



Evaluation of the Flanders Marine Institute V.Z.W.

Management summary

Study commissioned by:

**The Flemish government,
Department of Economy, Science and Innovation**

Conducted by:

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1 MANAGEMENT SUMMARY

1.1 Policy context and rationale

The very first time the Flanders Marine Institute (Vlaams Instituut voor de Zee – VLIZ) was discussed was in the “Policy Letter – Flanders’ Science and Technology Policy – 1998 Policy Priorities” where, under section 4 “Stimulating academic research”, both the sea’s economic and ecological impact and especially the pressure the marine ecosystem and connecting rivers were experiencing, as a result of economic developments, were pointed out. The policy letter clearly states that this intense pressure calls for appropriate policy measures so that these ecosystems can be protected from extinction.

In other words, marine research is deemed to be vital especially in light of its often multidisciplinary nature. In 1972, there existed the “Nationaal Programma Zee (National Sea Programme)”, which constituted the first step towards coordinated scientific research on the marine environment. And even though that coordinating structure has long since disappeared, several effective research groups, many of them also active on an international level, began to emerge.

As it was essential that all the various target groups (government, researchers, the public at large...) should have access to all the know-how thus far acquired and that the issue would remain a topical one, and, on account of the complexity and diversity of marine research, it was felt that a central and flexible support structure might constitute an important added value. Hence, it was in that light that the idea of a ‘Flanders Marine Institute’ came about so that Flanders would be able to rely on a central coordination platform that could comfortably sustain the information flow from and to the world of research, the authorities and the wider public. On 2 April 1999, the non-profit association (vereniging zonder winst oogmerk - vzw) Flanders Marine Institute (VLIZ vzw) was founded by the Flemish government, the province of West-Flanders and the Research Foundation – Flanders (Fonds voor Wetenschappelijk Onderzoek – Vlaanderen).

Since its foundation, the Flanders Marine Institute (VLIZ vzw) has developed into the marine research coordination and information platform of Flanders. The VLIZ is not only the Flemish hub for marine and coastal research but has also gained international acclaim. The institute concludes cooperation agreements with Flemish research groups and authorities and integrates its activities into national and international networks. Some of its more important activities are the management of the Flanders Marine Data and Information Centre (Vlaams Marien Data- en Informatie Centrum – VMDC), the Information Desk (Infoloket), the Marine Library and the ‘Zeeleeuw (Sea Lion)’ research vessel.

The VLIZ was given a brief which is described in further detail in the management agreement between the Flemish government, the province of West-Flanders and the VLIZ. The management agreement specifies that an evaluation has to be carried out before a new agreement can be concluded. The present evaluation therefore, features within the framework of the renewal of the management agreement between the VLIZ, the Flemish government and the province of West-Flanders.

In view of the evaluation, the Department of Economy, Science and Innovation (departement Economie, Wetenschap en Innovatie - EWI) of the Flemish government, in consultation with the province of West-Flanders, outlined the evaluation and the specific evaluation questions in a public tender, launched under the title “Specific tasks within the framework of the evaluation (of the investments by the Flemish government) in the Flanders Marine Institute vzw” -

(public tender no. EWI-2009-02) ("Specifieke opdrachten in het kader van de evaluatie (van de investering van de Vlaamse overheid) in het Vlaams Instituut voor de Zee vzw (VLIZ vzw)" - bestek met nummer EWI-2009-02). On 12.05.2009, the evaluation brief in this public tender was awarded to the company IDEA Consult.

1.2 Objectives and scope

The objective of the present evaluation, in its strictest sense, already features in the management agreement itself and has been defined as follow:

"The investments of the Flemish government in the VLIZ will be thoroughly assessed on the basis of whether the objectives defined in the management agreement have been achieved and in light of the benefits Flanders has derived."

However, during the lifetime of the management agreement, the objectives and tasks of the VLIZ have also been extended so that it is only proper that the evaluation should cater for this expansion. The objectives, activities and tasks of the VLIZ must also be assessed in light of the afore-outlined policy context. So, this evaluation will not only try to establish whether the VLIZ has in fact attained its objectives but it will also try to assess in what way these objectives were actually attained.

The evaluation shall therefore a.o. focus on:

- The intrinsic/scientific activities a.o. as regards the VLIZ's role in terms of facilitating marine research, its management of the Flanders Marine Data and Information Centre and the efforts it with respect to the popularisation of science;
- How it functions as an organisation, a.o. with a focus on staff policy, ICT policy, and the effectiveness of the various management structures;
- The financial situation, a.o. with a focus on how the various subsidies ("first", "second" up to "sixth subsidy") were used and how they were accounted for, and on any external funding the VLIZ was able to attract.

The VLIZ management agreement expires on 31.12.2009. For that reason, this evaluation concentrates on how the VLIZ performed from 2005 up to and including 2008, but, insofar as possible and relevant, its performance during 2009 has also been taken into consideration.

1.3 Outline approach

1.3.1 *A thematic line of approach*

We have chosen to streamline/cluster the aforementioned evaluation topics even further, so that we now have 6 homogenous, analytical evaluation themes.

1. The management agreement, policy plans and performance indicators, where we examined to what extent the VLIZ brief was properly 'described' and the extent to which applications for obtaining subsidies and reporting commitments are in line with one another. The current VLIZ performance indicators were also questioned (on the basis of SMART criteria).
2. The general functioning, where we distinguished between five dimensions: internal organisation and management structure, staff policy, financial policy, communications policy and ICT policy. These are the so-called input factors

which should allow the VLIZ to reach its objectives efficiently and effectively. In light of the importance of VLIZ's external communication (also within the framework of the role the VLIZ plays in terms of the popularisation of science), this issue was given special attention.

3. The intrinsic scientific activities of the VLIZ, VLIZ's core mission, which is to stimulate marine research in Flanders through a range of activities. Particular attention was paid to the Data Centre (VMDC), the marine library, the available research facilities and infrastructure, and the networking activities.
4. The relationship with the policy area and context, where we took a closer look at the role of the VLIZ within the Flemish, but also within the European (and the wider international) policy landscape. The impact and effect of any of the VLIZ activities are also investigated here.
5. Customer satisfaction and target-group policy, where we wanted to get an insight into how (potential) clients (i.e. researchers, policy makers, the corporate sector, educational institutions and their pupils and others) rate the service VLIZ provides. This theme also allows for an analysis and evaluation of the first four themes.
6. International benchmarking, based on a well considered comparison between the VLIZ and a number of foreign marine-research institutions, from which we draw lessons for VLIZ's future activities. This theme also supports the analysis and evaluation of the first four themes.

During this evaluation a lot of attention was paid to assessing the overall activities of the institute. However, as agreed during the first meeting of the steering committee, the central theme of this evaluation was the assessment of its intrinsic/scientific support activities. In consultation with the steering committee, and on the basis of the evaluation questions included in the public tender, a final list of evaluation questions was drafted which set the tone for the fulfilment of this brief (these questions feature at the start of each section in the main report).

