Research evaluation

REPORT ON THE RESEARCH UNIT:
Channel & North Sea Fisheries Research Unit (HMMN)

UNDER THE SUPERVISION OF THE FOLLOWING INSTITUTIONS AND RESEARCH BODIES:
Institut Français de Recherche pour l'Exploitation de la Mer – IFREMER

EVALUATION CAMPAIGN 2018-2019
GROUP E

In the name of Hcéres[1]:

Michel Cosnard, President

In the name of the experts committee[2]:

Tammo Bult, Chairman of the committee

Under the decree No.2014-1365 dated 14 November 2014,

[1] The president of Hcéres "countersigns the evaluation reports set up by the experts committees and signed by their chairman." (Article 8, paragraph 5);

[2] The evaluation reports "are signed by the chairman of the experts committee". (Article 11, paragraph 2).

This report is the sole result of the unit's evaluation by the expert committee, the composition of which is specified below. The assessments contained herein are the expression of an independent and collegial reviewing by the committee.
Tables in this report were filled with data provided by laboratories and supervising bodies in the unit's application and in the Excel files "Données du contrat en cours" and "Données du prochain contrat".

UNIT PRESENTATION

Unit name:	Channel & North Sea Fisheries Research Unit
Unit acronym:	HMMN
Requested label:	UPR
Application type:	Renewal
Current number:	
Head of the unit (2018-2019):	Mr Paul MARCHAL
Project leader (2020-2024):	Mr Paul MARCHAL
Number of themes:	3

EXPERTS COMMITTEE MEMBERS

Chair:	Mr Tammo BULT, Wageningen Marine Research, The Netherlands
Experts:	Mr Guy DUHAMEL, Muséum National d'Histoire Naturelle Paris
	Mr Yannick FAULCONNIER, Inra Centre de recherche de Clermont-Ferrand-Theix (supporting personnel)
	Mr Hans POLET, Institute for Agricultural and Fisheries Research (ILVO) Belgium
	Mr Pascal RIERA, Station Biologique de Roscoff

HCÉRES REPRESENTATIVE

Mr Jean-François HOCQUETTE

REPRESENTATIVE OF SUPERVISING INSTITUTIONS AND BODIES

Mr Philippe GOULLETQUER, Ifremer

INTRODUCTION

HISTORY AND GEOGRAPHICAL LOCATION OF THE UNIT

The Unit Halieutique de Manche – Mer du Nord (HMMN) was created in 2005. HMMN is part of the Department of Biological Resources and Environment of IFREMER. HMMN delivers research in fisheries science and marine ecology, with a focus on the English Channel and the Southern North Sea Region. Its tasks include the monitoring and assessment of fisheries resources and ecosystems affected by commercial fishing and other sectors of activity (*e.g.* sand and aggregate extraction, renewable marine energy production) in a context of climate change. The unit consists of two laboratories, located in:

1. Boulogne-sur-Mer: Laboratoire Ressources Halieutiques de Boulogne sur Mer, LRHBL, Hauts de France;
2. Port-en-Bessin: Laboratoire Ressources Halieutiques de Port-en-Bessin, LRHPB, Normandie;

These two HMMN laboratories are part of a network of Fisheries Laboratories contributing to the French Fisheries Information System, important to the French fisheries data collection & management.

HMMN coordinates three large-scale sea surveys and hosts four technical facilities: a National Sclerochronology Center (PNS), a trophic ecology facility (PRT), and a Zooplankton Taxonomy and Ecology Center (PTEZOO), which is shared with the LERBL laboratory, and finally a national service for processing and standardizing data in response to fisheries data calls supporting stock assessments (CREDO).

MANAGEMENT TEAM

The management team is composed of the head of the HMMN unit, Mr Paul Marchal, who is also the location-manager/head of the Boulogne-sur-Mer laboratory. Mr Joël Vigneau is the head/location manager for the laboratory of Port-en-Bessin.

