HABITATS AND BIOTAS OF SOUTHEASTERN EURAMERICA Project leaders: Christopher J. Cleal (United Kingdom), Stanislav Oplustil (Czech Republic), Isabel van Waveren (The Netherlands), Mihai E. Popa (Romania), Barry A. Thomas (United Kingdom)

Duration: 2010-2014

<http://www.igcp575.org>

580 APPLICATION OF MAGNETIC SUSCEPTIBILITY ON PALEOZOIC SEDIMENTARY ROCKS Project leaders: Anne-Christine da Silva (Belgium), Michael T. Whalen (USA), Jindrich Hladil (Czech Republic), Daizhao Chen (China), Simo Spassov (Belgium), Frederic Boulvain (Belgium), Xavier Devleeschouwer (Belgium)

Duration: 2009-2013

<http://www.ulg.ac.be/geolsed/MS>

581 EVOLUTION OF ASIAN RIVER SYSTEMS Project leaders: Hongbo Zheng (China), Ryuji Tada (Japan), Peter Clift (United Kingdom), Masood Ahmad (India), Zhengxiang Li (Australia)

Duration: 2009-2013

<http://isg.nju.edu.cn/Exchange/Index.aspx>

582 TROPICAL RIVERS: HYDRO-PHYSICAL PROCESSES, IMPACTS, HAZARDS AND MANAGEMENT Project leaders: Edgardo M. Latrubesse (Argentina), Rajiv Sinha (India), Jose C. Stevaux

(Brazil), Zhonguan Chen (China)

Duration: 2009-2013

<http://www.igcp582.uem.br/>

585 E-MARSHAL: EARTH'S CONTINENTAL MARGINS: ASSESSING

THE GEOHAZARD FROM SUBMARINE LANDSLIDES Project leaders:

Roger Urgeles (Spain), David Mosher (Canada), Jason Chaytor (USA),
Michael Strasser (Germany)

Duration: 2010-2014

<http://www.igcp585.org>

587 ENTITY, FACIES AND TIME -THE EDIACARAN (VENDIAN) PUZZLE

Project leaders: Patricia Vickers-Rich (Australia), Mikhail Fedonkin
(Russia), Jim Gehling (Australia), Guy Narbonne (Canada)

Duration: 2010-2014

<http://www.geosci.monash.edu.au/precsite>

588 PREPARING FOR COASTAL CHANGE Project leaders: Adam D.

Switzer (Malaysia), Craig Sloss (Australia), Benjamin Horton (USA),
Yongqiang Zong (China)

Duration: 2010-2014

<http://www.coastal-change.org>

589 DEVELOPMENT OF THE ASIAN TETHYAN REALM Project leaders:

Xiaochi Jin (China), Katsumi Ueno (Japan), Graciano Yumul JR
(Philippines), Pol Chaodumrong (Thailand)

Duration: 2012-2016

<http://igcp589.cags.ac.cn/>

591 THE EARLY TO MIDDLE PALAEOZOIC REVOLUTION Project

leaders: Bradley D. Cramer (USA), Zivile (Lithuania), Thijs RA
Vanderbroucke (France), Kathleen Histon (Italy), Renbin Zhan (China),
Guillermo L. Albanesi (Argentina), Michael J. Melchin (Canada), Mikael
Calner (Sweden)

Duration: 2011-2015

<http://igcp591.org/>

592 CONTINENTAL CONSTRUCTION IN CENTRAL ASIA Project

leaders: Inna Safonova (Russia), Reimar Seltsmann (UK), Min Sun
(China)

Duration: 2012-2015

<http://www.iagod.org/igcp/>

594 IMPACT OF MINING ON THE ENVIRONMENT IN AFRICA

(SPONSORED BY THE SWEDISHINTERNATIONAL
DEVELOPMENTCOOPERATIONAGENCY)

Project leaders: Bohdan Kflbek (Czech Republic), Ewa Cukrowska
(South Africa), Benjamin Mapani (Namibia), Imasiku Nyambe (Zambia)

Duration: 2011-2014 (4 years)
<http://www.geology.cz/igcp594>

596 CLIMATE CHANGE AND BIODIVERSITY PATTERNS IN THE MID-PALEOZOIC Project leaders: Peter K6nigshof (Germany), Thomas J. Suttner (Austria), Iliana A. Boncheva (Bulgaria), Nadezhda G. Izokh (Russia), Phuong Ta Hoa (Vietnam), Thasinee Charoentitirat (Thailand), Johny A. Waters (USA), Wolfgang Kiessling (Germany)
 Duration: 2011-2015
 Web site in process

597 AMALGAMATION AND BREAKUP PANGAEA: THE TYPE EXAMPLE OF THE SUPERCONTINENT CYCLE Project leaders: J. Brendan Murphy (Canada), J. Duncan Keppie (Mexico), Cecilio Quesada (Spain), Bill Collins (Australia)
 Duration: 2011-2015
<http://www.wix.com/declan15/test>

598 ENVIRONMENTAL CHANGE AND SUSTAINABILITY IN KARST SVSTEMS (SPONSORED BY THE SWEDISH INTERNATIONAL DEVELOPMENT COOPERATION AGENCY)
 Project leaders: Zhang Cheng (China), Augusto Auler (Brazil), Jiang Yongjun (China), Martin Knez (Slovenia), Bartolome Andreo-Navarro (Spain), Yuan Daoxian (China), Chris Groves (USA)
 Duration: 2011-2014 (4 years)
<http://igcpkarst.com/>

599 THE CHANGING EARLY EARTH (SPONSORED BY THE SWEDISH INTERNATIONAL COOPERATION AGENCY)
 Project leaders: Jaana Halla (Finland), Kent C. Condie (USA), Roberto Dall'Agnol (Brazil), Mudlappa Jayananda (India), Martin J. Van Kranendonk (Australia), Hugh Rollinson (UK), Gary Stevens (South Africa), Jin-Hui Yang (China)
 Duration: 2011-2014 (4 years)
<https://sites.google.com/a/helsinki.fi/early-earth-tectonics/>

