Evaluation of research and professional activity of research-oriented institutes of the Czech Academy of Sciences for the period 2015–2019

Final Report

Name of the Institute: Institute of Hydrodynamics of the CAS, v. v. i.
Evaluated team and its leader:
1. Water Resources (Václav Šípek)
2. Fluid mechanics (Petr Filip)

Part A: Evaluation of the institute

Strengths:
The institute possesses a good infrastructure in terms of laboratories and equipment. Water is the main research focus and has high societal relevance. Applicability to practice; focus on polymer suspensions used for manufacturing nanofibrous materials; research topics supported by PhD students and young PostDocs; close cooperation with universities for recreation of PhD students; cooperation with the application users has started but is extendable; international measuring networks; very sophisticated and so far successful HR policy;

Weaknesses:
There are not enough researchers with experience in international grant applications, project management and digital tools; number of scientific outputs in terms of publications and EU project participation (coordinator or partner) is still low for the institute's number of researchers; low level of international cooperation needs intensification; insufficient external funding from international grants and private sector; lack of skilled researchers; lack of international scientists.

Opportunities:
Further increase in the number of international collaborations; efforts to maintain promising PostDocs and to attract skilled foreign researchers; developing a series of online courses to better reach national and international students and graduate students; hosting more international students and scientist for short-term research stays as part of the internationalization strategy; expanding contract research with private sector; continuing change in the research directions, personal representation, management strategy and organization structure.

Threats:
Stagnation or downside risk in case begun or anticipitated measures are not successful; insufficient connectivity between the two departments.

Main criterion: 1. Quality of results (H1.1-H1.5)

H1.1	Quality of selected outputs of Phase I
The quality of the outputs of Phase I is good, especially that of the publications and the selected journals. Water Resources Dept: only 1 paper in Q1 (young age sructure of team to be considered!)	
H1.2	**Contribution of workers on the outputs reached**
The contribution of the workers on the outputs reached is appropriate. The outputs show a good distribution between joint publications and individual publications.	
H1.3	**Quality of all outputs and results**
The quality of all outputs and results is good. The number of articles in journals with impact factor is reasonable. It is suggested to increase the number of and to more substantial focus on creating intangible assets such as patents and software.	
H1.4	**The most valuable discoveries and findings in the fields, their importance for the field**

The knowledge advancement is mainly in single and multiphase flows (e.g. polymers, suspension) and the water-related topics (water treatment, algae separation, microplastic and other micropollutants, water retention in soils under climate change, flood/drought forecasting).

H1.5	Contribution of the participation of the authors in large collaborations
The institute participates in an EU-COST action; only few international cooperations, involved mainly in national cooperations with universities (supervision of PhD students) and research centres (mainly joint use of infrastructure), foundation of new research centre.	

Main criterion: 2. Societal relevance (H2.1-H2.5)

H2.1	Societal relevance of outputs and results pursuant to CAS and institute mission
Very high societal relevance according to institute mission, applies to both departments. The general topic "water" is of very high societal relevance. The institute should build unique research capabilities and expertise in the European context because it is relevant to each country.	

H2.2	System functionality for knowledge transfer into practise, its usefulness for society. The impact of the institute´s activity on proper practice in society in the area of social sciences and humanities
Knowledge transfer into practice has been demonstrated in several cases but offers should be increased; project manager office established since 2017. The knowledge transfer is partly very good, especially for topics related to water. The institute supports, in particular, evidence-based policy-making.	

H2.3	Relation to practice
The research topics themselves have a high instrinsic relation to practice which, however, should be more highlighted. The core research areas can be better connected to practice and potential industrial users of the results. More effort is needed.	

H2.4	Participation in AV21 strategy
Participation in two research topics „Water and Air“ and „Water for life“, aiming for research itself and for outreaches, in 2019 transferred into the new research programme „Water for Life“ (11 institutes of CAS joined). In another new programme „City as a Laboratory of Change – Construction, Historical Heritage and Place for Safe and Quality Life“ the Institute participates in the topic „City as a place for life“.	

H2.5	Cooperation with regions of the Czech Republic
Cooperation with several regional Water Treatment Plants and National Parks in Bohemia. Cooperations are also established as links to universities in different regions.	

Further criterion: 1. Position in international and national context (D1.1-D1.3)

D1.1	Comparison of the teams and the institute with similar international and national institutes

The output per team member in publications in journals with high impact factors is below the international average. It is recommended to generate a roadmap and probably also a gratification system to increase the number of outputs per researcher further.