HCÉRES NOMENCLATURE

SVE1_2 Évolution, écologie, biologie des populations

SCIENTIFIC DOMAIN

Since 2013, HMMN activities have been structured in three inter-connected themes: Individuals, Populations and Ecological (Theme 1): Communities, Trophic networks and Biodiversity (Theme 2); and Fleets, Exploitation and Management Scenarios (Theme 3). In terms of monitoring, HMMN contributes to fisheries and ecosystem data collection at sea, in the harbour, and in the laboratory.

UNIT WORKFORCE

	Unit workforce	
	Channel & North Sea Fisheries Research Unit	
Active staff	**Number 30/06/2018**	**Number 01/01/2020**
Full professors and similar positions	0	0
Assistant professors and similar positions	0	0
Full time research directors (Directeurs de recherche) and similar positions	0	0

Full time research associates (Chargés de recherche) and similar positions	0	0
Other scientists ("Conservateurs, cadres scientifiques des EPIC, fondations, industries, etc.")	9	11
High school teachers	0	0
Supporting personnel (ITAs, BIATSSs and others, notably of EPICs)	20	19
Permanent staff	**29**	**30**
Non-permanent professors and associate professors, including emeritus	0	
Non-permanent full time scientists, including emeritus, post-docs	0	
PhD Students	3	
Non-permanent supporting personnel	4	
Non-permanent staff	**7**	
Total	**36**	

GLOBAL ASSESSMENT OF THE UNIT

The unit's scientific strategy and projects are well built upon the units strengths, organised in three clearly defined and interconnected themes, coherent with the IFREMER 2030 plan. The unit addresses essential questions regarding the ecological impact of local human activities and global changes on the structure and functioning of exploited fish communities and trophic networks, aimed at new methods for the evaluation of fisheries management including the ecosystem approach to fisheries management and Good Environment Status indicator development in the context of the Marine Strategy Framework Directive. The unit's scientific production is very good in quantity and quality as well as its involvement in PhD training, resulting in a relatively large group of young, motivated PhDs that very much add to the work-atmosphere and the units profile: a good and pleasant place to start your career. In general, employees appreciate the good informal and intimate working atmosphere.

The number of HDR scientists must increase. A more clear and original focus in the research will help define a more unique knowledge position of the unit, strengthening the units competitiveness and complementarity. The unit could make more impact for the region by more regional cooperation and communication, adding to the rationale for "being in the region" as a regional unit. A development plan can help focus the unit's strategy, including: the most important external developments that are important to the unit, the most important opportunities & threats, the units ambitions in terms of the future market & knowledge position, and an outline of what is needed to achieve that position.

DETAILED ASSESSMENT OF THE UNIT

UNIT'S RESPONSE TO PREVIOUS RECOMMENDATIONS

The previous HCERES report made a number of recommendations to consolidate previous growth in development, related to team composition and the balancing of the work force and the work load. These recommendations were taken on to a large extent (*e.g.* more PhDs are part of the team; acquisition of research projects and work load are monitored and managed; administrative support to research projects has improved). However, the unit experienced a high turn-over of personnel, vacancies are limiting the units position and the project administration is still taking much time from scientists. From this, the full potential for improvement has not yet been reached.

The previous HCERES report also recommended to "enhance scientific exploitation and dissemination of research results". In the 2014-2018 evaluation period, efforts were made in terms of press releases, in collaboration with the dedicated IFREMER service (DCOM), participation in media training and coverage of HMMN activities, in particular as related to scientific findings.