600 METALLOGENESIS OF COLLISIONAL OROGENS (SPONSORED BY THE SWEDISH INTERNATIONAL DEVELOPMENT COOPERATION AGENCY)
 Project leaders: Zengqian Hou (China), David Leach (USA), Jeremy Richards (Canada), Richard Goldfarb (USA)
 Duration: 2011-2014 (4 years)
<http://igcp600.cags.ac.cn/en/>

601 SEISMOTECTONICS AND SEISMIC HAZARDS IN AFRICA (SPONSORED BY THE SWEDISH INTERNATIONAL DEVELOPMENT COOPERATION AGENCY)
 Project leaders: Mustapha Meghraoui (France), Vunganai Midzi (South

Africa), Atalay Ayele (Ethiopia), Djillali Benouar (Algeria)

Duration: 2011-2014 (4 years)

<http://eost.u-strasbg.fr/igcp601/Documents.html>

604 GROUNDWATER AND WETLANDS IN IBERO-AMERICA Project leaders: Emilia Bocanegra (Argentina), Gerdon Cardoso (Brazil), Emilio Custodio (Spain), Teresita Betancur (Colombia), Marisol Manzano (Spain)

Duration: 2011-2015

<http://www.mdp.edu.ar/hidrogeologia/IGCP604/description.php>

606 ADRESSING ENVIRONMENTAL AND HEALTH IMPACTS OF MAJOR AND ABANDONED MINES IN SUB-SAHARAN AFRICA (SPONSORED BY THE SWEDISH INTERNATIONAL DEVELOPMENT COOPERATION AGENCY)

Project leaders: Theo C. Davies (South Africa), Benjamin Mapani (Namibia)

Duration: 2011-2014 (4 years)

Web site in process

608 ASIA-PACIFIC CRETACEOUS ECOSYSTEMS Project leaders: Hisao Ando (Japan), Xiaojiao (China), Daekyo Cheong (Republic of Korea), Sunil Bajpai (India)

Duration: 2013-2017

<http://igcp608.sci.ibaraki.ac.jp/>

609 CRETACEOUS SEA-LEVEL CHANGES

Project leaders: Michael Wagreich (Austria), Silke Voigt (Germany), Svetlana Zorina (Russia), Xiumian Hu (Russia), Julleh Jalalur Rahman (Bangladesh), Ismail Omer Yilmaz (Turkey) Duration: 2013-2017
<http://geologie.univie.ac.at/home/news/news-singleview/article/igcp609>

610 FROM THE CASPIAN TO MEDITERRANEAN: ENVIRONMENTAL CHANGE AND HUMAN RESPONSE DURING THE QUATERNARY

Project leaders: Valentina Yanko-Hombach (Ukraine), Nikolay Panin (Romania), Olena Smyntyna (Ukraine), Mehmet Celal Osdogan (Turkey), Tamara Yanina (Russia)

Duration: 2013-2017

<http://www.avalon-institute.org/IGCP610/index.php>

616 TECTONIC, PALEOCLIMATIC, LANDSCAPE EVOLUTION OF CENTRAL AFRICA (SPONSORED BY THE SWEDISH INTERNATIONAL DEVELOPMENT COOPERATION AGENCY)

Project leaders: Boniface Kankeu (Cameroon), R.O. Greiling (Germany), Jurgen Runge (Germany)

Duration: 2012-2014 (3 years)

Web site in process

618 PALEOCLIMATE INFORMATION OBTAINED FROM
PAST-RECHARGED GROUNDWATER

Project leaders: Dioni I. Cend6n (Australia), Jianyao Chen (China), Jason J. Gurdak (USA), Ofelia Tujchneider (Argentina), Emerit. Sylvi Haldorsen (Norway), Ir. M.J (Martine) van der Ploeg (The Netherlands), Rein Vaikrnae (Estonia), Roland Purtschert (Switzerland) Najiba Chkir Ben Jernaa (Tunisia)
Duration: 2012-2016
<http://www.gw-gps.com/>

624 ONEGEOLOGY Project leaders: Alex Malahoff (New Zealand)
Duration: 2013-2017
<http://www.onegeology.org/>

628 THE GONDWANA MAP PROJECT Project leaders: Renata de Silva Schmidt (Brazil)
Duration: 2013-2017
Web site in process

7. Proposals received in 2013

Global change

630. Permian-Triassic climatic and environmental extremes and biotic Global Change response, Zhong-Qiang Chen (China), Thomas Algeo (USA), Margaret Fraiser (USA), Steve Kershaw (UK), Jinnan Tong (China), Sylvie Carsquin (France), Michael Benton (UK), Guang Shi (Australia), Charles Henderson (Canada), Arne Winguth (USA), Paul Wingall (UK), Kunio Kaiho (Japan), Ghulan Bhat (India), Yuri Zakharov.

631. NEOgene low-latitude shallow-water marine ECOSystems: Global Change consequences of the different histories of regional systems for future responses, Juan Braga (Spain), Atike Nazik (Turkey), Francesca Bosellini (Italy), Jorge Ledesma Vazquez (Mexico).

632. Continental Crisis of the Jurassic: Major Extinction Events and Global Change Environmental Changes within Lacustrine Ecosystems, Jingeng Sha (China), Vivi Vajda (Sweden), Paul E. Olsen (USA), Emma, Samuel Msaky (Tanzania), Mohammed Et-Touhami (Morocco), Olena, Shevchuk (Ukraine), Hamish Campbell (New Zealand), Wolfram M. Kürschner (Norway)

Geohazards

633. A global project to promote the use of seismology as an educational tool., Paul Denton (UK), John Taber (USA), Nathalie Balfour (Australia), Tom Blake (Ireland).

634. Natural hazards related to active tectonics and changing climate in the Andes of central Chile and Argentina, Sergio Sepulveda (Chile), Stella Moreiras (Argentina), Luisa Pinto (Chile), Jose Mescua (Argentina), Diego Araneo (Argentina), Maximiliano Viale (Chile), Felipe Leyton (Chile), Sergio Ruiz (Chile), Oliver Korup (Germany), Martin Mergilli (Austria)

8. Conclusions

The past 42 years of IGCP have demonstrated how UNESCO, in collaboration with IUGS, plays an important role in facilitating the exchange and advancement of geoscience knowledge which is essential for the future of modern society. Since 1972, IGCP has brought together many thousands of Earth scientists from around the world. IGCP projects have been very successful in establishing international research teams, often including early career scientists, while producing high-quality scientific data utilizing a multidisciplinary approach which is essential for creating a more sustainable future. In February 2012 the IGCP celebrated its 40th anniversary with a colloquium and exhibition at UNESCO Headquarters, accompanied by the publication of a book in three languages. The book, "Tales set in Stone", celebrates the 40 years with a selection of examples of IGCP projects on the 5 IGCP topics linking society and Earth Science.

