



Entreprises, territoires et environnement

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Michel Trommetter,

Research director for INRA UMR GAEL in Grenoble and Researcher in the Economics Department of Ecole Polytechnique Paris www.polytechnique.edu, new co-chair of the "Biodiversity and Economy" working group

Initial results of a joint development

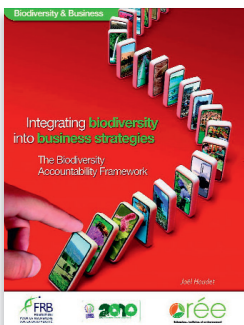
In 2006, the French Institute of Biodiversity and Orée decided to create a working group on biodiversity and corporate strategies. Jacques Weber (director of IFB at that time) and François Laurans (Veolia) were the co-chairs of this group while I was the IFB's coordinator.

The objective of the first meeting was for Orée members to present their definition of biodiversity as well as their perception of their activity's dependence on biodiversity. This meeting, based on dialogue and the joint development of the reflection, was a success and has continued with quarterly meetings.

At first, postgraduate students were solicited to do the groundwork on the interdependence of industrial activities on biodiversity. But this option was not enough to achieve the objective of the working group, i.e. developing a methodology to make a thorough evaluation of biodiversity for Orée members, private companies as well as local authorities. François Laurans, on behalf of Veolia, offered to co-finance with the French State a PhD thesis on this subject, and suggested that the working group hire a student. Joël Houdet, who had been part of the working group since its creation, seemed the ideal candidate; he was recruited and I can confidently say that we haven't been disappointed.

The objectives of the working group were developed step by step: the purpose of the first step (2006-2008) was to show that there wasn't any private company totally independent of biodiversity, taking into account their environmental impacts as well as their current and future, therefore strategic, production; the second step (2008-2010) was to create a new accounting approach placing biodiversity at the heart of the corporate strategy; the third step will relate to the analysis of interactions between businesses in relation to the living world (to be developed).

The first step resulted in the definition of the Business & Biodiversity Interdependence Indicator. It was published in the Orée / FRB guide, in which 25 Orée members (including 4 local authorities) agreed to publish their feedback. This guide highlights the dependence on the living world of the various stakeholders' activity (both industries and local authorities), and has therefore encouraged us to take the approach further. This guide was also a springboard for the dissemination of our approach at international level,

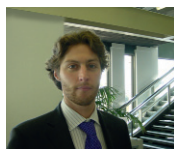


primarily via the European Platform for Biodiversity Research Strategy (EPBRs).

The second stage, the focal point of Joël Houdet's thesis, aimed at developing a new accounting approach based on incoming and outgoing biodiversity flows, measured both economically and physically (the results of this work are presented by Joël himself in this newsletter). Joël has developed and proposed a methodological approach for taking into account the interactions between biodiversity and businesses, which is currently being tested by several companies, with other cases to be completed in the coming months. I would like to spare a thought for Fleur Rodriguez-Gallois, who used to work for Kenzo Parfums (LVMH group) and was our correspondent when she sadly passed away so suddenly.

Even though Joël Houdet's thesis is now completed and its results will soon be published, the activities of the working group continue. It is currently co-chaired by Mathieu Tolian (Veolia) and I. The work is still in progress on the accounting approach as well as on the consideration of the interactions between Orée members on the subject of biodiversity.

Mathieu and I can only hope that the group ultimately achieves its objective, i.e. developing tools to formalise the links between stakeholders in relation to the living world.