CRITERION 1: QUALITY OF SCIENTIFIC OUTPUTS AND ACTIVITIES

A – Scientific outputs and activities, academic collaborations, reputation and appeal

Scientific outputs and activities, academic collaborations, reputation and appeal From 01/01/2013 to 30/06/2018	**Channel & North Sea Fisheries Research Unit**
Articles	
Scientific articles	139
Scientific articles with last authorship *(Biology only)*	40
Review articles	27
Other articles (professional journals, etc.)	6
Clinical articles	0
Books	
Scientific book edition	1
Book chapters	4
Meetings	
Meeting abstracts	83
Meetings and congress organisation	4
Electronic tools and products	
Software	1
Databases	3
Tools for decision making	1
Cohorts *(Biology only)*	0
Instruments and methodology	
Prototypes	0

Platforms and observatories	4
Other products	
Artistic creations	0
Movie or theatre play creation	0
Movies	13
Editorial activities	
Participation to journal editorial boards (books, collections)	2
Peer reviewing activities	
Reviewing of journal articles	75
Grant evaluation (public or charities)	11
Participation to lab site visit committees (Hcéres, etc.)	2
Participation to institutional committees and juries (CNRS, Inserm, etc.)	25
Academic research grants	
European (ERC, H2020, etc.) and international (NSF, JSPS, NIH, World Bank, FAO, etc.) grants	14
National public grants (ANR, PHRC, FUI, INCA, etc.)	14
Local grants (collectivités territoriales)	16
PIA (Labex, Equipex, etc.) grants	1
Grants from foundations and charities (ARC, FMR, FRM, etc.)	7
Visiting senior scientists and post-docs	
Post-docs	7
Visiting senior scientists	3
Scientific recognition	
Prizes	2
Distinctions	0
IUF members	0
Chair of learned and scientific societies	23
Invitations to meetings and symposia (out of France)	2
Members' long-term visits abroad	0

Strengths

The unit scientific production increased significantly relative to the previous self-assessment report: from 42 in 2008-2011 (1,12 per researcher per year) to 139 in 2013-2018 (2.37 per researcher per year).

The scientific production is high, with the unit publishing in 60 periodicals in which about half of the papers (63 of the 139) are at the top quality level (selected good to excellent reviews from international standard in the two major unit topics: marine biology and fisheries research). Forty papers out of the 139 are published by the unit with a unit member as last author.

Spatial species interaction (ALC 027 in *ICES* (International Council for Exploration of the Sea) *Journal of Marine Science*, Theme 1), change in marine trophic network (ALC 076 in *Progress in Oceanography*, Theme 2), fleet dynamics modelling (ALC 056 in *Fish and Fisheries*, Theme 3) are the best (highest impact factor) research, all well focused in the area of the unit (North sea and Channel) providing a good recognition of the unit in the scientific community.

The ratio of production between themes is well balanced.

The unit contributes to increasing peer reviewing activities (75), and has to be supported.

Participation to the ICES network (chair activities, Working Group participation with a very high - 83 - number of contributions meeting abstracts) shows a very good connection and involvement to the EU scientific community.

Participation in academic research programs is high (19, with added 8 PhD grants), diverse and well balanced, ranging from regional, national, to European programmes.

The unit produces useful keys databases (*e.g.* on trophic levels) and tools for their platforms (*e.g.* software and user's movies to help in sclerochronology, PNS). This is very helpful for learning.

The unit had 10 visiting scientists and post-docs.

There is cooperation with local universities in the region, also in the context of the Federation of Research.

The unit has coordinated 1 ANR project (COMANCHE), which finished in 2015. The unit did not coordinate any FP/H2020 project over 2013-2018, but has been WP leader of 2 FP7 (VECTORS, SOCIOEC) and 1 H2020 (DiscardLess) projects.

Weaknesses

Visiting scientists and post-docs largely originate from France (5), with none from countries that operate in the same region (UK, Belgium, The Netherlands).

Meetings (participation, organisation, invitations) largely focus on the ICES/North Atlantic region or broader, whilst the impact of such activities and connections for the units region is not apparent.

There is no clear description of the main challenges specific to the unit's region, nor a connection of these to a scientific, organisation or communication strategy.

There were only two invitations to meetings and symposia (out of France).