Considering that the IGCP has a limited budget, and given the current financial constraints, it is encouraging to see the continued impact of IGCP collaborative projects. In order to further maximize this impact, IGCP support is increasingly earmarked to help scientists from developing countries. IGCP allows scientists to benefit from the cooperative spirit generated under the umbrella of UNESCO. IGCP continues to evolve so that it can remain relevant in a fast changing world and assist in enhancing synergies between geosciences and other disciplines to help solve some key issues facing modern society.

Report on the General Assembly of IUPAP Singapore, November 5-7, 2014

Belgian delegate: R. Weynants, chair of NCPAP

1. The GA took place at the premises of the Nanyang Technical University in Singapore. There were about 95 attendees (see **Appendix 1**), representing the 60 member states and the various commissions and associated committees of IUPAP. The agenda can be found as **Appendix 2**.
2. A budget of 444517 Euro for 2015 was approved, with an expected surplus of 16917 EURO. The reserves on 1/1/15 are estimated to reach 0.96 MEuro. Roughly 1/3 of the budget goes to supporting conferences.
3. The IUPAP secretariat will move from London (IOP) to Singapore (NTU) in an effort to curb costs.
4. Some member states are increasing their shares in IUPAP. As such, China goes from 12 to 16, Mexico from 1 to 2 and Korea will follow. A difference is gradually developing between the number of shares and the number of possible Commission members (14 per Commission). Whereas each country is entitled to as much Commission members as it has shares, this might be lower in the future.
5. The discussions resulted in a number of resolutions that were approved by the GA. The contents are the following:
 - (i) An increase of the membership contribution of 3 % will be imposed in each of the years 2015-2017, going from 2082 Euro in 2015 to 2208 in 2017.
 - (ii) The Executive Council will consider establishing a new category of IUPAP Associated Organisations under similar conditions to those of the IUPAC Associated Organisations and will attract as many organisations as possible to this new kind of partnership.
 - (iii) The General Assembly approves the Executive Council's recommendations on the structure of commissions and on changes of commission names:
As such:
 - The Commission on Finance, denoted by C1, is reactivated and its membership enlarged to the President, the Past President, the President Designate, the Secretary-General and the Associate Secretary-General of IUPAP.
 - C 4 becomes Commission on Astroparticle Physics.
 - C 17 becomes Commission on Laser Physics and Photonics.
 - The creation of a Soft Matter Commission will be prepared by a working group led by prof. Dieter Richter, FZ-Juelich.
 - (iv) Commissions are asked to make proposals for preliminary support of conferences (before the formal application for support by the organisers and the approval of the level of support by IUPAP) in order that conference organisers advertise the involvement of IUPAP as soon as their website is being constructed.

(v) The IUPAP WG on Energy will continue for another period of 3 years. It will develop a series of briefs together with the Scientific Committee on Problems of the Environment (SCOPE) c/o UNESCO.

(vi) The GA resolves to extend the work of its Working Group “Women in Physics” for 3 years, and charges the Working Group to organize the 6th IUPAP International Conference on Women in Physics; it endorses an annual International Women in Physics Day, and supports and encourages Physical Societies, through their National Liaisons, to facilitate the sharing of insights and successful strategies for inclusion and advancement of women in Physics.

(vii) The GA resolves to create a Working Group on the Newtonian constant of gravitation, in order to foster international scientific dialogue and cooperation in the physics of such measurements and to provide advice when requested to groups undertaking such measurements.

(viii) The GA resolves to create a Working Group dedicated to Accelerator Science, in order to promote the exchange of information and views in the general field of Accelerator Science including, but not limited to,
 a. the theory and experiments concerned with the nature and properties of particle accelerators and beam physics;
 b. the improvement of international communications in Accelerator Science through the sponsorship of professional meetings;
 c. the industrial, medical, energy production and environmental applications of relevant accelerator technologies.

(ix) The GA resolves to provide full support to the bid from the International Commission for Acoustics (AC3) to celebrate Year of Sound, possibly in 2019.

6. The following Board will lead IUPAP from 2015 till 2017:

President: Bruce McKellar (Australia)
 President Designate: Kennedy Reed (USA)
 Past President: Cecilia Jarlskog (Sweden)
 Secretary General: Stuart Palmer (UK)
 Ass. Sec. General: Rudzami Nemutudi (S-Africa)

7. The following Belgian physicists, presented by the NCPAP, were elected as Commission members for the period 2015-2017:

Nuclear Physics (C12): P. Van Duppen (KUL)
 Physics for Development (C13): C.S. Iorio (ULB)
 Plasma Physics (C16): J. Ongena (KMS-ERM)
 Mathematical Physics (C18): A. Sevrin (VUB)

To put this outcome in perspective, it should be noted that Belgium is in principle entitled to a number of members corresponding to its share in the IUPAP financing (i.e. 4). Each of the 17 Belgian nominees (the list of which is given as **Appendix 3**) has therefore been in competition, not only with the nominees of the other 59 country

members, but also with the other Belgian nominees. It is therefore appropriate to congratulate not only those that were selected but all nominees for portraying such an image of excellence of Belgian Physics in the eyes of their peers.



GENERAL ASSEMBLY MEETING

INTERNATIONAL UNION OF PSYCHOLOGICAL SCIENCE,

PARIS, FRANCE

JULY 10, 2014

One-day meeting, starting at 9:00 am, with almost no stop at noontime but finishing at 6:00 pm sharp. The meeting was well attended; discussions were lively, exhaustive and occasionally very basic.