D1.2	Scope and quality of international and national cooperation and the role of the institute in such cooperation; engagement in broad international cooperation
The national cooperations are very good and mainly due to joint PhD projects with universities. The scope and quality of international cooperations is fair. It is suggested to enhance the number of a) further international contacts, b) international visiting and exchange scientists and students, and c) joint scientific work.	

D1.3	Participation of the workers in scientific community activities (organizing of conferences and workshops, invited lectures, awards)
Participation in three international hydrological measurement networks; seven conferences (co)organized, one summer school, two workshops; Award of the President of the CAS for Popularisation of Research. The participation of the researchers in such activities is very good.	

Further criterion: 2. Vitality, sustainability and strategy (D2.1-D2.9)

D2.1	Direction in line with the perspective of the planned research directions
Yes. The planned research directions are overall in line with the societal and industrial needs.	

D2.2	Assessment of the previous research objectives and their achievement
Fulfilled; changes in management; reorganization (two teams/departments), non-perspective topics suppressed, replacement by PhD students; new laboratoty equipment. The research objectives were achieved.	

D2.3	Assessment of implementation of recommendations from past evaluation
New definition of institute mission following recommendations; thorough reorganization of internal structure; internal stimulation programs, new bonus system; steps for improvement of external funding; participation in the SoWa RI; investments into new equipment; recruitment of young and skilled researchers; PR office established (2017). The advice from the past evaluation was implemented excellently.	

D2.4	Success in receiving grants
The institute has demonstrated significant progress in receiving grants. Further efforts are suggested, especially at the level of EU projects.	

D2.5	Adequacy of instrumental equipment
Has improved, further renovation and new equipment hoped for. The instrumental equipment is good. However, more specialization in unique techniques is required to maintain international competitiveness. More independent equipment and software developments will strengthen the unique aspects and international competitiveness.	

D2.6	Effectiveness of management
Good; successful in restructuring; connectivity of the both departments remains a pending challenge. It is suggested that progress monitoring and the communication of outcomes	

become a standard procedure. Furthermore, the expected outputs per researcher and group need a clear definition.	
D2.7	**Assessment of professional structure, development strategy and the strategy of keeping best scientists, age structure, career and qualification growth**
Promising and partially successful regulations and stimulations which need further expansion (career plans, hiring excellent international scientists); age structure is very promising for the future, actually some lack of experienced scientists and leaders is acknowledged. The professional structure is very good and comprises all elements. The strategy of keeping the best scientists is good, but effectiveness is limited due to better salaries elsewhere. It is suggested to further improve career development and progress monitoring through a (new) straightforward procedure based on individual career development plans frequently reviewed.	
D2.8	**Creating work-life balance conditions, assessment of approach towards possible gender issues**
Good and promising starting points; gender balance should support to bring female researchers in leading positions. The working conditions are overall good. Nevertheless, it is suggested to pay more attention to gender aspects, for example, through training, communication and feedback loops. It is recommended to assess these aspects separately through questionnaires.	
D2.9	**Relation of the institute with regard to the integration, development and sustainability of the research centre funded by the National Programme of Sustainability II.**
N/A	

Further criterion: 3. Cooperation with universities and participation in education (D3.1-D3.6)

D3.1	**Scope of cooperation with universities on national and international level**
Quite intensive on national level (6) and on international level (7). However, the number of international collaborations is too low, considering the number of researchers working in the institute. Measurements for improvement should be adopted.	
D3.2	**Effectiveness of joint research centres**
Joint Water Treatment Laboratory (with UCTP), Soil and Water Research Infrastructure (SoWa RI), effective cooperation documented by numerous joint publications. The effectiveness of joint research centers from the Department of Water Resources is very good and is characterized by a very good exchange with national universities.	
D3.3	**Success rate in supervision of PhD students**
Very good success rate of Water Ressources Dept.; e.g. number of PhD students increased by >50 %. Although many PhD students are hosted, the success rate expressed by the number of graduations per year can be further improved through appropriate supervision and career development activities.	