Mathieu Tolian,
In charge of Environmental Management – Veolia Environnement, co-chair of the "Biodiversity and economy" working group

The working group set up by Orée at the end of 2005 brings together companies, scientists as well as associations and local authorities, to share reflections on biodiversity. With a consultative process which was anticipating the one put in place by the National Grenelle conference on the environment two years later, the working group determined an ambitious initial objective: evaluate businesses' dependence on the living world. Boosted by the innovative nature of this initiative, and aware of the associated risk, Veolia Environnement decided to commit to co-chairing the working group and contributing to Joël Houdet's PhD thesis

Further to the publication of the guide "Integrating biodiversity into business strategies", Veolia Environnement was one of the first companies to launch, in 2009, a case study to put into practice the methodological elements developed by Joël Houdet as part of his thesis. This study, carried out in one of our facilities located south of Berlin, related to the interdependence of biodiversity and wastewater treatment. Based on the analysis of the material



Edito

In 2008, Orée co-published with FRB the guide on "Integrating biodiversity into business strategies", with the objective of explaining the interdependence between economic activities and biodiversity, involving companies and local authorities and creating a new IIEB* tool. In 2010, the International Year of Biodiversity, Orée continued its studies on biodiversity and its links with economical structures, one of Orée's 7 priorities. Thus, Joël Houdet's thesis, financed by Veolia and the State as part of a CIFRE agreement and supported by Orée, will be published and presented in September. This work focuses on the consideration of biodiversity flows, an important factor for enhancing the promotion (and not only the "marketing") of biodiversity and ecosystem services. It is also used to support the case studies developed within the "Biodiversity and economy" working group. The different people involved in this thesis were asked to present in this newsletter the tools, the results and their implications for organisations.

This International Year of Biodiversity, we can see the awareness of biodiversity erosion emerge outside of usual circles. Numerous players wish to remedy this situation. Orée strives to contribute to this movement. In this respect, I wish to thank the MEEDDM (Ministry of Ecology, Energy, Sustainable Development and Maritime Affairs) for backing Orée's work on biodiversity and supporting the working group.

Orée should participate in the COP 10** in Nagoya in October as well as in the EPBRs*** to be held in November 2010 under the Belgian presidency of the European Union.

The Orée team and Nathalie Boyer, Managing Director, have continued to develop actions with enthusiasm and professionalism, based on Orée's other priorities.

Thus, the interactive platform on environmental risks will soon be online and will be unveiled at Pollutec. A debate with a panel of experts on "Is recycling always the best solution?" will take place on September 15th and a "debate meeting" entitled: "How to take territorial vulnerability into account in climate plans", is scheduled for September 22nd in Paris.

Orée also develops partnerships; it will attend the Ateliers de la Terre (Global Conference) in Evian (17-19 November) and, like every year, Buy&Care (Pollutec) at the beginning of December, as well as different exhibitions such as Environrisk, Expoprotection or Expandi.

Gislaine Hierso,
President of Orée

*Business & Biodiversity Interdependence Indicator

** 10th meeting of the "Conference of the Parties"

***European Platform for Biodiversity Research Strategy
www.epbrs.org

flows specific to the facility, and inspired by the environmental management accounting framework, the facility's different expenditure items were categorized according to their connection with ecosystem services. The results show that approximately half of the expenditure associated with water treatment and sludge management are related to ecosystem services. This study, as well as providing Joël Houdet with additional information for his thesis, opened up the field of the



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▶ economic approach of ecosystem services for Veolia Environnement. This subject definitely represents a significant opportunity for the future of the company.

Thanks to their studies, Veolia Environnement and LVMH have paved the way for other companies who are now launching case studies as Joël Houdet's thesis comes to



Jacques Weber

Research director for Cirad,
Member of the Economic Council on sustainable development (CEDD)
Member of the Scientific Council on natural heritage and biodiversity (CSPNB)

I will always remember Orée's working group on the integration of biodiversity into business strategies as one of the most exciting moment of my career as a researcher.

When, upon the initiative of Orée, then headed by Sylvie Bénard, the working group met for the first time in June 2005, I was asked to become co-chair along with Veolia's François Laurans. I was then the director of the French Institute of biodiversity (IFB) and proposed to the scientific Council of this institute that the working group should also be recognised as the IFB's working group. From the beginning, Michel Trommetter represented the IFB in the group.