The Paris organisers promised a fullfledged report of the discussions, as soon as possible. Although the voting quorum was easily reached, no voting took place except for informative reasons

Well before the meeting, already since the late ninetnes, I knew the current Presdent of the Union very well. Formerly, I did not highly regard him and his activities. I must admit that this time, he was indeed well prepared for the meeting, and running smoothly the meeting he was expected to chair.

Although not yet introduced and confirmed, the expected upcoming new Secretary-General seems to have the whole administrative organization of the Union well in hands.

Brussels, July 29, 2014

Géry van Outryve d'Ydewalle

Rapport Scientifique de l'Assemblée Générale URSI 2014

Beijing (16-23 août 2014)

16/08/2014 (samedi)

Le premier jour a été utilisé pour l'enregistrement, ainsi que l'achat des billets pour les déjeuners (qui devaient être commandés un jour à l'avance). Le site du congrès pouvait également être exploré. Le palais des congrès était un bâtiment de deux étages autour d'un grand auditorium (Fig. 1). Le temps était relativement agréable: 32 ° C (il semble que la température en juillet était d'environ 40 ° C, mais heureusement l'ensemble du bâtiment était climatisé). La distance de marche selon des documents distribués à partir de l'hôtel ont été nettement sous-estimés (sauf pour un coureur de niveau Olympique: les 10' indiquées se transformaient aisément en plus de 45' en flânant pas). Par conséquent, les transports publics ont été utilisés pour tous les déplacements vers le centre de conférence. Le bus prévu par la conférence était très tôt le matin et le soir trop tard (après 21h00 la plupart des restaurants sont fermés ou on doit payer le double).



Fig. 1: Le Palais des Congrès (sur la 5^{ème} ceinture nord de Beijing)

17/08/2014 (Dimanche)

Les journées de travail sont assez longues: toutes les réunions des sessions techniques commencent à 8 heures, y compris le dimanche (et dans l'empire du centre le "quart d'heure académique" est inconnu. J'ai même fait l'expérience d'un train, et par après, même un bus, qui part une minute avant l'heure) et se terminent à 18h00 (commissions) et parfois même vers 19h00. Le déplacement en métro + bus n'est pas beaucoup plus court que la marche à pied: au moins une demi-heure de trajet (y compris les pauses aux arrêts)

Le premier conseil (Council) s'est bien déroulé. Une brève description suit ci-dessous. Les résultats de l'enquête du comité de planification à long terme sont discutés. Après deux votes le nouveau président est élu. Il s'agit du professeur Paul Cannon de l'Université de Birmingham en Angleterre. Cette personnalité dynamique est l'une des personnes les plus compétentes pour diriger URSI par ces temps troublés. Les vice-présidents (un pour chaque nouveau vice-président, un nouveau tour de scrutin a eu lieu, la personne avec le plus de votes dans ce tour est élue) sont resp. les professeurs Makoto Ando, Umran Inan, Yahia M.M. Antar et Subra Ananthakrishnan.

L'Irlande et le Brésil (en raison de problèmes de visa) ont voté par correspondance. La Commission conclut avec la présentation des candidats à la prochaine AG: Montréal et Rome.

Le rapport officiel des réunions du conseil (Conseil) en anglais se trouve à l'ajoute 1 Notez que la mise en page ne correspond pas à l'original, en raison de la conversion de PDF à Word.

Dans l'après-midi, la cérémonie d'ouverture a eu lieu dans le grand auditorium (Fig. 2).



Fig. 2: La cérémonie d'ouverture dans le grand auditorium.

Après le discours d'introduction classique suit la cérémonie de remise des différents prix. Contrairement aux éditions précédentes, il n'y avait pas de Belges parmi les lauréats. L'année passée, le Comité belge a payé une partie de l'inscription du professeur Ingrid Daubechie, mais les lauréats précédents Belges sont apparemment mentionnés dans le guide des programmes comme 'USA' (ils y travaillent maintenant). Notez la belle symétrie du logo, y compris les signaux "aléatoires", chaque partie est une parfaite copie dans un miroir (ndlr.: cela fait partie selon moi de la beauté de la culture Chinoise).

La journée s'est terminée par une réception de bienvenue somptueuse sur l'emplacement du centre des congrès (Fig. 3). Là, nous avons essentiellement établi des contacts avec nos collègues allemands. En effet à ce moment il n'y avait que 4 Belges présents (3N, 2 UG, 1 KU Leuven, et 1 F de IBAS), y compris moi-même. Les trois premiers étaient évidemment présents au conseil, en leur qualité de resp. Secrétaire Général (réélu à main levée), Secrétaire Général adjoint et représentant de la Belgique. Au cours du congrès est un membre de l'UCL s'est joint à nous, de sorte que la délégation scientifique Belge se composait de cinq Belges. Bien sûr, en plus, les deux secrétaires du Secrétaire Général, étaient présentes pour organiser le tout correctement.



Fig. 3: L'emplacement de la réception de bienvenue derrière le palais de Congrès.

18/08/2014 (lundi)

La première session suivie (A01: Universal Coordinated Time: The International Reference Time Scale and Possible Redefinition) a discuté des fameuses secondes intercalaires: vu que URSI a décidé de ne pas prendre de position dans ce cas, le débat reste académique, bien que le retard de la rotation de la terre augmente toujours et donc le nombre de secondes intercalaires. Ceci est discuté plus amplement en comité A, dont je fais partie.