1.3.2 A combination of methods

To answer all the evaluation questions in an appropriate and well-founded manner, we used a combination of both qualitative and quantitative methods, the main ones being:

- Desk research with an analysis of the **available documents and data**. In first instance, we used any documentation that was readily available, mainly from the VLIZ, the Flemish government and the province of West-Flanders, and from international government bodies such as the European Commission (Maritime Policy Affairs and more specifically the Integrated European Maritime Policy) and from any of the VLIZ's sister organisations included in the benchmark (cf. below).
- This readily available information was supplemented by **additional information** and any data the VLIZ provided. This desk research also focussed on any activities that were complementary to this brief and whose results were valorised in the main report as external input (cf. box below).

Box 1: Complementary activities

Complementary to this brief, a number of activities were carried out whose results have been incorporated into the results of our own evaluation. These encompassed:

➤ **The VLIZ self-evaluation**

The EWI Department of the Flemish government asked the VLIZ to carry out a self-evaluation on the basis of a set of specific questions. The results of this self-evaluation have been made available.

➤ **The 2010-2014 draft policy plan**

The EWI Department of the Flemish government also asked the VLIZ to develop a new 2010-2014 strategy in a draft policy plan. This draft policy plan has been made available.

➤ **Annual government audits when subsidy applications (and payments) are approved or turned down.**

Every year the government audits how the annual funds it allocates to the VLIZ are appropriated. The VLIZ issues a report and publishes an annual report. The government also has a seat on the VLIZ Board of Directors, the General Meeting and the Scientific Committee. The results of these audits have also been made available.

- The insights we gained from the analysis of the available documents and data were supplemented and enriched by **interviews**. Those were conducted face-to-face and by telephone. In addition, a number of thematic workshops were organised together with the VLIZ. Following the introductory presentations by the VLIZ, a number of introduction interviews were conducted with the VLIZ in relation to each of the evaluation themes. The desk-research stage was then followed by a second series of in-depth interviews at the VLIZ.

Subsequently, a cross-section of stakeholders (n=21) were interviewed, amongst whom:

- Representatives from the province of West-Flanders;
 - Representatives from the EWI Department of the Flemish government;
 - Members of the Board of Directors (of the VLIZ);
 - Members of the Scientific Committee (of the VLIZ);
 - Researchers at the Flemish universities;
 - Other stakeholders such as the Agency with Separate Management VLOOT (Dienst met Afzonderlijk Beheer VLOOT) (the ship-owner of the Flemish government), the Belgian Federal Science Policy Office (BELSPO), the Management Unit of the North Sea Mathematical Models (Beheerseenheid Mathematisch Model Noordzee en Schelde-estuarium (BMM), the Institute for Agricultural and Fisheries Research – a subsection of the Flemish government’s Agriculture and Fisheries policy area (Instituut voor Landbouw en Visserij-onderzoek - ILVO), the International Oceanographic Data and Information Exchange (IODE), the Marine Board ESF and others.
- By means of a **benchmark**, the VLIZ was measured on a number of points against the prevailing practice at a number of European¹ institutions. On account of the fact that the VLIZ does not have a mandate to carry out

¹ The benchmark institutions were: the Royal Netherlands Institute for Sea Research (Koninklijk Nederlands Instituut voor Onderzoek der Zee - NIOZ from the Netherlands, the French Research Institute for the Exploitation of the Sea (Institut français de recherche pour l’exploitation de la mer – IFREMER) from France, the National Oceanographic Centre, Southampton - NOCS - and the British Oceanographic Data Centre - BODC - from the United Kingdom.

scientific research while all the other institutions we looked at do, only a limited comparison could be made. The insights from that comparison have been incorporated into the main report under the various themes. A separate report with the full results is also available.

- Under our guidance, a so-called '**peer review**' was also conducted in June 2009. During a three-day stay in Ostend, a group of 4 international experts² studied the input and output characteristics of the VLIZ. This process was steered by a preset list of questions (a *mandate*). The peer review resulted in a separate report with its own conclusions and recommendations.
- Finally, we also conducted a **client and target-group survey** amongst the following target groups: clients, pupils, teachers and the public at large (cf. Table 1 for the results). The survey amongst VLIZ clients was conducted within the framework of the intrinsic/scientific activities. The survey amongst pupils and teachers probed into the services the VLIZ was providing in terms of the popularisation of science. The public at large was questioned about how familiar they were with the VLIZ as an institution and with its products 'De Grote Rede (The Big Issue)' and 'De Zeekrant (The Marine Newspaper)'.

Table 1: Response data of the various surveys

	'Clients'	'Pupils'	'Teachers'	'Wider public'
Gross number	871	Open call	Open call + VLIZ contacts	1000
- e-mail incorrect	0			
- survey not applicable	0			
- declined	0			
= net number	871	N/A	N/A	1000
Response	233	226	170	1000 ^a
Net response-%	26.8%	N/A	N/A	100%

^a via iVOX panel, so the entire panel answered all the questions.