Assessment of scientific outputs, reputation and appeal

The unit has a very good scientific production, reputation and appeal. This production is excellent, when taking into account the production improvement relative to the previous evaluation, and also the mission of the unit which is not only aimed at academic performance, but also at application and advice.

B – Interactions with the non-academic world, impacts on economy, society, culture or health

Interactions with the non-academic world, impacts on economy, society, culture or health From 01/01/2013 to 30/06/2018	
Socio-economic interactions / Patents	
Invention disclosures	0
Filed patents	0
Accepted patents	0
Licenced patents	0
Socio-economic interactions	
Industrial and R&D contracts	2

Cifre fellowships	0
Creation of labs with private-public partnerships	0
Networks and mixed units *(Science and technology only)*	0
Start-ups	0
Clinical trials *(Biology only)*	0
Expertise	
Consulting	1
Participation in expert committees (ANSES, etc.)	1
Legal expertise	0
Expert and standardization reports	76
Public outreach	
Radio broadcasts, TV shows, magazines	0
Journal articles, interviews, book edition, videos, etc.	137 (since 2016), including radio broadcasts, TV
Other popularisation outputs	6
Debates on science and society	11

Strengths

The public outreach is high with 154 initiatives, including 137 articles, radio & TV broadcast, 6 other popularisation outputs and 11 debates.

With 1 consulting, 1participation in expert committees and 76 expert reports the institute plays its role in giving advice.

Contributions to the Pint of Science Festival and the Fête de la Mer in Boulogne-sur-Mer are original activities allowing presenting the unit's knowledge to a broader audience.

Weaknesses

The socio-economic interactions are low with no invention disclosures and no patents, indicating low valorisation of research results by these means. In terms of socio-economic interactions, there were no CIFRE fellowships, no private-public partnerships, no start-ups and only 2 industrial R&D contracts.

Interactions with the non-academic world are unbalanced with only 2 socio-economic interactions on the one hand and 78 expertise products and 154 public outreach initiatives on the other hand. *i.e.,* many efforts are made in the media to inform a broader public, few efforts on directed communications towards more specific stakeholders in the region.

Assessment of the interactions with the non-academic world

The interactions of the unit with the non-academic world is good but needs improvement: The public outreach and expertise is very good; the social-economic interactions and impact on economy, society and health is fair.

C – Involvement in training through research

Involvement in training through research From 01/01/2013 to 30/06/2018	
Educational outputs	
Books	0
E-learning, MOOCs, multimedia lessons, etc.	0
Mean number of publications per student *(Biology & Science and technology only)*	1.9
Training	
Habilitated (HDR) scientists	1
HDR obtained during the period	0
PhD students	13
Defended PhDs	9
Mean PhD duration	38.8
Internships (BTS, M1, M2)	26
Education	
Courses with international label (ERASMUS, etc.)	11

Strengths

The number of courses with international label is high (11), as well as the number of internships (26).

HMMN has a good-sized group of PhD students working in the unit (6-8 in any given year), with 9 defended PhDs in the assessment period. The mean PhD duration (38.8 months) is good, given the general target of 36 months. PhD students are involved in the HMMN unit, as they are required to present their work – being in progress and/or finalized - and are invited to internal HMMN meetings. Twenty-two papers out of the 139 WoS referenced publications are co-authored by a PhD student supervised by HMMN scientists, having an IF median of 2.3 (comparable to that of HMMN), with two of these 22 publications having an IF>5. The PhD was first-author in 19 of these 22. Most PhDs obtained a job within a year following their viva (8 out of 9). The mean number of publications per student is 1.9, which is satisfactorily.

PhDs feel very welcome and supported by the unit and experience a very good working environment: when asked they give it an average 7.9 on job-satisfaction, on a scale from 1 to 10.

The participation in institutional committees and juries (CNRS, INSERM, etc) is very good (25 in total).

Weaknesses

The number of HDR scientists is low (1) and from this, the number of PhDs and defended PhDs unexpectedly high given this limited number of HDR scientists.