La conférence générale sur la capture de l'énergie de l'environnement (GL1: General Lecture: Energy Harvesting) a comparé diverses solutions alternatives. Le plus important est la réception de l'énergie lumineuse. Puis (de plusieurs ordres de grandeur plus faibles) suivent l'énergie mécanique (gestes) et enfin la réception de l'énergie électromagnétique. Ce fut un aperçu assez classique de toutes les techniques existantes, y compris le problèmes d'adaptation à une charge variable,

Dans l'après-midi les sessions de propagation dédiée aux ondes mm ont été suivies (F03 et F04: Millimeter-Wave propagation and Remote Sensing (1 & 2)). La première présentation portait sur la conception d'une antenne satellite tournant pour la détection à haute résolution à 53 et 183 GHz. Elle a été suivie par la description de la conception du radiomètre 300/500 GHz pour le satellite APSOS pour suivre l'évolution de l'atmosphère us dessus de la Chine. La contribution suivante a détaillé le nouveau satellite météorologique Chinois, le F(en)Y(ung) 3C et l' a comparé avec la conception des anciens satellites AMSU (de la NOAA). Elle a été suivie par une analyse des différentes réflexions de la végétation à 37 GHz. Le papier de l'Arménie n'a pas été proposé en raison de l'absence des auteurs. Enfin, cette session se termine par une contribution traitant de formes d'ondes à large bande (FMICW) utiles non seulement pour l'observation de la Terre, mais aussi pour les systèmes de radar pour voir à travers les obstacles comme le GPR. Après la pause-café, un système multi-fréquences est proposé pour mesurer non seulement l'humidité, mais aussi la glace et la teneur en eau dans les nuages (selon la ligne satellite-station de réception terrestre). Les premiers essais ont été effectués à terre. Ensuite, certaines réflexions sur la dispersion à travers les nuages aux fréquences micro-ondes conventionnelles ont été faites. Elles ont été suivies par des résultats de mesures à des fréquences différentes.

Les séances de la commission F sont généralement très bien suivies.

Après la fin des séances j'ai assisté à la première réunion de la commission A, où je représente la Belgique. Ici, les élections pour le nouveau vice-président ont été traitées. Le nouveau vice-président est le professeur dr. Patrizia Travella (Italie). Dans les termes de référence, j'ai suggéré d'indiquer explicitement les mesures d'antenne et de réseaux (la formulation que nous avions dans la version précédente était il me semble trop vague). La deuxième suggestion est d'inclure la notion d'imprécision (Prof. Travella) et la métrologie dans l'espace (Dr Liu, représentant de la Chine).

Ensuite, le vote sur le représentant en début de carrière (ECR) a eu lieu avec trois candidats (un Chinois n'a apparemment pas été mentionné sur le premier appel). Le candidat proposé au conseil de l'URSI est le Dr Pedro Miguel Duarte. Pour le reste, les délais pour l'AT-RASC sont déjà très proches: octobre 2014 pour les sessions proposées et décembre pour les papiers. En mai 2015 on souhaite également planifier les sessions pour l'AG 2017.

19/08/2014 (mardi)

La première session, qui a été suivie, est la session B05 "Scattering and Diffraction (2)". Plusieurs nouvelles techniques ont été proposées pour le calcul de la diffusion. La deuxième session du matin, que j' ai suivie, a était la session F06 (Advances in Spaceborne SAR Imaging and Applications (2)). Le lien vers cette session sur la clé USB (d'une taille de 8 Go) ne fonctionne pas, mais il est facile à trouver. Le papier F06.2 est remplacé par le F06.7. L'énumération des propriétés du dernier satellite SAR chinois (HJ-1-C), y compris une résolution de 0,1 m, est impressionnante (papier F06.4), en dépit de l'utilisation de fréquences plus basses (dans la bande S). Les documents finaux sont plus dédiés au traitement du signal pour combiner des images sous différents angles de vue (F06.5) et pour mieux classifier la glace marine (basé sur l'utilisation d'un filtre de Kalman). Finalement des algorithmes de reconstruction de hauteurs sont présentés avec comme exemple le fameux nid d'oiseau (le stade olympique de Pékin, où les olympiades de la jeunesse ont lieu; elles sont ouvertes par le Président Xi Jinping et sa femme, tout comme pour les jeux de 2008).

Au cours la pause-midi, une réunion des délégations européennes pour rapprocher les points de vue a eu lieu. Il a été décidé d'échanger toutes les informations sur les activités à la fois dans le bulletin de l'URSI et par l'intermédiaire du Secrétariat central de l'URSI. Le rapport de cette réunion est ajouté sine varietur à la fin de ce rapport.

L'après-midi (séance F07) a été consacré à un nouveau modèle pour l'atténuation qui prend en compte la direction du vent et la vitesse du vent, ce qui n'est pas inclus jusqu'ici dans les normes de l'ITU. Des calculs avec les équations intégrales (sans omettre la rétrodiffusion) ont été discutés. Elle a été suivie par une séance de posters, qui est trop vaste pour couvrir dans le présent rapport et à une deuxième réunion du Conseil.

Le problème de l'élection du nouveau vice-président au comité K est posé. Il ya autant de voix pour les deux candidats. Le conseil a décidé de retenir le candidat sud-coréen sur base de considérations géographiques (Samyoung Young). Pour les ECR le Conseil a décidé de maintenir l'ordre proposé, après avoir suggéré deux candidats par commission (1 pour 3 ans et un pour six ans). Cette suggestion n'est pas retenue entre autres pour des raisons budgétaires. Le rapport officiel se trouve à l'ajoute 2.

20/08/2014 (mercredi)

Nous n'avons pas suivi la session de propagation mais la séance AC01 qui était consacrée à des algorithmes de DOA. Le premier document a été consacré à l'amélioration d'un DF classique avec un réseau circulaire en présence de couplage fort. La seconde contribution utilise de la compression dans l'échantillonnage afin de déterminer la direction à partir des signaux reçus par un réseau linéaire d'éléments isotropes. Le troisième document était une nouvelle proposition pour un système d'atterrissage à faible coût. Il se compose d'au moins trois grandes antennes, chacune sur un mât de 9 mètres dispersés autour du point d'atterrissage, et une section de traitement de signal pour déterminer

la position. Le dernier document était un système pour localiser les téléphones mobiles de personnes disparues lors de catastrophes naturelles.

Le premier document de la session F09 a discuté de l'impact de l'activité humaine sur les précipitations dans le sud de la Chine. Ensuite, une chaîne de radars en bande X a été proposée pour prévoir de fortes inondations. La conférence générale a détaillé le Square Kilometer Array pour des applications astronomiques. Dans la première session de l'après-midi (F10) des modèles de canaux sont discutés. La session a bien commencé, avec un sondeur UWB pour 5G, mais deux auteurs ne se présentent pas et nous avons eu un temps mort de 40'. La deuxième session (F11: Mobile Propagation Models and Measurements (2)) a commencé avec une étude expérimentale d'un réseau sur l'être humain. La seconde portait sur les effets d'un incendie dans un conteneur. Curieusement, les niveaux des signaux s'amélioraient au fur et à mesure de la combustion obstacles. La fumée et les fluides employés pour la lutte contre l'incendie n'ont qu'un effet temporaire et très limité dans les différentes étapes de l'incendie. La troisième contribution concernait la modélisation à 60 GHz. La prochaine était une étude de la propagation à travers une forêt. La conclusion était que la composante incohérente domine à grande distance. Enfin arrivent les environnements inhabituels tels que les conteneurs. La majeure partie de l'ouvrage, qui est présenté ici, a déjà été proposé dans les dernières réunions COST IC1004.