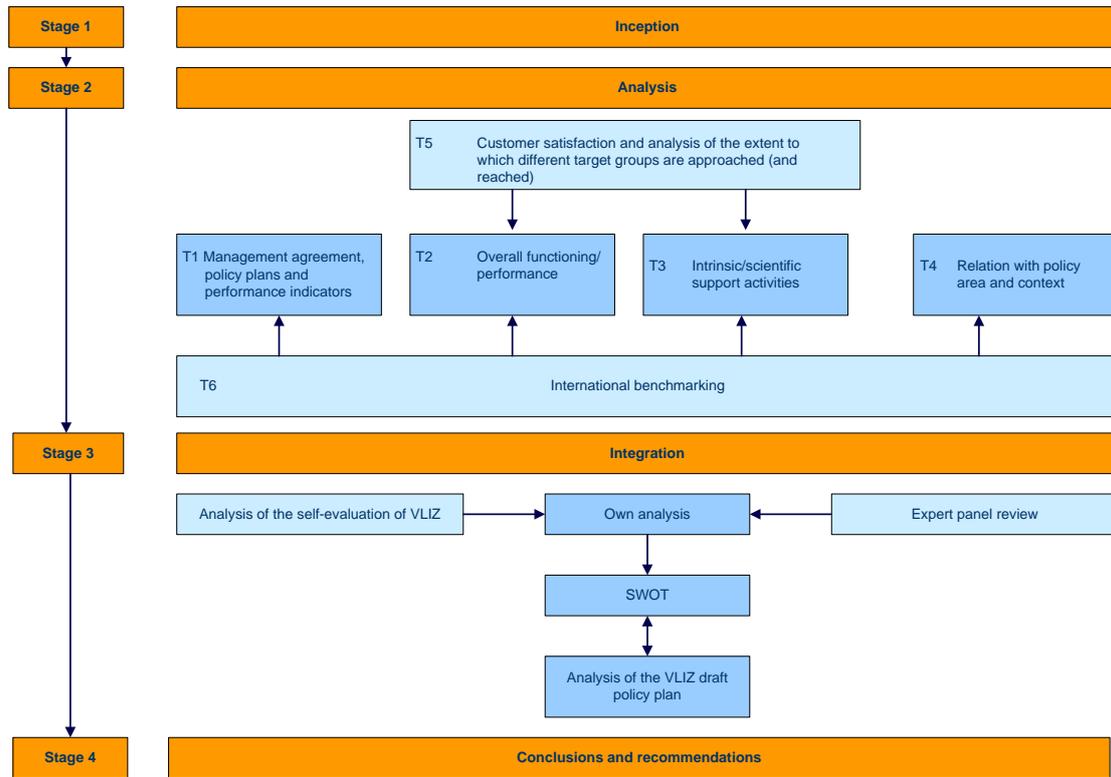
Source: IDEA Consult

1.3.3 A phased approach

The entire project was subdivided into four stages. It kicked off with an initiation stage comprising the initial consultation with the authority responsible for the public tender and with the steering committee. The second stage consisted of an analysis of the various themes. In stage 3, the results of these analyses were compiled into a SWOT-analysis combining all the available insights (self-evaluations and the 2010-2014 VLIZ draft policy plan and the report by the international experts). Stage 4 features the recommendations (advice) for the competent authorities (Flemish government and the province of West-Flanders) and for the VLIZ.

² Mr Geoffrey O'Sullivan (Chair) Manager, International Co-Operation Marine Institute, Ireland; Dr Niamh Connolly, Associate Vice Provost. Nanyang Technological University, Singapore; Dr Mark Costello, Associate Professor University of Auckland, New Zealand; Dr Peter Herman, Head of Department, Professor, Netherlands Institute of Ecology Radboud University, Nijmegen, The Netherlands.

Figure 1: Plan of approach



Source: IDEA Consult

Our work finally led to a main report and a number of appendixes. The appendixes contain the various report sections mentioned above.

1.4 Conclusions

In this section we present the principal conclusions of the evaluation. Here, we limit ourselves to the overall conclusions as the detailed conclusions (per individual evaluation question) are discussed separately in the theme-specific sections of the main report. As reference, we also include the unedited conclusions and recommendations of the international experts (the peer review) in the box below.

Box: Conclusions and recommendations from the international experts.

Conclusions

1. The overall performance of VLIZ with respect to its mandate and identified deliverables (i.e. Management Agreement, 2005-2009) is judged by the Review Panel to be exceptional, as is evident from the quality of its deliverables and the uptake of its outputs.
2. VLIZ has realised an impressive volume of relevant work given its modest capacity (budget and staff). Its output secures high impact and awareness within Flanders, Belgium, throughout Europe and globally.

Recommendations

3. The Review Panel supports the VLIZ Draft Plan (2010-2014) as set out in the Self-Evaluation Report (February 2009) and associated budget with minor modifications (see Section 8 of the peer review report).
4. VLIZ has a very high international reputation and the development and consolidation of this international role should be specifically referenced in the Management Agreement with appropriate Performance Indicators (see Section 5 of the peer review report).
5. VLIZ has developed international competencies and world leadership in marine biological databases. This has significant potential in terms of leverage of external funding and the international visibility of Flanders as a Region of Excellence in Science, Technology & Innovation attracting external research funding (e.g. FP7) and Foreign Direct Investment (FDI). This competency needs to be acknowledged in the Management Agreement and secured in future budgets.
6. The performance indicators currently used are measures of activity rather than quality, or impact. While this may have been appropriate during the gestation period, these performance indicators now need to be revisited (see Section 7 of the peer review report).
7. The international standing of VLIZ creates a significant opportunity for the Flemish authorities to take a lead role in regional research, monitoring and assessment activities related to the Southern North Sea involving the north of France, Belgium, the Netherlands and the east coast of the UK (see Section 11 of the peer review report). The Review Panel notes that this was also a recommendation of the 1999-2003 Review.
8. The identification of research topics to be included in a Flemish Marine Science Programme would provide a very appropriate focus for the establishment of VLIZ Scientific Committee Thematic or Foresight Groups as proposed in the Self Evaluation Review and this initiative is supported by the Review Panel for the reasons set out in Section 10 of the peer review report.
9. The output from the "Stakeholder Satisfaction Survey", being undertaken by IDEA Consult and to be completed in September 2009, is important and its recommendations need to be taken into account in implementing the recommendations identified above.

1.4.1 The 2005-2009 management agreement

1. The VLIZ did not only attain but even surpassed the expectations and objectives of the 2005-2009 management agreement.

- 1.1. As a result of its coherent and systematic mode of operation, and the unrivalled dynamism, enthusiasm and client-friendliness of its staff, the VLIZ exceeded all performance-indicator expectations.
- 1.2. This positive view is also resonated not only in national but also in international scientific (and other) circles (cf. the report from the international panel of experts). The VLIZ should be highly commended on this point. As stated by the panel of international experts, the Flemish government and the province of West-Flanders must be complimented on their visionary attitude that led to the establishment of the VLIZ in the first place.
- 1.3. In terms of the VLIZ brief on the popularisation of science, the VLIZ also scores well. It has not reached central hub status in matters of marine and coastal science in Flanders yet, but it could/should undoubtedly reach that status.

2. The management agreement has turned into a complex package of various addenda.

- 2.1. During the lifetime of the past management agreement, various addenda were appended. As a result the complexity of the application and payment terms of the various subsidies has increased dramatically.
- 2.2. In spite of this, the VLIZ has shown that it has managed the various subsidies well. The management agreement and its addenda have undoubtedly been instrumental in the increased performance of the VLIZ.
- 2.3. The flexibility of the competent authorities in terms of the additional addenda (in response to new developments and needs) is commendable, but a simplification and integration of the number of agreements would be desirable in the future.

3. The VLIZ self-evaluation gives a true picture of reality.

The present evaluation is partly based on the self-evaluation the VLIZ conducted during 2009. A systematic analysis of the self-evaluation and of other sources has allowed us to conclude that the VLIZ has painted a true picture of its performance over the past period.

1.4.2 The VLIZ internally

4. The VLIZ is an effective, though vulnerable organisation.

- 4.1. The VLIZ staff is client-oriented, highly motivated, have a sense of responsibility and is much valued by the target groups who are very satisfied with the way the VLIZ operates and the support it provides.
- 4.2. However, the tight staffing levels, especially in the smaller departments, are a reason for concern. These smaller departments rely heavily on a number of key persons which could seriously affect continuity if any of those people decided to leave. The heavy work load and the lack of any contingency plans make the entire organisation vulnerable.
- 4.3. In terms of HRM, some important steps have been taken over the past number of years. However, as the organisation will only get bigger, further developments and professionalization are required (e.g. the drafting of job descriptions, decentralised evaluations, linking to remuneration conditions).