Researchers have not been involved in specialized courses at the international level. There are no e-learning, MOOCs and multi-media lessons.

Assessment of the involvement in training through research

The units involvement in training through research is good to very good taking into account that education is not a primary objective of the institute compared to a university unit. The number of HDR scientists is too low and must increase. Educational outputs (i.e., contributions to e-learning and educational books) can be improved.

CRITERION 2: UNIT ORGANISATION AND LIFE

Unit organisation and life **From 01/01/2013 to 30/06/2018**	
Women/men ratio in the unit	0,39
Women/men ratio among unit scientists	0,25
Women/men ratio among unit PhD students	0,36
Women/men ratio among team leaders, unit head and deputy heads	0

Strengths

The unit is structured in two teams (LRHBL in Boulogne-sur-Mer and LRHPB in Port-en-Bessin) which work closely together and in a complementary way through the three scientific themes and with four technical facilities. Managers and referents are clearly identified with well-defined missions/activities. In general, employees very much enjoy their work and colleagues.

Employees enjoy the small size of the unit, contributing to informal contacts, easy interactions with colleagues and team spirit. Research staff is much enjoying their work environment; most assistants do so as well, but a smaller group of these indicate they experience a reduced job-satisfaction: Staff gave the committee a job-satisfaction rating of 7.6, ranging from 7-8 (from a scale of 1-10); PhDs a 7.9 (range: 7-9); engineers, technicians and administrative personnel 7.0 (range 3-9), including both high marks (comparable to the other groups) as well as low marks

The high turnover must not necessarily been seen as a weakness, but also something that adds to the very strength of the unit, and as such, something to be accepted and managed: The high turnover in personnel is a result of young and motivated people starting their PhD and scientific career at the unit. Such people bring the necessary drive and spirit that allows the unit to do good science and be visible in that.

The frequency of meetings, alternatively in LRHBL and LRHPB, at the different organizational levels is high.

The unit has a well-organized internal communication with Flash meetings every Monday, HMMN scientific days every year over 2 days (with all members of both laboratories), HMMN-wide videoconferences, HMMN plenary meetings once per quarter with the whole research unit staff, scientific seminars (including students seminars once a year), two general assemblies to discuss progress in terms of science and human resources (in January) and organization (quality assurance, hygiene and security, IT strategy…, in June).

Quality assurance is a high priority for the unit wich is integrated within a processes-based quality framework ISO 9001(within IFREMER ISO 9001 quality framework). Three processes are described for the activities of HMMN directions and research teams allowing a very good scientific integrity: Process P3 on conducting research, Process P7 concerning collecting and archiving reliable data and Process P9 on delivering expertise and advice promote the harmonization and sharing of practices and archiving of documents and to develop more realistic project proposals. Two processes for the management of HMMN human and financial resources are described: they follow also a national standard wich is embedded within IFREMER ISO 9001 quality framework (Processes P12 and P13). The ISO standards guidelines are used in a relevant way in the unit guaranteeing good scientific integrity.

Training sessions in different areas have been organized over the period 2013-2017 in the unit (210 trainings: 75 concerned science and technology and 51 health and safety aspects).

Weaknesses

The unit has written a reflection on the designation of authors co-authoring publications, but this reflection does not seem to be shared and appreciated by all staff.

The "Centre Manche – mer du Nord" shows a good development in terms of the protection of its staff: one engineer works fulltime for hygiene and security within the unit. He is involved in risk identification and analysis (with SEIRICH software) and ways to prevent them. However, not all staff is completely aware of health and safety procedures.

The pooling of the research money and its distribution is discussed in the unit, but not everyone seems to be involved.

The high staff turnover in HMMN (especially in the PRT Platform) was observed over 2013-2018 with a decrease in the workforce in 2018 (2013-2017: 32-34 in total vs. 2018: 29) and 4 departures planned over 2019-2022.