During the first meeting, I informed the companies present that the working group had an extremely small chance of succeeding, insofar as, up until then, nobody had ever attempted to assess businesses' dependence on biodiversity in terms of raw materials, technologies or turnover. Companies, however, continued to attend the meetings and the chairman of the IFB's scientific council, Pr. Bruno David, observed after a meeting: "Research needs to be accelerated to keep up with company changes".

In the early days of the working group, Veolia agreed to finance a PhD thesis for the benefit of the group and Joël Houdet was selected. The first phase of the work led to the guide "Integrating biodiversity into business strategies", co-published by Orée, the French Foundation for Research on Biodiversity (FRB) and Natureparif. It also resulted, during the first FRB Days in November 2008, in notable lectures as part of an international symposium on "businesses and biodiversity".

Then the second step of the work began. While the first step mostly consisted of the evaluation of the businesses' dependence on the living world, the ambition of the second

an end. The results of this thesis more than justify Veolia Environnement's investment. Additional developments are however necessary to achieve a Biodiversity Accountability Framework allowing companies to assess and monitor their relationships with biodiversity. Veolia Environnement, in partnership with Orée, intends to pursue

was to design an accounting method enabling the monitoring of biodiversity flows within a company and between several companies of a given sector. This was the major challenge of Joël Houdet's thesis.

Now that this thesis has been completed, I can only praise the importance of the work carried out over such a short period by this young doctoral student. Even though we do not yet have a "definitive" accounting method, all the elements and analyses required for its development are featured in the thesis: its construction per se will not be possible without the involvement of the accountants and financial divisions of the working group's member companies. Meetings have already been scheduled for this purpose.

After three years, what assessment can we make?

I believe that businesses' perception of biodiversity has radically changed, switching from the protection of various endangered species to an interest in biodiversity as a condition of company's very existence, as attested by the companies' enthusiasm for the self-assessment proposed by the working group (green pages of the Guide).

We have made considerable progress in understanding the role of the living world in the functioning of businesses. We used an approach focused on managers that is complementary to the one developed by the WBCSD (World Business Council for sustainable development) and the WRI (World Resource Institute) which is focused on investors' point of view in terms of "risks and opportunities".

Orée's group issued several publications in English, which contributed to the TEEB Group (The Economics of Ecosystems and Biodiversity) and were cited by this Group. In France, the proceedings of the working group are presented in a report by the CAS*, chaired by Mr Chevasus-au-Louis.

this effort by encouraging the implementation of new case studies within companies and by supporting the continuation of academic work which will result in an operational and universally used tool.

Since the meeting of 29 June, I have been replaced as co-chair of the Working Group by Michel Trommetter, who is overseeing Joël Houdet's thesis and has been involved in the Group since its creation. I will however remain a faithful participant in this group which has taught me so much!

The perspectives developed by this three-year work are invaluable, as attested by the increasing number and diversity of participating companies, as well as the regular attendance of accountancy firms and of Pr. Jacques Richard, professor of accounting in Dauphine University.

Researchers involved in the Group have come to realise its importance and, once again, there are many perspectives. After contributing to the TEEB group, Orée should promote this work during the Conference of the parties (COP 10) to the CBD in Nagoya in October. The work of Orée's group and Joël Houdet should have a significant influence within the creation of the IPBES, the equivalent of the IPCC for biodiversity. Finally, Orée's involvement in the FRB's Strategic Advisory Council and the presence of the FRB in the working group should support the development of partnerships between the research sector and the business world.

Therefore our work is not yet complete! Now that the bases have been established, the businesses' financial departments, with the help of accountancy firms, must exploit and adopt the work already achieved, so that biodiversity can be truly integrated by businesses. We can expect, in particular, the emergence of a Biodiversity Accountability Framework on a par with the carbon footprint assessment.