5. The governance structure and the way in which it operates are in line with the principle of good governance, though some 'refreshment' is needed.

- 5.1. The VLIZ governance structure meets the main principles of corporate governance (cf. Code Buysse II). For instance, decisions are taken in mutual trust between the various management bodies and they operate in a transparent (well-documented) fashion. It has to be mentioned however that the Board of Directors insufficiently evaluates its own functioning and performance.
- 5.2. The VLIZ also has to contend with a meagre attendance of its management meetings, especially the meetings of the Scientific Committee, and with the scant proactive strategic role of the Board of Directors. As the Board of Directors almost always relies on the opinion of the Scientific Committee it is vital that this opinion is a representative one, in other words, that its meetings are properly attended.
- 5.3. In that light we would consider it necessary that the composition of the Board of Directors and of the Scientific Committee, which came about historically, is re-examined. Are the right members involved? Are they committed and do they serve the interests of the VLIZ?
- 5.4. The information flow to the academic 'backbench' (via the members of the Scientific Committee) is not well developed. Although this is only partly the VLIZ's responsibility, it will undermine the activities of the VLIZ in the long run. In this respect, the VLIZ may/should also seek a commitment from the members.

6. The financial policy and management are adequate – the VLIZ is managing its funds with 'due diligence'.

- 6.1. The drafting of the budget and the accounts are done as they should: transparent and well-documented. In terms of the internal payment authorisation procedures, the '4-eyes' principle prevails albeit often in too informal a fashion.
- 6.2. From a financial point of view, the VLIZ is very vulnerable. Its annual accounts are deteriorating, mainly as a result of rising wage and fuel costs. To try and counter this, the VLIZ has a.o. gone in search of external project funding, which amounts to 47.9 % on average (cf. the lower limit of 7.5% as stipulated in the management agreement). Even though this can and should be seen as positive, especially as a testimony to the VLIZ's excellence, this situation is nevertheless a precarious one as it causes a lot of 'unrest' amongst the organisation's rank and file (many staff are paid out of temporary resources).
- 6.3. The investment subsidy (additional addendum to the management agreement) has given the VLIZ some extra breathing space which was absolutely vital. For the future, it would seem that extra resources would need to be provided on an ongoing basis to keep the financial situation and the continuity of service the VLIZ provides 'healthy'.
- 6.4. The VLIZ does not or insufficiently avails of opportunities to seek a modest 'contribution' to the costs arising from the organisation of events or from the printing/posting of posters. Such contributions could reduce the overall costs of the VLIZ.

7. The ICT policy has been well developed and meets the requirements.

ICT, within the VLIZ, has been organised in a highly efficient and effective manner, both internally and externally. Its data policy is rigorously observed and adequate measures are taken to safeguard the integrity of the VLIZ environment and its databases.

1.4.3 Communication policy

8. The VLIZ successfully communicates in a broad and diversified manner.

8.1. The VLIZ communicates intensively and successfully with the outside world. The extent to which a formal communication strategy has been put in place is limited and differs according to the various forms of external communication. The strategy has (in terms of content and form) been adapted to the needs of the various target groups.

8.2. The main target groups are the public at large (including a wider audience of scientists), education and the authorities. The target groups have been clearly defined. Every target group is approached in a different, though, appropriate fashion. As a result of the bottom-up tailoring of the products and the entire operation, the content has been well attuned to the individual target groups.

8.3. Communication with the authorities has up and until now been indirect (via interesting data and documents on its website or in various publications) or at the request of policy staff (the issue of a 'mandate' regarding the VLIZ as a hub for marine and coastal science plays a role here). General awareness of (the services) the VLIZ provides is not bad but could (should) be better, definitely among the target group 'education'. Even the authorities could call more often on the services of the VLIZ.

8.4. Communication towards the public at large and education is mainly nationally-oriented and nationally known. Even as far as the education sector is concerned, there is considerable room for growth on the national market. Communication towards the authorities, however, does have more of an international slant and has been increasingly embedded within the international context.

1.4.4 Scientific activities

9. The gap between the VLIZ and the performance of scientific research is (too) wide.

9.1. First of all, the VLIZ should be commended for the services it provides and for the ensuing international credit and recognition which also rubs off on the Flemish research community. However, it should be taken into account that the VLIZ does not engage in any research itself and that it has gained this acclaim through the research support it provides and through its excellent data and data management.

9.2. Literally speaking, the VLIZ does not have any mandate to conduct research itself and this distinguishes it from its main international 'competitors'. Even though we do support this (historical) policy choice (which is inherent to the organisation of the Flemish research landscape) we cannot but observe that the VLIZ finds it harder to show a 'fist' at an international level as a result of this restriction, especially when it comes to influencing any European research programmes. At the same time, the VLIZ and its staff find it harder to maintain a scientific profile, which is a

prerequisite to be able to compete for project-related funding (e.g. Framework Programme funding) at an international level.

- 9.3. The VLIZ advocates the establishment of a Flemish (marine) research programme in which the VLIZ would play a facilitating role through the organisation of thematic working groups/panels who would 'feed' the programme. Like the science community (cf. the survey among researchers), we would also be in favour of this, on the explicit condition though, that its feasibility is properly tested in conjunction with the Flemish universities (cf. also our recommendation in this regard).

10. The 'competitors' of the VLIZ do perform scientific research.

Following on the above conclusion it must be emphasised that all the institutions we have analysed within the benchmarking context (in the UK, the Netherlands and France) are involved in research and are therefore fully-fledged partners on the national and international research landscape. Flanders differs on this point as it has of old always invested in excellent research universities (alongside education) while the aforementioned countries began to identify and organise spearhead fields, i.e. specific research centres (and therefore other sources of funding), much earlier. The area of tension between universities and research centres we are familiar with in Flanders is therefore no/less of an issue in these countries.

