PBL RESPONSES TO AUDIT RECOMMENDATIONS
(24 May 2013, responses in italic)

An international audit committee chaired by Professor Lea Kauppi (Finnish Environment Institute & University of Helsinki) has made a thorough evaluation of the quality of PBL's work over the past few years. PBL's core business is not science per se, but rather presenting scientific assessments for public policy. Therefore, the Audit Committee was asked to concentrate its evaluation on the quality of analyses and the underpinning of policy recommendations that PBL gives to government and the way PBL organises the quality control for its products. Next to these central questions the committee was also invited to give its views on a broader range of themes which are important for PBL's strategic choices for the future with regard to its interface function. These topics cover questions concerning the role of PBL as an independent advisor to the government in view of subsequent budget cuts. The Audit Committee was asked what it thought of the choices PBL has made with regard to the kinds of products it wants to concentrate on, its national and international embedding and its ambitions.

On 14 February 2013, the Audit Committee published its report with overall a rather positive assessment outcome. This positive judgment relates to the quality of the research published, as well as to the way in which PBL connects science and policy. The Committee was pleased to see that PBL is committed to its independence: PBL plays a proactive role in the agenda setting discussions with the Ministries. At the same time, the Committee was of the opinion that PBL should improve its process of quality assurance. The Committee's recommendations can be found below.

We are strongly committed to implementing our intended actions in response to the Committee's recommendations, taking into account resource constraints within which PBL has to operate. Our response (following hereafter) concludes with a list of 26 action items, which are referred to in the individual responses.

Science-policy-society interactions

I. The understanding of PBL's role in interactions with policy and society shows varying degrees of sophistication across PBL. The Committee recommends that PBL should continue to develop among its staff a clear and conscious understanding of research on science–society–policy relations and the ways in which this research can be reflected in PBL's interactions with policy and society.

Response: PBL management will organise agency-wide debates, led by PBL's external counselor for scientific integrity, on interconnected issues of scientific integrity, normativity and communication with society, in particular through the press (1). Project plans should explicitly reflect on the approach taken towards science–society–policy relations and will be screened for this (2, 3). Furthermore, PBL will initiate a sustained programme of lectures and a course (involving external speakers) about the state-of-the-art in scholarship on science–policy–society interactions (4). Participation in the PBL Academy course (which will be repeated over a number of years) will be obligatory for all researchers.

II. PBL studies issues that transcend different geographical scales and multiple policy levels. It needs to address these issues as multi-scale problems to make sure that

comprehensive analyses result and effective solutions, strategies or policies are proposed. It is not so clear if and how PBL is doing this. The Committee recommends that PBL should provide more clarity about how it intends to work across scales, especially given the counteracting forces of policy decentralisation and budgetary constraints that limit the level of PBL's activities at regional and local levels.

Response: In 2013, PBL's pilot programme for regional governments will be concluded and evaluated (5). In 2014, PBL will develop a strategy for dealing with multi-scale problems and for handling inevitable risks faced when it chooses to 'serve two masters' (national government vs. European or regional governments), taking into account that the national government will remain PBL's primary client (6). Furthermore, project plans will have to contain an explanation of the choice of focal scale(s) (2, 3).

III. PBL has adopted a leadership role in conceptualising science–policy–society interactions, but does not necessarily have the means and resources to bring its vision into full-scale practice. The Committee strongly endorses PBL's intention as stated in the Communication Strategy 2012–2015 to increase the use of (new) communicative techniques. Furthermore, PBL is recommended to continue to improve its two-way communication with all parts of society, including more engagement with the private sector.

Response: The guidances that have been developed for science–policy–society interactions (on uncertainty assessment and communication; on stakeholder participation, including participation of the private sector; on review and seminars; and on scenario building) will be brought more systematically to the attention of project managers: it will become obligatory to specify their use in project plans (2, 3). Furthermore, in support of its Communication Strategy, PBL will continue research and development on infographics and on techniques for interactive communication with society (7) and a strategy will be developed in 2013 for increasing transparency and opening up of models and data (8).

Scientific quality control

IV. Procedures for scientific quality control vary among PBL departments and there is no uniform policy on external reviews. In addition, internal review procedures (e.g., seminars) do not always meet the expectations of a critical review. The Committee recommends considering a more rigorous, standardised review procedure and that the procedures used and the content of the review be carefully documented in the projects.

Response: A revised guidance on review and seminars that assists in identifying suitable internal and external review techniques will be developed and made available (9). Conscious choices for the review procedure should be made in developing project plans and reported in the section on quality control (2, 3). Where necessary, budget will be allocated for paying external reviewers. Department Heads will see to it that, following to the guidance on review and seminars, the aim of inviting constructively critical review in external reviews and project seminars is reached; the Chief Scientist has a monitoring and signaling role (10). For the category of high-profile publications (less than 20 per year) it will become obligatory to ask the Chief Scientist's approval on scientific quality assurance, while for other projects the Chief Scientist will be

authorised to request amendments to the scientific quality assurance (11). In case of disagreement, the Directors will decide.