D3.4	Participation of PhD students in the outputs
Not specified (see Part B, D3.4), but apparently PhD students participate in the outputs at an appropriate level.	
D3.5	**Participation of the institute in master or bachelor studies**
Strong. The participation is good. A further increase of the activities is suggested to attract more talented people for research careers and improve the merit-based selection process.	
D3.6	**Assessment of cooperation intensity with universities in the form of teaching**
Good. The institute participates in the master and bachelor education in a very good way. It is suggested to develop also online courses to disseminate fundamentals as well as special knowledge further.	

Further criterion: 4. Outreach activities (D4.1-D4.3)

D4.1	Sufficiency of media strategy and activities in the area of research popularisation
Exemplary, good. The popularisation activities of the Department of Water Resources are very good. The Department of Fluid Mechanics' outreach activities are fair, but it is recommended to increase the efforts. It is suggested that the Department improves the web presence and increases the number of social media activities.	
D4.2	**Publishing activities and its quality**
Good: 3 monographs, Journal of Hydrology and Hydromechanics (IF 2.02). The publishing activities towards the general public and stakeholders such as policymakers are very good for hydrology and water treatment topics.	
D4.3	**Participation in professional organisations in the area of research and development**
The level of participation in professional organizations such as editorial boards and conference committees is very good.	

Other comments of the commission:

Both Commissions were impressed by the rather young group of researchers, which deserves support for the future to develop their modern and attractive research area with large potential for society overall.

Part B: Evaluation of teams

1. Water Resources

Strengths:
Strong Department, wide interdisciplinary research focusing on water quality and water distribution, good connection of basic research to practice; determination of microplastics down to 1µm; certified methodology of jar tests for water treatment optimization; Equal pay certificate; good HR politics; very good gender balance; young team with rather good age structure (PhD, post-doc) and strong growth; successful recruitment of PhD students; interdisciplinary research orientation towards sufficient water supply; new devices and new hydro-pedological laboratory; cooperation with universities and end users; research of microplastics in drink water; improvement of models for hydrological forecast, bonus system for publishing results in Q1 and Q2 journals, good web presence.

Weaknesses:
Low level of international cooperation, low international visibility; low external funding; some lack of experienced skilled researchers (the other side of young age structure) but high number of PhD students resulting in bearing risk of insufficient guidance and training; low number of international PhD students; low number of publications with international cooperations, strategy how to increase international cooperations remains very vague.

Opportunities:
Engaged young team, promising ideas and plans for further scientific work and transfer into practice; good networking in Research Infrastructures; expanding publishing bonus system could result in more high-impact journals and more international visibility; increase number of international PhD students and postdocs by applying for, e.g., international mobility grants (and others); formulation and implementation of future funding strategies.

Threats:
Individual departures by experienced skilled researchers, underfinancing during further increment of the new team, brain drain because young scientists might leave because of insufficient support (unbalanced numbers of young and experienced researchers).

Main criterion: 1. Quality of results (H1.1-H1.5)

H1.1	Quality of selected outputs of Phase I
Good but below mean of field, only 1 in Q1 (young age sructure of team to be considered!)	
H1.2	**Contribution of workers on the outputs reached**
Still high number of Q3 and Q2 publications, Q1 and Q2 publications increased	
H1.3	**Quality of all outputs and results**
Good, but needs to be improved further to be competitive	
H1.4	**The most valuable discoveries and findings in the fields, their importance for the field**
Removal of algal organic matter AOM by coagulation-flocculation differing for different species; dependance on pH and dosis, molecular weight; up to 99% cell removal (cyanobacteria *M. Tenuissima);* cellular organic matter COM may improve the removability	

of humic substances HS; gentle permanganate pre-oxidation patented; distinct adsorption mechanisms and granular activated carbon GAC; applicability in water treatment practice, development of new method to predict S and N depositions.

H1.5	Contribution of the participation of the authors in large collaborations
Only few international cooperations resulting in majority of co-authored, published papers with national cooperations, involved in national cooperations with universities (supervision of PhD students) and research centres (mainly joint use of infrastructure), foundation of new research centre.	