11. The research activities of the Flemish researchers are outstandingly facilitated.

- 11.1. The survey conducted amongst researchers has shown tremendous satisfaction with the services offered across the board. There was an adequate supply of equipment and availability of sailing time and the support provided in terms of data and information was excellent. The number of references to the use of the VLIZ infrastructure has risen. The quality of the infrastructure available was considered to be well above average.
- 11.2. The researchers were delighted with the say they were given in the design of the new ship, the 'Simon Stevin' (78% of the respondents deemed their input to be significant/adequate).
- 11.3. The dune vegetation greenhouse complex (located in De Haan), as a facility, remained underused. Even though they are not a cost factor for the VLIZ, it is important that, in time, better and more frequent use is made of this ready-made infrastructure.
- 11.4. The VLIZ data centre is now internationally acclaimed. It ranks top in Europe and is a world player in networks and projects on data management and data collection. The data centre's forte is biological data. It is highly valued by researchers and other stakeholders, in all its aspects. Overall, scientists consider the databases to be relevant, user-friendly, of high quality and comprehensive. IMIS³, in particular, is frequently used and by all the various disciplines.
- 11.5. The preservation and maintenance of the existing databases is and remains an issue. Despite the external project funding received to set up the databases in the first place, the VLIZ's internal budget does not allow it to maintain and update the databases once a project has been completed. In view of the importance of the databases to Flemish

³ Integrated Marine Information System.

marine research, it is up to the competent authorities to selectively ensure continuity in this matter (cf. also our recommendations in that regard).

- 11.6. The VLIZ library is highly valued. Digitalisation has been an excellent development (time gain, accessibility, appreciated by scientists) and the increased availability of grey literature is an added value. In view of the high costs involved, it would be a good idea to look into attracting outside funding for the digitalisation of grey literature. The collections are considered unique in Flanders and important in Europe.

12. The VLIZ networking and collaboration activities are well developed and highly valued.

- 12.1. The scientists appreciate the fact that they have been able to expand their national and international network via the VLIZ even though it did not lead to enhanced cooperation. Although the VLIZ was instrumental in increasing the visibility of Flemish research, this could be improved upon provided the gap between the VLIZ and research is narrowed further.
- 12.2. VLIZ, as a whole, but also at departmental level, is well represented in the relevant forums. Though, in terms of local networking and the involvement of local Flemish researchers, the VLIZ could do more. As regards policy-related networking, its mandate is obscure.
- 12.3. The VLIZ concludes cooperation agreements with research groups, universities and other key players in Flanders. The number of these agreements should always be subordinate to their quality. 'High'-level structural cooperation agreements (framework agreements with the various partners), and their periodic renewal, are essential here.
- 12.4. IODE⁴ and the ESF Marine Board⁵ do value the services and the collaboration with the VLIZ and have found the proximity of VLIZ (as an expert and the initiator of the InnovOcean site) to be a bonus.

1.4.5 Relationship with the policy area and policy context

13. Unclear mandate in terms of the role the VLIZ is allowed to/can play in the national and international policy area.

The VLIZ has not been given a (clear) mandate in terms of the role it plays or can play (within the policy landscape) with the result that, as a policy-support entity, the VLIZ is underutilised (the number of 'queries' is limited). Even in Flanders, the VLIZ is not yet seen as the hub for data flows and/or policy issues.

⁴ International Oceanographic Data and Information Exchange of the UNESCO Intergovernmental Oceanographic Commission.

⁵ European Science Foundation Marine Board

14. The VLIZ operates complementarily and in collaboration with other key players.

Vis-à-vis other key players, (ILVO⁶, INBO⁷, BMM⁸, Flanders Hydraulics Research (Waterbouwkundig Laboratorium, etc.)), VLIZ always strives towards complementarity (added value) and collaboration. There is virtually no overlap between the services the VLIZ provides and those provided by others (different focus, different scope, different mandate).

15. The VLIZ has to play and is already playing a role in economic added value creation for Flanders.

With the establishment of FlandersMarine, the VLIZ (and its partners) have made an important step towards giving the marine and related sectors a boost in economic added value. The VLIZ facilitates FlandersMarine but is not 'directly' involved. In our opinion, this is a wise choice in view of the sensitivities around the economic valorisation of research results and the arrangements between research institutes and universities.

1.4.6 The 2010-2014 policy plan

16. The policy plan has been well thought out.

The policy plan the VLIZ put forward was well thought out. It contains details about the conditions that are pivotal to the realisation of its ambitions. The plan also takes into account the weaknesses in terms of staffing levels and funding.

17. The policy plan is ambitious, but priorities will have to be set.

17.1. The VLIZ policy plan is an ambitious one but whether it is also a realistic one will strongly depend on the financial resources it will have at its disposal. On that account, we feel that the VLIZ should revise its ambitions in function of the available resources (and this in function of the negotiations with the Flemish government and the province of West-Flanders).

17.2. Over the past period, the VLIZ performed tremendously well but this also means that the risk of 'overheating' the organisation should be properly analysed. From our point of view, the emphasis should definitely be on creating the correct terms and conditions (cf. recommendations) so that the institute can continue to grow in a sustainable and sensible manner.

17.3. Priorities, in combination with a clear timeframe, will have to be defined so that the institute can continue to operate in a manageable fashion. At the same time, it is important that its internal policy-making capacity is reinforced (cf. VLIZ's enquiry about appointing a policy officer).

⁶ The Institute for Agricultural and Fisheries Research (Instituut voor Landbouw en Visserijonderzoek)

⁷ Research Institute for Nature and Forest (Instituut voor Natuur- en Bosonderzoek)

⁸ Management Unit of the North Sea Mathematical Models of the Royal Belgian Institute of Natural Sciences (Beheerseenheid van het Mathematisch Model van de Noordzee en het Schelde-estuarium van het Koninklijk Belgisch Instituut voor Natuurwetenschappen)

18. The policy plan takes into account the opportunities at national but also at international level.

The opportunities we identified at various levels are indeed properly reflected in the 2010-2014 policy plan. The VLIZ has distinct opportunities to make inroads at European level and to consequently contribute to the various European policy initiatives. So, we do recognise the potential added value for Flanders and its researchers.

1.4.7 The previous institutional evaluation

19. The VLIZ largely took on board the conclusions and recommendations made in the previous institutional evaluation.

In its self-evaluation, the VLIZ details how it took into account the recommendations made during the previous institutional evaluation. On the basis of that description and our own analysis, we can conclude that the VLIZ did its utmost to take the recommendations made on board and to implement them. In this regard, the VLIZ itself writes: "overall we can state that the evaluation a.o. led to a reformulation of the VLIZ objectives and that these objectives were welcomed by the Board of Directors and the Scientific Committee of the VLIZ and that they – subject to some minor adjustments – have been incorporated into the 2005-2009 management agreement".

Only a very small number of recommendations (for instance regarding VLIZ's further intrinsic focus on less subdisciplines, or the further rationalisation of its networking activities) have not or only been implemented to a certain degree on account of the lack of support from the scientific community and/or factors outside of the VLIZ's control (like in the case of networking, where VLIZ faced the Europeanization of research over the past number of years and the ensuing need to engage in more and more active networking).

1.5 Recommendations

As regards the recommendations, it is worth noting that some recommendations are strategic in nature and should possibly be incorporated into the new management agreement. To assist with the drafting of this management agreement, we explicitly listed these separately. Other recommendations are more of an operational nature and relate for instance to the actual functioning of the VLIZ.