*Centre of Strategic Analysis. Consult the report on Orée's website. www.oree.org/bibliographie.html

Presentation of Joël Houdet's PhD thesis

Businesses, biodiversity and ecosystem services: what Interactions and strategies? What accounting information



In light of the predominant role of businesses in biodiversity loss, my PhD thesis, supported by Veolia Environnement, is an integral part of phase 2 of the Working Group entitled "integrating biodiversity into business strategies", which I worked on from April 2007 to December 2009.

The results presented come from numerous exchanges with the members of this group, as well as numerous case studies conducted in close partnerships with some firms. As part of a resolutely inter-disciplinary research approach, my work revolved around the following question: can the viability of the biodiversity components with which firms interact directly and indirectly be ensured via the cost and revenue management rationale specific to this form of economic organisation? This is tantamount to analysing what role firms can play to reconcile ecology and economy.

To present my results, I have organised my thesis into two sections. For the first section, I determined two major objectives:

- Assessing changes in firms' perceptions of biodiversity

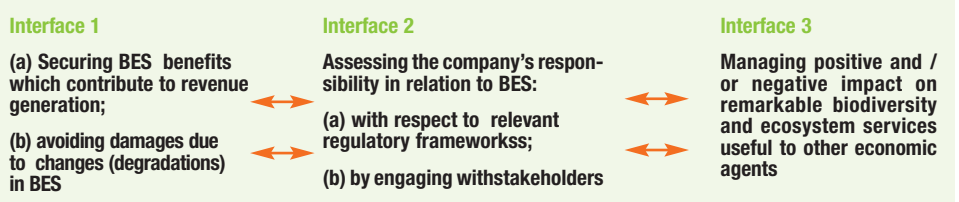
and ecosystem services (BES) and analysing the resulting strategies.

- Proposing a strategic behaviour typology in terms of BES in relation to the three interaction interfaces identified (figure 1): (a) management of BES influencing the activity, (b) legal responsibility and stakeholders' engagement, (c) impact mitigation management.

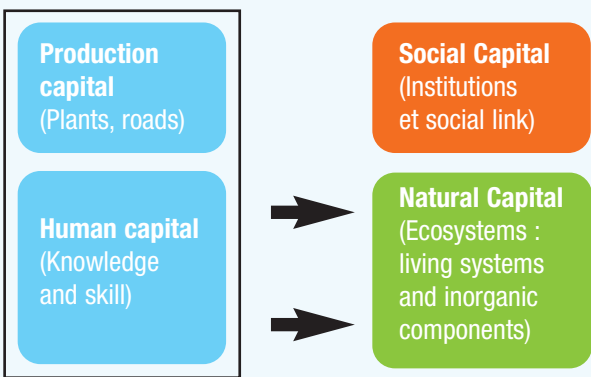
While BES are currently often perceived as a source of constraints, in particular in terms of the management of impacts on remarkable biodiversity, I stressed the relevance

of going beyond the notion of biodiversity as a factor external to the firm. The idea is to adopt a managerial approach, complementary with the anticipation of risks and opportunities and based on the analysis of the company's interdependencies with the living systems. By focusing on its ecosystem infrastructure, i.e. all the BES elements with which it interacts, the company could target the key interactions to be sustained, controlled or developed within the socio-ecosystems within which it evolves. This requires the in-depth renewal of its internal (key success factors) and external strategic diagnosis (opportunities, constraints, positioning in relation to competitors), notably the analysis

Figure 1 : general framework of business interactions with biodiversity and ecosystem services (BES)



Shifting regulations on the consumption and modes of management of natural capital via the institutionalisation of the Biodiversity Accountability Framework



of the many roles played by BES in the creation of corporate value, as a traditional source of revenue (sales contingent upon BES) as well as a source of new business opportunities (markets for the sustained availability or restoration of ecosystem services).