Enfin, suit une réunion de la commission A, où les décisions du conseil ont été expliqués. Des suggestions pour une lecture générale sont demandées. La mesure de réseaux non linéaire n'est pas devenue un succès. Une autre suggestion concerne les antennes dans des matériaux anisotropes (magnétodiélectriques). Il y a des plaintes au sujet de l'absence aujourd'hui de signaux LAN sans fil (le Wi-Fi est en Chine dans de nombreux endroits encore à ses balbutiements).

21/08/2014 (jeudi)

Premièrement, j'ai accroché mon poster (au mauvais endroit, mais au cours des séances du matin, les gnômes chinois (ou mes collègues de Eindhoven, dont j'avais apparemment pris la place) l'ont suspendu au bon endroit). Je suis ravi que le LAN sans fil fonctionne à nouveau, quoique recevoir ou répondre à un courriel ici est toujours d'une lenteur inimaginable (environs une heure par message) et la connexion au réseau était également laborieuse. La session de propagation concernait les propriétés de certains végétaux comme le maïs. La deuxième partie, y compris le tutoriel sur la télédétection passive discutait principalement de la détection de la glace. A cet effet, un modèle ayant une double couche de surface aléatoire fut proposée par Xu. Le tutoriel traite également de la détermination de la biomasse végétale et de la neige à l'aide de radiomètres à des fréquences différentes. Le tutoriel de la commission A était dédié au système Chinois de navigation par satellite Beidou; le nom vient de la constellation de la Grande Ourse, parce que cette constellation ressemble à une cuillère Chinoise. Actuellement 16 satellites sont actifs dont trois géostationnaires. Malheureusement un nouveau système de coordonnées est employé: CGCS2000: système chinois de coordonnées géodésiques de 2000. Le temps de référence est le 1^{er} janvier 2006. Le site BSNC diffuse la relation entre le temps Beidou et l'UTC; $B3 = \text{différence}$) www.beidou.gov.cn. La précision finale sera de 1 m, même si cela ne s'élève qu'à 10 m maintenant. La constellation totale sera de 5 satellites géostationnaires + 27 non-géostationnaires. La durée de vie des satellites est de 8 ans. Ceci est suivi par des présentations sur d'autres systèmes de géo localisation par satellites, en particulier sur la synchronisation des temps différents, qui sont utilisés par les divers systèmes. La présentation sur l'utilisation des fontaines atomiques vient en premier. Elles sont très stables ($<0,1$ ns. / Jour). L'AIU va les mettre en ligne. L'avenir de l'UTC (WRC-15 agenda 1.14) par le dr. Han remplace la présentation de Russie. APT formule un "avis préliminaire". UTI-R WP7A: propose exceptionnellement 3 options (normalement un consensus est obtenu, qui ne pouvait pas être atteint dans ce cas précis)

- A) A1: plus de secondes intercalaires; A2: UTC reçoit un nouveau nom pour éviter la confusion
- B) les secondes intercalaires restent et UT1 / TAI sans elle.
- C) TAI = temps sans secondes intercalaires + la différence avec l'UTC est diffusée

Au début de la session de posters je reçois encore environ 6 visiteurs intéressés. Je quitte pour le conseil (je laisse sur place mes coordonnées, mais je n'ai pour l'instant pas encore été contacté). Après le rapport des publications du comité, le conseil accepte Montréal pour l'AG de 2017, par 142 voix contre 58 pour Rome. Ensuite, nous avons voté si Rome (le seul candidat restant,) est retenu pour 2020. Le résultat est que nous décidons de ne pas décider maintenant et, comme d'habitude à prendre notre décision trois ans et non six ans à l'avance. Le nouveau coordinateur pour le (coordinateur adjoint chinois actuel) comité scientifique est nommé. Enfin, le choix de Gran Canaria pour AT-RASC 2015 est expliqué: l'emplacement hors saison n'est pas cher, bien équipé et bien accessible par avion depuis l'Europe.

22/08/2014 (vendredi)

Pour la séance du vendredi, nous commençons avec une courte séance: le CD02 "Ultra-high bit rate radio communications (TeraHertz and 60 GHz)". La première contribution a été d'une radio par fibre optique, où les composants coûteux à 60 GHz sont centralisés et donc ne doivent pas être présents partout. La deuxième étude a été consacrée à une distribution bon marché de signaux THz par des fibres optiques.

Cette séance étant terminée, j'ai essayé de suivre la session sur les mesures non linéaires A11, mais elle était aussi déjà terminée. Aujourd'hui, il y avait très peu de participants aux sessions scientifiques, malgré le peu d'activités touristiques planifiées. La plupart des absents étaient curieusement du pays d'accueil! La session CD03 sur le traitement du signal pour les systèmes de radar a attiré notre attention. Ici, une méthode de classification est proposée pour l'identification des objets tels que les personnes, les animaux domestiques comme les chiens et les oiseaux en mouvement avec l'aide d'un radar en bande Ka. Ceci est basé sur une décomposition en composants principaux, dans lequel le bruit est supprimé. La présentation suivante utilise un réseau circulaire pour des applications de reconstruction SAR en 3D, qui est semblable aux mesures en champ proche plan-polaires. La dernière présentation concernait un algorithme MIMO radar, mais son discours était presque inintelligible.

Ce qui valait la peine, a été la présentation de notre nouveau président sur l'impact d'une éruption solaire majeure sur les lignes électriques, l'ionosphère (qui est sa spécialité), les communications, le GNSS (et synchronisation de l'heure), ... et rayonnement. Il conclut en disant que l'impact sera moins catastrophique que celle d'un tremblement de terre ou d'un tsunami majeur, mais que les gouvernements doivent prendre des mesures pour empêcher des conséquences graves.