Main criterion: 2. Societal relevance (H2.1-H2.5)

H2.1	Societal relevance of outputs and results pursuant to CAS and institute mission
Very high, concerns quality and availibility of drinkwater and the function of soils in supply	
H2.2	**System functionality for knowledge transfer into practise, its usefulness for society. The impact of the team´s activity on proper practice in society in the area of social sciences and humanities**
Highly useful for society, but impact of the team's activity remains to be further developed and made more visible internationally and nationally	
H2.3	**Relation to practice**
Potentially very strong but to be expanded.	
H2.4	**Participation in AV21 strategy**
Not specified, but „Water for Life" programme mentioned in presentation from 17.3.2021; See Part A!	
H2.5	**Cooperation with regions of the Czech Republic**
Exemplary cooperation with cities and regions	

Further criterion: 1. Position in international and national context (D1.1-D1.3)

D1.1	Comparison of the team with similar international and national institutes
All young team members are engaged in responsible functions of international research societies, but more Q1 publications from international collaboration and more international PhD students and postdocs are desirable to incrfease international visibility.	
D1.2	**Scope and quality of international and national cooperation and the role of the team in such cooperation; engagement in broad international cooperation**
International: COST actions of EU aiming at new international cooperations but strategy remains unclear; „Visegrad" fund; project funded by international joint initiative EIG Concert Japan; organizing or participation in regluar international conferences; participation in 3 international measurement networks; international visibility improvable.	

National: cooperation with 4 universities and joint PhD supervision, joint publications; collaboration with several institues of the CAS, joint research projects and publications.	
D1.3	**Participation of the workers in scientific community activities (organizing of conferences and workshops, invited lectures, awards)**
Considerably busy in (co-)organization of conferences, one summer school, one workshop for technicians in drink water treatment plants (DWTPs); 4 invited lectures (not so many, but young team!) 2 awards, one for best teacher at Charles University, the other from CAS for Popularisation of Research; but no international recognitions.	

Further criterion: 2. Vitality, sustainability and strategy (D2.1-D2.9)

D2.1	**Direction in line with the perspective of the planned research directions**
Yes	
D2.2	**Assessment of the previous research objectives and their achievement**
Fulfilled, some additional topics	
D2.3	**Assessment of implementation of recommendations from past evaluation**
Reorganization of the institute with the newly established team Water Ressources (reorganization seemingly not yet fully finished); Looks like really successful implementation of Water Resources Team; new motivation of workers including a sophisticated bonus system;	
D2.4	**Success in receiving grants**
impressive rise of grants (factor >4.4), preconditions for applying grants improved; however only minor leading role in international granting schemes	
D2.5	**Adequacy of instrumental equipment**
Several new devices aquired, new hydro-pedological laboratory; mutual utilization of laboratory equipment in joint research centres with universities and the Soil and Water Research Infrastructure (SoWa RI) of CAS	
D2.6	**Effectiveness of management**
Looks good and promising	
D2.7	**Assessment of professional structure, development strategy and the strategy of keeping best scientists, age structure, career and qualification growth**
Based on previous knowledge and results, a very ambitious and promising plan is presented. Well elaborated HR politics; regular evaluations to support qualification growth; implemented publication bonus system to increase quality of research outputs; number of successful completed PhD projects increased; internal career path for successful PhD students and postdocs should be further developed	

D2.8	Creating work-life balance conditions, assessment of approach towards possible gender issues
Flexible working time, part-time contracts, home office as measures; good gender balance (should be further developed to increase number of femal scientists); equal pay strategy very good.	
D2.9	**Relation of the team with regard to the integration, development and sustainability of the research centre funded by the National Programme of Sustainability II.**
N/A	

Further criterion: 3. Cooperation with universities and participation in education (D3.1-D3.6)

D3.1	Scope of cooperation with universities on national and international level
Good with universities in Prague; two Australian universities	
D3.2	**Effectiveness of joint research centres**
Effective participation in 2 joint research centres; sharing laboratory equipments, methods and data sets; joint publications and mentoring PhD students	
D3.3	**Success rate in supervision of PhD students**
High (7 from 9)	
D3.4	**Participation of PhD students in the outputs**
Important participation of PhD students is stated, but no numbers are given	
D3.5	**Participation of the team in master or bachelor studies**
5 researchers strongly involved at 2 universities	
D3.6	**Assessment of cooperation intensity with universities in the form of teaching**
See 3.5	

Further criterion: 4. Outreach activities (D4.1-D4.3)

D4.1	Sufficiency of media strategy and activities in the area of research popularisation
Wide range of media (TV, radio, internet media, print media incuding popular science magazines, popularization events including lectures, panel discussions, guided tours, courses, seminars for policy-makers... Impressive list of PR activities. Good internet presence.	
D4.2	**Publishing activities and its quality**
See D4.1	

D4.3	Participation in professional organisations in the area of research and development
Membership and responsibilites in international and national research societies, members of editorial boards of 5 international journals, work in Czech scientific boards and commissions; participation in national and international review activities for journals and commissions but seemingly not for international funding agencies.	