The commission has not seen a development plan of skills ("GEPEC") that could improve the performance of the unit. This can immediately affect the strength of the specific themes and therefore the implementation of the projects.

The gender balance is not good in particular concerning leaders (unit and laboratory managers, scientific themes and platforms referents: 0 woman out of nine men).

Expertise activities do not seem to be recognised at the same level as academic activities and achievements, leading to a reduced job-satisfaction amongst certain staff (i.e. engineers).

Assessment of the unit's life and organisation

The unit's life and organization is very good.

CRITERION 3: SCIENTIFIC STRATEGY AND PROJECTS

Strengths

The scientific strategy and projects are well built upon the units strengths, organised in three clearly defined and interconnected themes. The three themes include well defined axes to develop in continuity with the previous work. The project is coherent with the IFREMER 2030 plan.

The different themes will benefit from data collection and resulting time series from IFREMER (fisheries) surveys.

Members have good expertise and up-to-date equipment and facilities to conduct these projects, also as a result of the CPER MARCO project.

The unit addresses essential questions regarding the ecological impact of local human activities and global changes on the structure and functioning of exploited fish communities and trophic networks aimed at new methods for the evaluation of fisheries management including the ecosystem approach to fisheries management and Good Environment Status indicator development in the context of the Marine Strategy Framework Directive.

Weaknesses

The unit has put more emphasis on scientific research and achievements during the last evaluation period, especially related to themes 1 and 2, and has the ambition to continue this line. Theme 3 did not get that emphasis, also because of changes in staff. The projects and research are of a very good academic level, but focus less on practical advice with impact for the region compared to the past, taking away from the potential impact of the unit to the region. This shift in focus may put the unit in more direct competition of other research groups from other universities and institutes that also work on marine ecology, food webs and biodiversity, often with more academic resources.

The projects balance between continuity and development of novel research avenues and the different objectives are ambitious and need integrative strategies. This complexity makes it sometimes difficult to apprehend priority of objectives and feasibility: a development plan is missing, outlining the units desired future position and how to reach that, taking into account external developments and opportunities; clear Key Performance Indicators, related to science, impact and vitality of the organisation, are missing but would allow more clear ambitions, progress monitoring, evaluation and focussed management decisions in relation to such a development/strategic plan.

The unit is operating within the context of the "IFREMER 2030" report, indicating 3 excellence areas, 6 emergent priorities and 2 challenges, all relevant to the unit, in addition to an overall COEI framework and the 3 HMMN themes identified. The three themes of the unit are quite broad and being "on top" of all these and being original seems a daunting challenge for a (relatively small) unit by itself. A clear and original focus and decision as

to what topics the unit wants to be "on top of" is missing: *e.g.* many groups do research on food webs and biodiversity, but what will make this unit unique in that context?

Assessment of the scientific strategy and projects

The scientific strategy & projects is assessed as good. The research projects are at a very good academic level. The research strategy is clearly built upon the unit's strengths and well connected to a number of related scientific challenges. The strategy needs improvement by a more clear and explicit picture of the unit's desired future position and how to reach that, taking into account external developments and opportunities.

RECOMMENDATIONS TO THE UNIT

A – Recommendations on scientific production and activities (criterion 1)

The committee recommends:

- Strengthen the units profile regarding its impact for the region, ensuring that the science done by the unit makes a more explicit difference to societal debates and management of nature and marine resources in the Southern North Sea and English Channel: a "science for impact" approach, with more cooperation with labs from neighbouring countries that are active in the region (UK, Belgium, Netherlands) and more activities in cooperation with regional stakeholders, including fisheries. A communication strategy, also making use of social media (e.g. twitter, Facebook), will add to this profile.
- Increase the number of HDR scientists and make a plan to achieve that goal.
- Attract more post-docs or visiting senior scientists from labs from neighbouring countries that are active in the same region.
- Be more active in social media (twitter, YouTube, Facebook,...) and possibly e-learning, to add to the units visibility.