La session sur les nouvelles méthodes mathématiques en électromagnétisme est suivie dans l'après-midi. Le premier document a été une analyse des guides d'ondes aux permittivités non linéaires (quadratiques), de sorte que les modes TE et TM couplent. Le second inclut le calcul de guides d'ondes diélectriques avec des petits trous (comme dans les nano-structures). Les deux prochains articles ont été consacrés au calcul des valeurs propres de guides d'ondes cylindriques avec des matériaux spéciaux (par exemple ferromagnétiques) (une question sur un rendement de plus de 1 (100%) a été clarifiée au cours de la pause-café). L'un des auteurs n'était pas présent, mais le président a fait un effort pour présenter le papier plutôt mathématique de son collègue. La dernière présentation a donné une solution exacte pour les réflexions à partir d'une onde cylindrique à une jonction plane. Cette session a été particulièrement intéressante. La dernière session suivie concernait la localisation par satellites. Le premier document a déterminé la position sur la base des petites déviations de la fréquence Doppler d'un satellite géostationnaire. Malheureusement, les auteurs du deuxième et troisième document n'étaient pas présents (même si ils provenaient de Chine). Une autre extra longue pause-café! Heureusement, ces documents ne sont plus inclus dans les actes finaux dans IEEE explorer. La détermination de la position en utilisant une modulation EBPSK contenait quelques caractéristiques originales. La dernière contribution à l'affaiblissement de la pluie en fonction de la direction du vent aurait été mieux placée dans la commission F.

Finalement, la troisième et dernière réunion de la Commission A se tient. Le professeur Koyama prend la présidence. Après les thèmes de la prochaine conférence, la discussion sur les secondes

intercalaires reprend. La décision est que nous proposons l'option A, mais sans avoir à choisir entre A1 ou A2: c'est à l'ITU de décider si le temps continu doit recevoir un nouveau nom ou que l'appellation UTC soit conservé. Nous recommandons donc au conseil de l'URSI que l'UTC soit remplacé par une fonction continue, tel que UT1 et de passer cette recommandation à l'ITU. C'est ce que nous avons déjà fait en 1999. Les "termes de référence" finales sont également affinés.

23/08/2014 (samedi)

Le Conseil (malheureusement pendant quelques séances GPR) commence à 08h10. La commission A suggère que l'URSI enverrait à l'ITU la recommandation concernant les secondes intercalaires. En principe, ce document devait être transmis un mois à l'avance. Par conséquent, le Conseil a décidé de passer à IUCAF qui passera cette recommandation à l'ITU. Le comité C recommande de tenir leurs réunions avec les nouvelles «conférences phares» de l'URSI. La commission F remarque que le site Web devrait contenir plus d'information pour les jeunes. Les commission J et K ont choisi les thèmes des prochaines réunions de l'URSI, comme la plupart des autres commissions. La commission K organise également une réunion intermédiaire. En 2016, elle sera tenue à Brugge (Bruges en Belgique).

Une discussion sur l'augmentation de la contribution des États membres de l'union internationale est initiée par le trésorier. 5% semble raisonnable, mais de nombreux pays ne le considèrent pas comme réalisable (comme les académies devraient subir de massives coupe sombres dans leurs budgets dans de nombreux pays). Par conséquent, les contributions des autres unions scientifiques seront d'abord étudiées et une proposition se fera au conseil. Nous continuons à soutenir les pays qui veulent devenir membre associé et donnons à la commission une procuration pour accepter tous les nouveaux membres associés, à condition qu'ils remplissent toutes les conditions. Enfin, nous remercions la délégation chinoise pour la bonne organisation. Le rapport en anglais peut être trouvé à l'ajoute 4 y compris l'annexe 1 concernant l'UTC.

La dernière conférence générale concerne l'évolution de la 5G en Chine, principalement basée sur la TD (compréhensible pour les spécialistes des télécommunications dont je suis (j'ai eu de la chance), mais tout à fait obscur et en plus récitée en 40 'au lieu de 60' pour les spécialistes des autres comités).

Après 20' de silence forcé, dans la cérémonie de clôture, le Secrétaire Général réitère les résultats des élections, y compris les nouveaux «Early Career Representatives» (ECR), et termine par un chaleureux merci à tous les participants et les organisateurs. Le président du comité local nous parle en Chinois peut-être pour expliquer l'importance des télécommunications. La traduction anglaise suit heureusement. Le nombre de participants (environ 1200) est détaillée. Le président sortant a remercié ses collègues pour la coopération agréable et met en évidence le nouveau régime des ECR. Il demande à chacun de publier dans les deux magazines de l'URSI, à savoir Radio Science et Radio Science Bulletin. Enfin, le nouveau président a également exprimé sa gratitude à ses collègues. Il met l'accent sur les nouvelles conférences tous les ans et clôture officiellement la réunion.

SOIL SCIENCE SOCIETY OF BELGIUM
NATIONAL COMMITTEE OF SOIL SCIENCE BELGIUM



LEUVEN 2014-08-09

REPORT

Travel Report, 20th World Congress of Soil Science by the International Union of Soil Science (IUSS) Jeju, South Korea, 8 – 13 June 2014

1. Scope

This report covers the salient points of the 2014 IUSS Congress and General Assembly, organized from June 8-13 in Jeju, South Korea, with particular attention to the activities of the IUSS Council meetings.

2. References

For further details on the topics discussed in this report, reference is made to the following documents:

- The congress: congress program and published congress proceedings (<http://www.20wcscs.org>)
- The IUSS general assembly and council meetings were based upon following documents: minutes and reports of previous Council meetings, reports of the president, vice-president, secretary general, treasurer, reports of heads of divisions, commissions and working groups; minutes and conclusive letter of the 2014 Council meeting, Voting practice and procedures, statutes and bylaws, reports of task forces, IUSS bulletins. These documents are available upon request.