1.5.1 With respect to the Flemish government and the province of West-Flanders

1. Continue investment in the VLIZ and therefore conclude a new management agreement with the VLIZ for the period 2010-2014.

In light of the VLIZ's outstanding performance and the future opportunities in the area of marine and coastal science, we would recommend that the Flemish government and the province of West-Flanders renew the management agreement with the VLIZ. The VLIZ has proven to be indispensable to Flemish marine research and to be highly instrumental in the international image of Flemish marine scientists.

2. An increase in investments is desirable, and probably also necessary.

2.1. Even though we are consciously refraining from commenting on the exact extent to which the VLIZ should be refinanced, we have established that, in comparison to any national or foreign organisations, the VLIZ's budget

is a 'modest' one (compared to the budgets of the NIOZ for instance, which receives EUR 20.3 million, or the NOCS, which can call on GBP 41 million – including research resources). It is therefore nothing short of a miracle that the VLIZ, basically thanks to its own inventiveness and the professionalism of its staff, performs so remarkably well.

- 2.2. This situation is not tenable however. If Flanders wants to capitalise on the investments it has made so far (which have partly been compensated by some of VLIZ's own revenue), additional investments will be needed. At the moment, VLIZ is too dependent on external project-related resources, which could jeopardise its own activities. When external funding is needed to cover basic activities, it is time to review the basic funding of the VLIZ in that light and to increase it.
- 2.3. The VLIZ does hardly/not have any financial buffer and only half of its staff is paid via the subsidy. We feel this situation is neither healthy nor sustainable and that it won't allow the VLIZ to properly cater for unexpected events.
- 2.4. The replacement investments the VLIZ must periodically embark on were facilitated thanks to the additional investment subsidy. In the future, it is important that the VLIZ can continue to manage its facilities (including its research infrastructure) properly, for, this will ultimately be the determining factor in its rise or demise. So, in that light we think it is essential that the investment subsidy is a regular and a recurrent one so that the continuity of the VLIZ can be guaranteed.
- 2.5. A particular point of interest is the funding for the VLIZ's 'core' activity, i.e. data management. The VLIZ must, even in the future, be in a position to properly manage the data it obtains from local and/or international projects. These also include datasets that were developed within the framework of externally (e.g. EU) funded projects.

3. 'Streamlining' of the new management agreement.

- 3.1. The various prevailing addenda should be integrated into one agreement which will also cater for a clear funds flow from the Flemish government, alongside the funds provided by the province of West-Flanders.
- 3.2. The new management agreement should, as we see it, and in light of the development stage VLIZ finds itself in, contain clearly formulated and quantifiable objectives and activities on various topics (cf. the SMART concept). Specific tasks in the areas of communication, internal operations, including the role and composition of the different management bodies, scientific activities, international involvement, the attunement with/support of the Flemish policy, VLIZ's involvement in the valorisation and creation of economic added value, etc., should be defined. More specifically, the rules regarding the appointment of members of the Scientific Committee will have to be spelt out (cf. also recommendation 9.3 below).
- 3.3. On the other hand, the VLIZ's current stage of development also calls for more 'result indicators', rather than 'output indicators'. We would suggest the following possible indicators in particular:

P1: Cooperation intensity

- P1.1 Number of institutional agreements concluded (with universities, research centres, government services) on marine research at home and abroad

- P1.2 Number of institutional agreements renewed (with universities, research centres, government services) on marine research at home and abroad)
 - P1.2 Number of collaborations with research groups within the framework of ongoing projects (to be defined)
 - P1.3 Number of queries from the corporate sector dealt with (to be defined) in relation to the number of contact hours (on the condition of a mandate)
 - P2: Increase in data volume (or in datasets)
 - P2.1 In the Open Marine Archive for Flemish Marine Research (Open Marien Archief – OMA) (articles, reports and dissertations)
 - P2.2 In specific databases (e.g. biological databases, the Marine Data Archive (MDA))
 - P3: The number of informative publications for the wider public
 - P3.1 At least X number of copies of the 'De Grote Rede'
 - P3.2 At least Y number of copies of 'VLIZINE' (VLIZ e-zine)
 - P4: Quality of the informative publications aimed at the wider public
 - P4.2 Number of 'De Grote Rede' subscribers
 - P4.3 Number of 'VLIZINE' subscribers
 - P4.5 Reader satisfaction (qualitative, to be surveyed periodically)
 - P5: IODE Project Office valorisation
 - P5.1 The number of guest researchers in number of man-days who avail of the 'IODE Project Office'
 - P5.2 The number of training activities, expressed in number of man-days.
 - P6: The number of actual sailing days (and hours)
 - P6.1 The number of actual sailing days (and hours) spent on scientific research
 - P6.2 The number of actual sailing days (and hours) spent on monitoring assignments
 - P7: Utilisation level of the information products
 - P7.1 Number of data XYZ downloads
 - P7.2 Number of product XYZ (publications, educational products, etc.) downloads
 - P8: The number of policy-supporting activities, expressed in number of man-days (data production, data analysis and advice to public authorities)
- As regards popularisation of science, we would propose that these indicators would be integrated into the aforementioned indicators. That would also leave room for 2 additional indicators (the most essential ones).
- P9: At least 2 initiatives (to be defined) a year should be taken for teachers (via the appropriate forums).
 - P10: At least 2 educational teaching packs about the sea and the coast should be developed and made readily available
 - P11: Target-group satisfaction with the educational packs offered (to be measured mid-term)

The following could also be included as objectives, i.e. the VLIZ

- Publishes 'De Zeekrant' once a year and distributes it to seaside tourists
- Actively collaborates with other organisations involved in marine and coastal education
- Publishes photographic and audio-visual material on its website
- Supplies samples for experiments (upon request)
- Participates in and contribute to Flemish Science Week and the Flanders Science Festival
- Periodically conducts a self-evaluation to assess the quality and the extent to which use is made of the educational tools and publish the ensuing results.

4. The VLIZ should be given a number of clear mandates which must be translated into strategic objectives.

4.1. Its mandate in terms of international representation should be clarified. VLIZ is a Flemish institute, so it does not actually have a Belgian mandate of representation as such. On the other hand, this difference, and why it should be made, is often not very clear beyond our own national borders. At international level, it is the Belgian nationality that counts and for that reason the VLIZ is more often than not thought of as the Belgian Marine Institute. Because of that, it would be advisable to unambiguously clarify the VLIZ mandate in the next management agreement so that this anomaly of perception can be dispensed with. It goes without saying that, within the context of 'further Europeanization', collaboration between the VLIZ and the Federal government will be essential.