B – Recommendations on the unit's organisation and life (criterion 2)

The committee recommends:

- Foster and cherish the units team spirit, informal contacts and good communications.
- Have all employees be aware of the health and safety procedures in place.
- Organise structured discussions between scientists and administrative support, for planned improvement of project support.
- Agree on a clear and uniform procedure for authorships of publications and use this in the unit.
- Explore the reason for the reduced job-satisfaction in a subsection of the group of engineers, technicians and administrative personnel the committee spoke with.

C – Recommendations on scientific strategy and projects (criterion 3)

The committee recommends:

- Make a more focussed decision as to what the unit wants to be really good/original/unique at within the three themes identified, and – especially for other topics - to operate more as a network organisation, with the unit as a gateway to science and knowledge available through its strong IFREMER and (inter)national academic networks; to combine that with a clear application of the units science to practical advice with impact for the region. That focus would allow a more distinct position from competing (university) groups, complementarity with other groups and institutes, as well as a stronger rationale for "being in the region" versus "centralised". In other words: the unit as a top regional centre and extension of a top institute (IFREMER) that is very much embedded in the region, doing top science, or can act as a gateway to top-science from elsewhere, with impact for the region. A strategy that is actually strengthened by operating from both Boulogne-sur-Mer and Port-en-Bessin, as this would allow the desired regional profile and impact.
- Invest in more manpower for theme 3.

- Develop a development/strategic plan for the unit, including: the most important external developments that are important to the unit; the most important opportunities & threats; the units ambitions in terms of the future market & knowledge position (who will be paying the unit in the future & how much; what science is needed for that); and an outline of what is needed to achieve that position, in terms of expertise (quality, quantity), cooperation, facilities and communication. Key Performance Indicators (on science, impact and vitality of the organisation) will allow progress-monitoring, evaluation and management decisions.
- Develop a clear data policy and data management plan.

CONDUCT OF THE VISIT

DATE

Start: 2nd April 2019 at « 8h30 »

End: 2nd April 2019 at « 19h00 »

VISIT SITE

Institution: Ifremer

Address: 150 Quai Gambetta, 62200 Boulogne-sur-Mer

CONDUCT OR PROGRAM OF THE VISIT

The day before, 19h: diner (HCERES scientific advisor and committee members)

8h30-9h00 Welcome (closed-door) Visiting committee with the HCERES Scientific advisor
The scientific sessions below (9h00-12h15) are attended by all members of the research unit

9h00-9h15 HCERES representative: the role and procedures of HCERES

9h15-10h45 Presentation of the unit and of its past activities: (45 min presentation, 45 min discussion),

- Presentation of HMMN overall achievements: Dr Paul MARCHAL (15 min + 15 min)
- Presentation of HMMN Theme 1 achievements: Dr Christophe LOOTS (10 min + 10 min)
- Presentation of HMMN Theme 2 achievements: Dr Pierre CRESSON (10 min + 10 min)
- Presentation of HMMN Theme 3 achievements: Dr Raphaël GIRARDIN (10 min + 10 min)

11h15-12h15 Presentation of HMMN project: Dr Paul MARCHAL (30 min presentation, 30 min discussion),

13h30-14h00 Discussions with engineers, technicians and administrative (HCERES advisor and committee members)

14h00-14h30 Discussions with students and post-docs (HCERES advisor and committee members)

15h00-15h30 Discussions with staff scientists (HCERES advisor and committee members)

15h30-16h00 Discussion with the representatives of the managing bodies (HCERES advisor and committee members)

16h00-16h30 Specific discussions (at the will of the visiting committee) (HCERES advisor and committee members)

16h30-17h00 Discussion with the head of the unit, (HCERES advisor and committee members)

17h00-19h00 Private meeting of the visiting committee (with the HCERES scientific advisor)

SUPERVISING BODIES' GENERAL COMMENTS

Despite the Hcéres' requests, no comments have been received on the day of publication of this evaluation.

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