3. Members of the National Committee board present

Karen Vancampenhout, Secretary General, official representative

Gilles Collinet, Treasurer

4. Schedule

Friday June 6, 2014

Flight Brussels-Peking

Saturday June 7, 2014

Flight Peking-Jeju, arrival in Jeju

Transfer and check-in at the Hyatt Regency Hotel

Sunday June 8, 2014

Registration and welcome reception

Set-up of Consortium booth for the Geneva 2022 bid

Monday June 9, 2014

Opening Ceremony

Plenary Symposium 'Soils for Peace'

Poster and Oral Sessions

Soil Parade

Consortium booth for the Geneva 2022 bid

IUSS Council evening meeting 19-21h

Tuesday June 10, 2014

Plenary Symposium 'Soil Security'

Poster and Oral Sessions

Consortium booth for the Geneva 2022 bid

IUSS Council lunch meeting 12-13.30h

Elsevier Publisher's dinner event

Anniversary Event British Soil Science Society

Wednesday June 11, 2014

Technical tours: soils of Jeju Island

Thursday June 12, 2014

Plenary Symposium 'Soil-Plant Welfares for Human'

Poster and Oral Sessions

Consortium booth for the Geneva 2022 bid

IUSS Council lunch meeting 12-14.30h

Gala Dinner

Friday June 13, 2014

Plenary Symposium 'IUSS for Global Soils: Future Nexus'

Poster and Oral Sessions

Retour flight from Jeju to Peking

Saturday June 14, 2014

Retour flight from Peking to Brussels

5. Congress

The conference was well organized by the IUSS president Prof. Yang and his coworkers. Overall it was a great success with a well-balanced mix of scientific, educational and social events.

The scientific and educational program was strong with 4 plenary symposia on future challenges for the sustainable management of soils in a global context. Leading authorities in these fields were invited as

speakers. Further, 91 oral sessions were organized on a variety of actual topics and 2343 posters were presented. Both oral as poster sessions were well attended.

Social events included a "soils and art" theme that ran during the entire span of the congress, including exhibitions, posters, film screenings, a soil parade and traditional Korean performances during the opening ceremony and gala dinner. Moreover, a welcome reception, technical tours and a gala dinner were organized.

6. IUSS Council meetings

The IUSS Council meetings were held at the Convention Centre, mostly during lunch breaks and evenings, so as to minimize overlap with the on-going congress.

Monday June 9 19:00-21:00h

- Registration of Council members and outline of procedures
- Minutes board council meeting June 2012 : the report was approved
- Reports of the members of the executive board
 - President and Vice President
In the past four years, the activities of the President, Vice President and executive board focused on three main domains:
 - Organization of the congress – vide supra
 - Reorganization: the former organizational structure of the executive board has been changed substantially, to allow a more continuous and more efficient management: (i) the presidency and the organization of the conference have been decoupled. The organization of the conference takes too much time, interfering with the president's abilities to represent the society and bridge the gap between science and policy. It will become the task of the vice president; (ii) a president, past-president and president-elect, with presidential elections every 2 years, replaced the current structure. These three people will work closely together, ensuring continuity. A permanent secretariat with dedicated employees was founded in Vienna.
 - Financial matters: the union was not in a good financial position. Hence, a plan was developed to improve the management and investments of the financial means of the Society. Actions were completed successfully.
 - Divisional chairs and chairs of Standing Committees: the chairs of the divisions and committees report on the progress and activities in their respective fields. Reports can be found in the IUSS bulletins.
- The activities of the IUSS working groups were presented by IUSS Secretary General Alex McBratney. Currently, there are sixteen Working groups, an up-to-date list is posted on the IUSS website. Most of these working groups are extremely active, with many activities organized. These include a new version of the WRB international. Some changes were made in the organization and reporting of the working groups.

Tuesday June 10 12:00-13.30h

- Presidential elections IUSS :
 - Rattan Lal: IUSS President-elect
 - Flavio Camargo: IUSS Vice-President-elect (organization of the next congress)
- Year of the Soil 2015 and World Soil Day
 FAO endorsed the request from the Kingdom of Thailand in the framework of the GSP for the proclamation of the International Year of the Soil (IYS) in 2015 on 24 April 2013. IUSS members are encouraged by the council to submit activities for this benchmark year. The IYS will serve as a platform for raising awareness on the importance of sustainable soil management as the basis for food systems, fuel and fibre production, essential ecosystem functions and better adaptation to climate change for present and future generations. December 5 was endorsed as World Soil Day.
- Endorsement Soil Taxonomy
 Together with World Reference Base, Soil Taxonomy was accepted as an official IUSS world soil classification system.

Thursday June 12 12:00-14.30h

- Fund raising Task force and 100th Anniversary Task force
 Task forces were established to improve fund raising activities, as the contributions from members are not sufficient to sustainable cover all IUSS costs, and to prepare the 100th Anniversary of the IUSS
- Committee and WG chairs as council members
 A motion was filed to add chairs of committees and working groups to the IUSS council (currently only division chairs have the ability to vote). The motion was denied, as the vast increase of council members would dilute the member countries' ability to weigh on the decision-making. Nevertheless, it was agreed that the committees and working groups should have a voice in the IUSS council. Hence a motion was filed and accepted that a forum should be established that has the ability to report to the council and to put items on the agenda.
- Bids for hosting the World Congress of Soil Science 2022.
 Four bids were filed to host the congress in 2022, and their detailed plans were presented to the council, by the Soil Science Society of Italy, the British Soil Science Society, the Chinese Soil Science Society and a consortium of 7 societies including the Belgian SSSB (vide infra). The British Society won the vote, the consortium came in second. The WCSS2022 will be organized in Glasgow.

7. Bid for the World Congress of Soil Science by the Geneva Consortium

In a consortium of 7 soil science societies, the Belgian Soil Science Society proposed a bid for the WCSS in 2022. The other participating countries were Switzerland (chair), France, Germany, Slovakia, Austria and Slovenia. The bid was well received and came in second, after the British bid. Intensive preparations and meetings leading up to the conference strengthened the bonds between these 7 European soil science societies, a definite asset to work together in the future.

Acknowledgement

The National Committee of Soil Science would like to thank the Royal Academies of Belgium for Science and the Arts to represent the National Committee at the IUSS World Congress of Soil Science, and to participate in policy-defining activities for soil science in the future.



Karen Vancampenhout
Secretary-General