4.2. The VLIZ should be given a clear mandate as regards its support of marine and maritime policy in Flanders. As a policy-supporting institute, the VLIZ is currently 'underutilised'. In view of its central position, both nationally and internationally, the VLIZ is well placed to help shape the 'policy' in conjunction with other key players (such as the Cooperation Point for Integrated Coastal Zone Management (Coördinatiepunt Duurzaam Kustbeheer - CDK) and affiliated parties; what's more, the VLIZ does recognise the CDK as the number 1 hub for planning and policy integration in the Belgian coastal area). This of course 'touches on' the arrangements about international representation, the supply of data within the framework of international monitoring agreements, the involvement in and instigation of various policy-relevant initiatives, the drafting of recommendations for the Flemish, Federal but also the international authorities, etc. as VLIZ is in possession of valuable 'intelligence', in the broadest sense of the term.

4.3. The VLIZ should be given a clear-cut mandate in matters of economic added-value creation. Both at regional and at international level there are opportunities to create economic added value. FlandersMarine is a good initiative which should be able to bank on continued VLIZ support. Though, for VLIZ's positioning in Flanders (between the academic and economic actors) it is essential that any expectations in this regard are clearly spelt out.

5. Recognise marine science as a key area for the future.

- 5.1. Given the overlap with other disciplines such as the environment, energy, health, food, etc., marine and coastal science is a key area to Flanders' future.
- 5.2. The reputation and excellence of the VLIZ could be used at higher level within present and future Flemish priorities (cf. Flanders in Action (Vlaanderen in Actie – ViA), etc.). Although the VLIZ does not engage in any scientific research itself, it has earned a place among the strategic research centres (strategische onderzoekscentra - SOCs) in view of the strategic research field VLIZ operates in and the central role it plays in it, within the Flemish context. In the future, collaboration with other strategic research centres should be further stimulated.

6. The feasibility of a Flemish marine research programme should be analysed.

- 6.1. It is in the interest of Flanders, Flemish researchers and the VLIZ to anticipate the development of a Flemish marine research programme within the context of a possible drop in funding for marine science from the Federal government.
- 6.2. The success of the VLIZ so far can partly be explained by its 'neutral' and independent stance on 'research' which has, historically speaking, mainly been conducted by the universities. This feasibility study should not centre on whether or not VLIZ should engage in research itself but on the cost that would be involved and on the benefits that could be derived from this type of programme and on how the VLIZ could be instrumental in the establishment and realisation of such a programme, in collaboration with the Research Foundation - Flanders (Fonds Wetenschappelijk Onderzoek Vlaanderen - FWO Vlaanderen), for instance.
- 6.3. The keynote to this feasibility study should be that the VLIZ continues to fulfil a facilitating role by promoting the activities of the yet to be established thematic scientific advisory committees (composed of Flemish but also international researchers); (in addition to/replacement of the current Scientific Committee).
- 6.4. It should also be investigated whether it is correct that, if a Flemish research programme were to be launched, the VLIZ would find itself in a stronger position internationally to voice any Flemish 'demands' and 'wishes' and would therefore be able to exercise more influence on international scientific-research programming (FP-funding and Flanders' participation in any "Joint Programming" initiatives).
- 6.5. Finally, this type of feasibility study should be conducted by a 'neutral' party.

7. The VLIZ should be given the means to develop its 'scientific profile'.

The VLIZ has to compete in a purely scientific and research-driven environment. The fact that it doesn't engage in any research itself puts the institute at a disadvantage. It is important that VLIZ retains its scientific character by, for instance, allowing it to co-write scientific publications. After all, the CV of any science promoter at an institution (read: the VLIZ) should be a scientific one.

8. The VLIZ should become/be the Flemish hub for marine and coastal data.

As regards the flow of data to the VLIZ, arrangements are currently being made with the universities and other key players on an individual, and therefore, ad hoc basis. Here, a wider framework would be desirable. Any data that have been generated by relevant projects funded by the Flemish taxpayer should ultimately end up in the VLIZ databases. Likewise, it would seem efficient and effective to us, in view of the excellence of VLIZ in this area, that VLIZ would become the hatch for any data generated within the framework of international agreements. The failure to make such arrangements simply undermines the strength and the reputation of the VLIZ data centre.

1.5.2 With respect to the VLIZ

1. Focus on risk management.

It is important to focus on risk management, i.e. capitalizing on unexpected and/or expected grant and staffing developments (contingency plans in the event any key staff would decide to leave). This should lead to concrete plans (contingency plans) which must also be put into practice.

2. 'Choices' will have to be made.

Over the past management term, the VLIZ has been able to strongly expand its activities, also thanks to the external funding it was able to attract. Both in our view and in that of the panel of international experts, its performance is impressive. At the same time, we must appreciate that there are limits to this excellence, limits defined by what is humanly feasible. Once again, VLIZ's ambitions for the period 2010-2014 are high. If resources do not follow suite, then the VLIZ will have to make some choices, choices at international level, in the area of data, of project ambitions, of communication and educational activities, etc.

3. Rationalise project-specific funding.

It is a feather on VLIZ's cap that it can attract a significant percentage of external funding through competitive projects and the provision of various services.

But, at the same time, this is a precarious situation because the institute is too reliant on the fund flow to cross-finance its basis activities. This could, in time, undermine VLIZ's own activities (basic activities). If external funding is needed to finance basic activities, it is important that the VLIZ allocations are also reviewed in that light. Failing that, the VLIZ will have to become more selective about its involvement in external projects so that it can focus properly on its own basic tasks.

4. Develop a comprehensive communication strategy.

4.1. A comprehensive communication strategy must be developed, with due regard for the results of the surveys conducted within the framework of this evaluation. The VLIZ's branding and the visibility given to Flemish researchers should be particular points for consideration.

4.2. The further integration of the popularisation of science into (general) communication also merits attention because some products are far more versatile and should not be confined to education only and vice versa.

4.3. In relation to the above, some thought should be given to the possibilities of concentrating more on the primary education sector, in collaboration

with those actors who have already gone down this route, in other words, in conjunction with the province of West-Flanders.

- 4.4. The VLIZ's ambition to actively make school visits would, in our opinion, not be the most effective approach. An alternative would be to focus on the teachers through the appropriate forums and in consultation with the province and other actors.

5. Further professionalization and strengthening of the organisation.

- 5.1. The HRM policy should be further professionalised, with the drafting of job descriptions, the review of the evaluation procedures, and the further decentralisation of evaluations in function of the hierarchy. Heads of departments need to evaluate their staff, and it is a very good idea that every member of staff gets called to the Director's office.
- 5.2. It is clear that the VLIZ, in terms of critical mass, is a vulnerable organisation. To ensure continuity it is important to put a back-up (no splitting, mind) in place for the vulnerable positions so that the continuity of the organisation and its services is guaranteed. The director's wish to recruit a policy officer is absolutely necessary and that post should be filled as matter of priority.
- 5.3. At a financial-management level, the authorisation procedures on the paying and checking of invoices should be formalised (clearly worked out and laid down).