Other comments of the commission:

2. Fluid mechanics

Strengths:
1. Strong scientific foundations in areas such as modeling and rheology experiments.
2. A state-of-the-art flow loops to investigate the solid-liquid suspensions.
3. Joint research and publication activities with other national and international universities.

Weaknesses:
1. No unique and high-level experimental or computational facilities to study for example single and multiphase flows at high spatial and temporal resolution.
2. Management lacks a clear strategy to further specialize the research in alignment with industry and societal needs, to increase external funding and to increase the number of scientific outputs.

Opportunities:
1. Increase the number of contacts to companies in the different research areas and generate more context for the research topics.
2. Improve the research focus on the topics where a leading position in Europe and beyond is possible. Focus spending of money in these areas.
3. Teaching activities should be extended through new specialized online courses that can impact a global audience.

Threats:
1. The research topics are less attractive to young talented researchers due to limited links to societal challenges.
2. Experienced researchers are missing that possess a sufficiently developer track-record in new/emerging topics and international funding as well as project management and leadership.
3. Fast growing areas such as new measurement techniques, simulation software, advanced automation and control as well as new computational facilities might result in asymmetric knowledge gains and scientific progress elsewhere.

Main criterion: 1. Quality of results (H1.1-H1.5)

H1.1	Quality of selected outputs of Phase I
The quality of the outputs of Phase I are good. In particular the quality of the publications and the selected journals are good.	
H1.2	**Contribution of workers on the outputs reached**
The contribution of the workers on the outputs reached is appropriate. The outputs show a good distribution between joint publications and individual publications of the team members.	
H1.3	**Quality of all outputs and results**
The quality of all outputs and results is good. The number of articles in journals with impact factor is reasonable. The team shows a very good participation in conferences with proceedings. There are no IPRs created such as patents. It is suggested to increase the number of publications (2 per researcher year) and to stronger focus on the creation of intangible assets such as patents and software.	

H1.4	The most valuable discoveries and findings in the fields, their importance for the field
Progress in modeling and experimental polymer processing to get fundamental understanding for new applications. New insights on electrospinning at nanoscale to produce future materials. New knowledge on carbon nanofluids as contribution to the design of new sensors. Widening the knowledge base on flow behaviour of settling slurries to better engineer material transportation over long distances. In general a strong focus is on rheological characterisation of different newtonian and non-newtonian fluids.	
H1.5	**Contribution of the participation of the authors in large collaborations**
The team participates in one large-scale EU project, which is good.	

Main criterion: 2. Societal relevance (H2.1-H2.5)

H2.1	Societal relevance of outputs and results pursuant to CAS and institute mission
Societal relevance is not fully addressed. The use of knowledge and several applications are indicated but the direct links of the research to key issues (technology, products, services) and performance parameters (technical systems) are not clear. Thus, the expected impacts and benefits are not clearly detailed.	
H2.2	**System functionality for knowledge transfer into practise, its usefulness for society. The impact of the team´s activity on proper practice in society in the area of social sciences and humanities**
There is no effective system put in place to ensure proper knowledge transfer. This is supported by the fact that there is not a single patent or pending patent application. It is suggested to address this issue with a strategy or a roadmap.	
H2.3	**Relation to practice**
The core research areas are not sufficiently connected to practice and potential industrial users of the results. More effort is suggested.	
H2.4	**Participation in AV21 strategy**
Yes, the team participates in this strategy.	
H2.5	**Cooperation with regions of the Czech Republic**
Cooperations are sufficiently established; mainly as links to universities in different regions.	

Further criterion: 1. Position in international and national context (D1.1-D1.3)

D1.1	Comparison of the team with similar international and national institutes
The team performs good compared to similar international and national institutes. The research work is solid and helps to advance the knowledge in the different research directions. Unfortunately there are no unique (high-level) experimental or computational facilities for example to study single and multiphase flows at high temporal and spatial resolutions.	
D1.2	**Scope and quality of international and national cooperation and the role of the team in such cooperation; engagement in broad international cooperation**
The scope and quality of international collaborations are good. Several connections to research institution from abroad exist. This resulted in a good number of joint publications. A positive aspect are two long-term research stays from foreign researchers (Israel and Poland).	
D1.3	**Participation of the workers in scientific community activities (organizing of conferences and workshops, invited lectures, awards)**
The participation in conference committees and editorial boards is excellent. However the invited lecture are not fully detailed.	