V. The number of peer-reviewed journal publications varies widely among departments, researchers and projects. The Committee recommends that significant results and methodological advances be disseminated in peer-reviewed journals. Adequate time and incentives should be offered for such work.

Response: For each project, the way it is ensured that the results are scientifically well-underpinned and – where relevant – spread in the wider academic community will be specified in the project plan (2, 3). For some policy-analysis projects this may not necessarily lead to academic publications, but for other policy-analysis projects the results may be very significant, or the methods new, so that an effort to produce peer-reviewed publications as integral part of a project is warranted. For strategic research projects, a PBL-wide goal will be set that aims for one peer-reviewed journal or book publication per FTE per year committed to a project (2, 3). This will be monitored by the Chief Scientist (see VII). Of course, peer-reviewed publications that underpin PBL reports can in some cases also be produced through universities and research organisations in PBL's network, who will be recognised in the PBL reports they contributed to.

Aside from working on academic publications there are also other routes to expose PBL staff to the latest academic thinking, such as scanning the peer-reviewed literature, participating in external seminars, presenting at conferences and participating in (inter)national scientific networks (which should be sufficiently diverse).

Furthermore, also related to ensuring the scientific underpinning of PBL results, a strategy will be made in 2013 on PBL's networking with Dutch universities and research institutes, and with research organisations abroad – this strategy will also address the mechanism of secondments (in both directions, including external researchers and professors at PBL and PBL researchers and professors at universities) (12).

VI. The role of the Chief Scientist is still unclear to many staff members. The Committee recommends that PBL management explains better to researchers the role of the Chief Scientist and how to interact with him/her.

Response: PBL management will clarify the role of the Chief Scientist to PBL's staff members, by organising presentations by the Chief Scientist of PBL's updated scientific quality control policy (based on the present response) in plenary meetings of all departments and offices (13). The Chief Scientist acts as an advisor to Project Managers, Department Heads and the Directors on issues of scientific quality assurance, in all stages of projects. Furthermore, the Chief Scientist has the authority to request amendments (see IV and VII).

VII. The allocation of responsibilities for scientific quality control may not be optimally effective. The Committee recommends reconsidering the responsibilities and tasks of the Chief Scientist as well as the possible need for a Scientific Director.

Response: The role of Chief Scientist will be strengthened, but not in the form of a Scientific Director, since the two Directors together can adequately fulfill their role of holding ultimate responsibility, provided that effective communication between Chief Scientist and Directors is maintained within the Directors Team. First, the Chief Scientist will become a full member of the Directors Team and the Management Team (14). Second, the Chief Scientist will have to formally approve all high-profile publications (11), as discussed before under IV. Third, all Department Heads will be required to discuss any outstanding scientific quality issues with the Chief Scientist in preparation for their regular progress meetings with the Directors (15). Unresolved issues will be brought to the Directors' attention by the Chief Scientist. Finally, in order to be able to realise all tasks and responsibilities of the Chief Scientist role, the time allocated to this role will be increased from 0.4 FTEs to 0.6 FTEs and an assistant to the Chief Scientist will be appointed for 0.4 FTEs (16). In this way, the time available for scientific-quality control will increase by 150%.

These changes will be reflected in the updated PBL policy on scientific quality assurance and quality control (17). The Chief Scientist will produce an annual report, which will include monitoring of the implementation of the PBL policy on scientific quality assurance and quality control and of all action items identified in this response (18). Based on this annual report, the effectiveness of our response will be annually evaluated by PBL's Management Team and Advisory Board (19).

VIII. In times of a shrinking budget and changing strategic priorities there is a risk that long term strategic research will be given lower priority. The Committee recommends maintaining PBL's current level of investment in strategic research.

Response: PBL will maintain strategic research (research projects that develop knowledge for use in the mutiannual strategic programmes of PBL) at the level of 15–20% of its budget (similar to the past) (20). Project plans will have to specify to what extent the project strategically develops knowledge (percentage of the project devoted to strategic research) (2, 3).

Organisation and human resources

IX. The Committee is concerned about the mix of expertise and skills within PBL. It does not seem to be adequate for achieving the strategic choices. Because of budget cuts there will be little opportunity to hire new people. Training and education will not be enough to solve this problem. The Committee recommends preparing a human resource strategy to support the implementation of the strategic choices. This strategy should be accompanied by a concrete plan to realise the actions needed, along with a monitoring plan.

Response: In 2013, PBL will develop a human resource strategy to more clearly support the implementation of its strategic choices (21).

X. PBL should consider seeking more external funding while the Ministry should abolish funding rules that form a disincentive for obtaining external funding (i.e. they should allow PBL to carry over external funds from one budget year to the next).

Response: In 2013, PBL will evaluate its pilot programme for regional governments (5), hire a senior advisor for increasing EU funding (22), decide on rules for the internal allocation of external funds (23), seek, together with the Ministry, to realise a solution for being able to carry over external funds from one budget year to the next (24), and develop a strategy to increase skills in tendering and financial management, as part of the human resource strategy (21).