6. Introduction of a management information system.

We would recommend that a (limited and flexible) time-registration system would be set up to improve the monitoring of the various efforts. This monitoring system could be used as a management information system to timely detect any possible project overruns and take corrective action. It could also be used to answer the question 'are we getting value for money?' by comparing time allocation to output (e.g. number of records in a database) and its use by scientists (e.g. number of requests for data in a given database). A time-registration system could also be an objective tool to build a certain selectiveness into the network choices.

7. Rationalise the cooperation agreements and strategy.

The rationalisation of the cooperation agreements should result in a more active follow-up. On this point we do not advocate that the number of cooperation agreements should be used as a measure of performance. Collaborations should be judged by their added value to the VLIZ and Flemish researchers. If necessary, the current strategy used by the VLIZ should be revised.

It would for instance be a good idea to conclude cooperation agreements at an institutional level, which would set the framework for any cooperation agreements at research-group level within which project-specific arrangements can be made. This would, on the one hand, mean that any ad hoc arrangements with groups of researchers in one and the same university can be made uniform, and, on other the hand, that an escalation in collaborations can be avoided. The renewal of the existing cooperation agreements also merits attention.

8. Keep costs 'down' by charging a small fee.

The costs of the VLIZ have risen dramatically over the past number of years. We would advise the VLIZ to examine which services could support a small charge so that costs could be somewhat reduced. Things that spring to mind are a contribution to the costs of any event catering, publications, etc. This is

accepted practice. We would not advocate going down the road of generating revenue from advertising in light of the neutral character of the VLIZ.

9. Review the composition and functioning of the Scientific Committee.

- 9.1. The composition and the functioning of the Scientific Committee needs to be reviewed. The (excessively) high level of absenteeism amongst committee members is a reason for concern in terms of their commitment to the VLIZ. Hereafter, we make some concrete suggestions.
- 9.2. The members of the Scientific Committee, and their respective institutions, should be asked to make a clear commitment. The VLIZ should be able to rely on the fact that its members are committed and that there is no question of any 'conflict of interests'. At the same time, guarantees must be put in place to ensure that the 'backbench' is properly informed about (the outcome of) the meetings.
- 9.3. The rules on the selection and appointment of the members of the Scientific Committee will have to be clearly defined to ensure that this Committee can function as it should. The 'rules' will have to be unambiguous. The VLIZ should (be able to) intervene if certain members systematically fail to make the meetings. It goes without saying that this recommendation also concerns the competent authorities (Flemish government and province of West-Flanders).
- 9.4. The agenda of the meetings of the Scientific Committee could be further 'compartmentalised'. Sheer information can be taken off the agenda and transmitted through parallel channels.
- 9.5. The locations for the meetings could be alternated. For instance, once a year a more 'strategic' meeting could be organised at a location other than one in close proximity to or at the VLIZ.
- 9.6. It is clear that one of the reasons for the absenteeism is the low level of 'research relevance' of the themes on the agenda. If the VLIZ were to facilitate a Flemish research programme, interest would undoubtedly be higher. Should any such programme come about, and should a decision be made to work in thematic advisory committees, it would even be more relevant to formulate clear rules, which should be adhered to in a strict and transparent fashion.

10. Review the composition and the functioning of the Board of Directors.

Even though the Board, on the whole, is functioning well, it is falling short on strategy. Moreover, absenteeism is also an issue here. The renewal of the management agreement should be taken as an opportunity to also review the Board's composition and to invite the various stakeholders to nominate new members. It is always a good idea to regularly introduce some 'new blood' into these bodies. The practical suggestion regarding the Scientific Committee also applies to the workings of the Board. It is advisable that the Board would conduct a self-evaluation on a periodical basis.

11. Consolidate and develop the strengths regarding 'data' in an intelligent fashion.

- 11.1. It is important to consolidate and further develop the strengths in terms of biological data. In this area, the VLIZ is in a very strong position internationally and that position should be retained and expanded where possible. The Flemish government could also play a role here by developing a framework within which the VLIZ would always be the

'link' between the local and international data flows (cf. international benchmarking results).

- 11.2. As indicated by the international experts also, the VLIZ could act as a trailblazer in terms of combining the existing data with other data (for instance, physical and/or chemical data) so that entire ecosystems can be studied. This will have to be done in consultation with other national and/or foreign centres.
- 11.3. The search for 'patterns' in data is also a promising course to follow. By means of so-called 'data-mining', it may be possible to formulate new research hypotheses, in consultation with and at the request of researchers. This may bring the VLIZ one step closer to the 'research' which might jeopardise its much acclaimed independence and neutrality. For that reason, prior consultation with the universities would be a 'conditio sine qua non'. Any arrangements could subsequently be laid down in the cooperation agreements.
- 11.4. On the basis of the present databases, and possibly in combination with other databases, work could start on actively looking into developing new products which could be offered nationally and/or internationally.

12. Find a use for the dune vegetation greenhouses.

Even though the dune greenhouses might not cost the VLIZ any money, they are nevertheless funded by the Flemish taxpayer. This facility is unique in Flanders (and to an extent also in Europe) so it is a shame that they are not used more. We would advise the VLIZ to actively look for ways to make more and better use of these greenhouses during the first half of the next contract term. This could possibly be done in collaboration with other actors, maybe even at international level.

13. The library's 'treasures' must not be buried.

As already indicated in the previous institutional evaluation, it is vital that the unique collections under the VLIZ's custodianship are not 'forgotten'. The recent changes around the library are an opportunity to make the collections more accessible. In this light is it not desirable that the VLIZ would start to actively promote its collections amongst the wider public, but a targeted campaign, on the other hand, might be very useful. Increased digitalisation would be essential here though.

14. Benchmark yourself on a regular basis, especially internationally.

As the VLIZ currently does not have any foreign experts in any of its management bodies, we feel that it might be useful and meaningful that the VLIZ would periodically measure itself against prevailing practice abroad. This could take the shape of a biannual visit of experts during which top experts would 'audit' the VLIZ for about two days. It could possibly be combined with a conference on marine and coastal issues and could prove to be a very useful exercise. Participation in Joint Programming, which involves a certain amount of inspection/benchmarking, would also prove interesting within this context.

15. Work on attracting international organisations to the InnovOcean site.

The VLIZ is already facilitating the activities of the International Oceanographic Data Exchange, IODE and the European Science Foundation, ESF, Marine Board. This, in combination with all the trumps the VLIZ already holds (site, location, expertise, etc.), makes it possible to actively look for organisations that could make Ostend their home base, at the VLIZ site. To bring this about, though, a joint effort by the VLIZ, the province of West-Flanders and others is required. This would increase the VLIZ's local economic

impact and would not only benefit the local economy and population but also the entire province. The VLIZ should therefore further capitalise on its role of 'catalyst'.