Further criterion: 2. Vitality, sustainability and strategy (D2.1-D2.9)

D2.1	Direction in line with the perspective of the planned research directions
The research directions will remain the same in the next three years. It is suggested to better link the topics to specific (or emerging) applications or user groups/cases as well as to decide in which areas the team can lead the field in Europe and beyond.	
D2.2	**Assessment of the previous research objectives and their achievement**
The previous research objectives were achieved.	
D2.3	**Assessment of implementation of recommendations from past evaluation**
The recommendations were all discussed and partly implemented.	
D2.4	**Success in receiving grants**
The success in receiving grants is too low and more efforts are needed. It is recommended to develop a clear roadmap of specific activities, clear goals and a reasonable timeline.	
D2.5	**Adequacy of instrumental equipment**
The two teams have good equipment. However, there is little equipment that is unique. The developments in measurement techniques, computational methods, software, machine learning and automation change everywhere the way experiments are conducted. It is suggested to investigate and integrate such topics.	
D2.6	**Effectiveness of management**
The effectiveness of the management is good. Core aspects are well executed. However, clear strategies to acquire and retain young talent, to further increase funding from the public and private bodies as well as to better communicate the activities to the general	

public are not put in place. It is recommended that the management puts also more effort in the communication of expected scientific outputs (to increase the number of scientific publications to at least two papers per researcher year).
D2.7 **Assessment of professional structure, development strategy and the strategy of keeping best scientists, age structure, career and qualification growth**
There is no clear strategy for the development of talents. It is suggested to set-up such strategy. The number of young talents is quite low and should be further increased. It is important that every senior staff is supportive with a role as advisor rather than a leader. Decision making has to be in the hands of sufficiently skilled scientists that can cope with the changes in the field, use latest channels and are effective in getting grants as well as in management of projects.
D2.8 **Creating work-life balance conditions, assessment of approach towards possible gender issues**
These aspects need to be considered further. It is suggested that the group develops and communicates a clear strategy on what the working conditions are and how to improve gender aspects.
D2.9 **Relation of the team with regard to the integration, development and sustainability of the research centre funded by the National Programme of Sustainability II.**
N/A

Further criterion: 3. Cooperation with universities and participation in education (D3.1-D3.6)

D3.1 **Scope of cooperation with universities on national and international level**
The scope of cooperation with national and international universities is very good and led to a good number of joint publications.
D3.2 **Effectiveness of joint research centres**
There is no joint research center.
D3.3 **Success rate in supervision of PhD students**
The number of supported PhD thesis is reasonable. Therefore it is suggested to improve the number of PhD students supported and to increase the participation in international PhD committees.
D3.4 **Participation of PhD students in the outputs**
The main participation is through joint research activities and publications. It is suggested the PhD students contribute also to public outreach activities.
D3.5 **Participation of the team in master or bachelor studies**
The participation in Master studies is reasonable. Teaching activities at bachelor level are rather limited. The number of activities at Master level should be further increase e.g. through online teaching of an entire course.
D3.6 **Assessment of cooperation intensity with universities in the form of teaching**

The cooperation intensity is good at Master and PhD level. It is suggested to generate online courses on high-impact topics that are open to participants from around the world. This will significantly increase the visibility of the team and lead to new collaborations and exchange opportunities.

Further criterion: 4. Outreach activities (D4.1-D4.3)

D4.1	Sufficiency of media strategy and activities in the area of research popularisation
There is no clear media strategy put in place. It is suggested to use several social media channels to connect with different audiences and to frequently demonstrate the societal relevance of the research areas. Furthermore, It is also suggested to improve the website of the team (e.g. high-quality photos).	
D4.2	**Publishing activities and its quality**
It is recommended to increase the number of publications that target on the general public. This will also help to better internally communicate the broader context of the research areas.	
D4.3	**Participation in professional organisations in the area of research and development**
The participation in professional organisations is good. In particular the participation in editorial boards and conference committees is very good.	

Other comments of the commission:
N/A

Final report was elaborated by:

Commission 4 - Earth and enviromental sciences
Evaluated teams No.: 1

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Commission 7.1 - Engineering and technology
Evaluated teams No.: 2

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