XI. Within PBL there is no explicit attention to facilitation skills. The Committee recommends that PBL build staff capacity in such skills to support interdisciplinary collaboration and stakeholder participation.

Response: In 2014, the PBL Academy will develop a course in facilitation skills that can support capacity building (25). This course will build on the small amount but high quality of expertise on interdisciplinary collaboration and stakeholder participation that is already available within PBL.

Evaluation of scientific quality and societal and policy relevance based on the selected projects

XII. The Committee has reviewed eight PBL projects. Based on this review and the self-evaluation material provided by PBL the Committee arrives at the following recommendations:

In three of the projects assessed there was little or no reference to uncertainty. At the same time the Committee noted that PBL provides state-of-the-art guidelines for uncertainty characterisation and communication. The awareness and implementation of these guidelines within PBL needs to be improved.

Response: It will be required that project plans indicate how use will be made of the guidances on assessing and communicating uncertainties; on stakeholder participation; on review and seminars; and on scenario building (2). The release of the second edition of PBL's Guidance on Uncertainty Assessment and Communication in 2013 will be used to raise awareness of the uncertainty guidelines (26). The Department Heads will see to it that the guidelines are actually used (3).

XIII. The Committee concludes that while some good examples of governance expertise are available within PBL, this kind of expertise is not yet broadly applied throughout all of PBL's work.

Response: How governance (including behavioural economics) expertise can become available in all of PBL's departments and in all projects for which this is relevant, will be decided in the human resource strategy (21). It is expected that alliances with universities and research organisations can offer help here (12).

List of action items

#	Description	Responsible	Due
1	Organise agency-wide debates on integrity, normativity and press communication	Head, Office of Communication and Management Support	April 2013 (completed)
2	Include additional elements in project plans. The following elements should be specified: - usage of PBL guidances (on uncertainty assessment and communication; on stakeholder participation; on review and seminars; and on scenario building); - internal and external review; - underpinning and publication in peer-reviewed literature (norm for strategic research: at least one publication per FTE per year); - extent to which the project strategically develops knowledge (% strategic research); - setup of science–policy–society relations; - choice of focal scale(s)	Project Leaders	Continuous (updated format available in May 2013)
3	Screen projectplans for elements mentioned under action item 2	Department Heads, Chief Scientist	Continuous
4	Initiate PBL Academy programme of lectures and a course (obligatory for all researchers)	Chief Scientist	September 2013
5	Evaluate pilot programme for regional governments	Management Team	November 2013
6	Develop strategy for dealing with multi-scale problems, with incentives for increasing external funding from international organisations (including EU) and – if so decided – regional governments	Management Team	May 2014
7	Conduct R&D projects on infographics and on techniques for interactive communication with society	Department of Information, Data and Methodology	Continuous
8	Develop strategy for dealing with open data and models	Management Team	November 2013
9	Introduce revised guidance on review and seminars	Chief Scientist	February 2013 (completed)
10	Invite constructively critical review in external reviews and project seminars	Department Heads, Chief Scientist	Continuous
11	Approve or request amendments to scientific quality assurance in projects (covering at least all high-profile publications, which themselves also need to be approved with respect to scientific quality)	Chief Scientist	Continuous
12	Develop strategy for networking with Dutch universities and research institutes, and with research organisations abroad	Management Team	October 2013
13	Organise presentations by the Chief Scientist of PBL's updated scientific quality control policy in plenary meetings of all departments and offices (13).	Department and Office Heads	May 2013
14	Make Chief Scientist full member of Directors Team and Management Team	Directors	February 2013 (completed)
15	Organise regular progress meetings between Chief Scientist and Department Heads on outstanding scientific quality issues	Chief Scientist and Department Heads	Continuous
16	Increase the total time available for Chief Scientist tasks to 1.0 FTEs	Directors	February 2013 (completed)
17	Update PBL policy on scientific quality assurance and quality control	Management Team	February 2013 (completed)
18	Produce annual report on PBL's scientific quality	Chief Scientist	January 2014

	assurance and quality control		(repeated annually)
19	Evaluate PBL's scientific quality assurance and quality control	Management Team, Advisory Board	March 2014 (repeated annually)
20	Ensure that strategic research is maintained at the 15–20% level (agency average)	Management Team	Continuous
21	Develop human resource strategy	Management Team	December 2013
22	Hire a senior advisor for increasing EU funding	Directors	March 2013 (completed)
23	Decide on rules for the internal allocation of external funds	Management Team	April 2013 (completed)
24	Realise a solution for being able to carry over external funds from one budget year to the next	Directors, Ministry	September 2013
25	Initiate PBL Academy course in facilitation skills	Chief Scientist	September 2014
26	Raise awareness for PBL's Guidance on Uncertainty Assessment and Communication (2nd edition)	Chief Scientist	September 2013