

## Summary of the Advisory Board's Evaluation for FY2018

Advisory Board Members:

Prof. Brenda Howard (UK Centre for Ecology & Hydrology)

Prof. Sergey Fesenko (Russian Academy of Sciences, Russian Institute of Radiology and Agroecology)

Prof. Wolfgang Raskob (Karlsruhe Institute of Technology)

Dr. Satoshi Yoshida (National Institutes for Quantum and Radiological Science and Technology)

Evaluation period: April 1, 2018 - March 31, 2019

Annual Symposium: March 14-15, 2019

Advisory Board meeting: March 15, 2019 Venue: CORASSE FUKUSHIMA Multipurpose Hall

### **Prof. Brenda Howard**

Over the past year IER has made significant progress in a number of key areas. It has set itself a number of key challenges which focus not only on (i) scientific research, but also on (ii) developing student courses, (iii) providing a trusted source of information to people in Fukushima prefecture thereby supporting the recovery process (iv) significant co-operation with both national and international organisations, notably in SATREPS.

The structure and content of the annual meetings continues to improve every year. In the 2019 meeting it was nice to see so many other scientists present as well as maintaining an open session for the public. The IER should seriously consider taking a leading role in planning a 10<sup>th</sup> anniversary meeting with other appropriate organisations in Japan – this would need to be developed soon as there may be a number of national and international initiatives in this area and there will be a need to avoid overlap.

The development and success in gaining funding for the graduate program is a major step forward. Further appropriate developments in teaching need to be considered in the future, but the current focus should be on attracting good students and developing a high quality teaching course and learning environment.

The social contribution is dominated by Professor Tsukada and Associate Professor Wada. Both of these scientists are key members of the scientific team. It may be helpful if other members of IER with appropriate skills also participated more frequently to spread the commitment more evenly and develop the skills needed for communication.

The publication output of the IER is good, especially for some of the science sections. Some science areas have strength in many different types of output whereas other focus on certain outputs such as research publications. As IER extends its scientific output and reputation it needs to ensure that it maintains and enhances its national and international contributions in the different science areas as appropriate for the staff and infrastructure support resources available.

The staff and university should be congratulated for a successful year in 2018.

### **Prof. Sergey Fesenko**

As all previous similar Symposiums, the IER Annual Symposium was well organized. All presentations have demonstrated a good progress in quality of the research. The marine, forest and catchment research were exceptionally well presented. IER continues strengthening collaboration with many national and international relevant institutions. The attraction of the qualified research teams around the world allows increasing the efficiency of the research in the areas affected by the accident, because of new expertise that can bring such a collaboration. The proposal for Joint Use/Research Centre approved in 2018 by MEXT confirms a maturity of the Institute and serves as an evidence high qualification of IER staff. The proposal for the creation of a master's program was approved by MEXT in 2018. Forty-five publications in the peer-reviewed journal is an excellent output in dissemination of the results for relatively small and relatively young team. IER is involved in many International activities. In 2018, an interim meeting of IAEA MODARIA II (Modelling and Data for Radiological Impact Assessments) project was co-hosted IER and QST-NIRS. "Modelling" research area, likely, needs to be strengthened to provide better generalization of the available data and long-term predictions of radionuclides behaviour in areas affected by the FDNPP accident.

### **Prof. Wolfgang Raskob**

Following the review meeting in March 2019, one can state, that IER continuously progresses in terms of scientific achievements and education and training.

The new structure of the IER Annual Symposium clearly improved the presentation against scientists and the local public. The program is more diverse and demonstrates the good collaboration with national counterparts. The selection of young researches for presenting during the plenary sessions and as part of the poster sessions was beneficial and highly appreciated. The separation of the scientific and public sessions is surely a step in the right direction. In a future step, the IER Annual Symposium might be expanded into an international conference with the possibility to publish results in a journal.

IER is present at many different fields, performing excellent research in e.g. Oceans, Rivers and Lakes, Ecosystems with Modelling with expertise in Speciation Radiochemistry, Measurement and Analysis. These unique competences allow that experimentalists can successfully work together with modelling experts to gain a better understanding of the underlying processes in the ecosystems. This is highly recommended to be continued. The current portfolio of research, however, bears the risk that single work activities might be under-budgeted in the future. To overcome this, a vision paper should be developed that demonstrated the research needs of IER in the long term. This vision paper will support long-term funding requests.

The establishing of a graduate program was acknowledged as a sensible way forward to establish and demonstrate visibility and to develop knowledge in that area in Japan. To establish a PhD is the necessary consequence in that area. This is also in line with the excellent progress in research collaborations demonstrated during the symposium.

Finally, as there will be the 10 years anniversary of the Fukushima disaster in 2021, IER might consider to prepare a special report or book that summarises their experience in research and interaction with the public.

## Dr. Satoshi Yoshida (Japanese Only)

2019年3月に開催された成果報告会は、プログラムを二日間に分けることで会合の目的が明確になり議論が活性化した。最先端の学術研究成果を発信しつつ、それを福島県民をはじめとする社会に分かりやすく伝えるという IER の役割を十分に果たすものであった。関連研究者が一堂に会する機会として今後益々その重要性が高まると考えられ、継続的な開催を期待したい。

研究所では、海洋、湖沼・河川、生態系など6つの分野の研究が、適切な研究計画のもとに実施され、原著論文や学会発表によって質・量ともに優れた研究成果を発信している。引き続き、透明性のあるデータを収集しつつ、地域のニーズも把握しながら、的確な情報発信に努めていきたい。外部資金の獲得も積極的に進められており評価できる。

国内外の研究者（研究機関）との連携は、研究所の設立当初からの特徴であり、着実に実を結んでいる。国際的にも求心力のある、環境放射能に関する代表的な研究機関の一つになっている。研究棟および試料保管棟の利用も進んでおり、外部研究者との連携に重要な役割を果たしている。

SATREPS プロジェクトは、原子力事故の影響を受けた二つの地域が手を結ぶことで、長期的な課題や対策についての新たな研究展開が期待でき、今後の研究成果に期待したい。また、ネットワーク共同研究拠点は、今後の長期的な研究と人材育成の基盤を築く上で大いに期待できる。IER はその中心的な役割を担っており、目に見える成果を生み出して発信していくことが期待される。環境放射能研究について、IER を中心とした人材育成の場が形成されることの意味は大きく、福島県内の他の研究施設とも連携しながら、今後もその役割を果たしていくことを期待したい。

大学院の開設は、教育は勿論のこと、若手人材の発掘と育成に大きく貢献するものである。多岐にわたる講義は、IER の強みを活かしつつ環境放射能の分野を十分にカバーしており、事故の影響を受けた現場に近接している特徴を活かした運営が期待できる。博士課程を開設することは学生が研究者を目指す上で重要であり、人材育成の要となりうる。是非実現していただきたい。

福島原発事故後10年目が近くなり、国内の多くの事業が見直しの時期を迎えており、財政的にも大きな転換期に来ている。IER も、より長期的な視点に立った研究テーマの選択と運営の最適化が重要になってくる。環境放射能研究は継続が重要ではあるが、今後も変化を恐れない柔軟で機動的な運営を続けていただきたい。