In the second part of the thesis, I focused on the organisational changes and innovations required for the emergence of co-viability dynamics between firms and biodiversity. This relates to the standardisation of practices favourable to BES with which each firm interacts, either directly via its own assets or indirectly via its supply chain or shares in other businesses. In other words, the idea is to reposition companies at the heart of their socio-ecosystems by rethinking their purposes and development strategies in light of their performance regarding the management of their interactions with remarkable biodiversity components and ecosystem services useful to others.

In this perspective, the first difficulty lies in the development of indicators adapted to ecosystem challenges as well as the

firms' decision-making processes. However, unlike the management of greenhouse gas emissions, an issue which is part of the bigger issue of ecosystem viability, the use of a single indicator is not an option. To attempt to respond to this challenge, I propose the upgrading of the information systems necessary and common to most companies, i.e. accounting information systems. I explored two complementary working options:

- I have formalised an management accounting framework, via case studies (agricultural and wastewater treatment activities), so as to account for the interactions between businesses and BES, i.e. aimed at developing an analytical accounting method associating monetary flows (costs, revenue) with BES-related indicators to respond to the company's internal requirements. This involves the accounting of (a) material flows derived from biodiversity, (b) ecosystem services influencing the firm's activities and (c) the impact of business activities on remarkable biodiversity companies and ecosystem services useful to others.

- I have proposed the conceptual foundations of an accounting method aimed at reporting the company's BES performance to the stakeholders, aiming for the standardisation of a Biodiversity Accountability Framework (Houdet 2008) ; which requires communication (a) on the company's financial dependence on BES and (b) on the consequences of its activities on BES.

The need to go beyond the legal scope of traditional environmental accounting methods by making use of geographical information systems, is one of the major challenges common to both approaches. However promising our management accounting framework for BES may be, additional

case studies are necessary with a view to initiating a standardisation process. Furthermore, the generalisation of an accounting framework aiming at reporting the firms' financial dependence on BES and their impact on ecosystems will chiefly depend on stakeholders' expectations, i.e. their information-related needs to assess the firms' performance with respect to BES issues.

While it is largely the responsibility of the readers, in particular the companies involved in the working group, to follow up on my research, I wish to stress the extraordinary opportunity that the institutionalisation (standardisation) of a Biodiversity Accountability Framework would offer: this would make it possible to produce the data required for a shift in regulations towards the consumption and modes of management of natural capital (figure 2), aiming for co-viability dynamics between accumulation regimes (forms of capitalism) and ecosystems. Accompanied by the simultaneous development of incentives and disincentives, these institutional innovations would result in the standardisation of organisational routines propitious to BES throughout the interaction interfaces between firms and biodiversity.

Références :

Houdet, J. (Ed.), 2008. *Integrating biodiversity into business strategies. The Biodiversity Accountability Framework*. FRB – Orée, Paris, 393p.

Houdet, J., 2010. *Entreprises, biodiversité et services écosystémiques. Quelles interactions et stratégies ? Quelles comptabilités? (Businesses, biodiversity and ecosystem services. What interactions and what strategies? What Accounting information systems?)*. Doctoral thesis of the Institute of Life and Environmental Sciences and Industries (AgroParisTech), 356p.

New members

Ateliers de la Terre, Caux Vallée de Seine, CICF-TEN, IDE Ingénierie, Kepler, La Roue verte, Mairie de Tarare, Rouge Cobalt, Sémaphores, Techlid.

Consult the list of all our members on our website: www.oree.org/en

Upcoming events

- **30 AUGUST:**
Working group "environmental expertise" - Paris
- **7 SEPTEMBER**
Working group "environmental risks" Paris
- **14 SEPTEMBER**
Working group "eco-design" - Paris
- **14 SEPTEMBER**
Working group "biodiversity and economy" and first working exchange with the CSOEC (public accountants) – (Veolia) Paris
- **15 SEPTEMBER**
Forum "environmental expertise" (LVMH) Paris
- **18 SEPTEMBER**
Radio show Co2 mon amour Gh. Hierso, J. Weber, R. Barbault (14h05-15h – France Inter)
- **20-22 SEPTEMBER**
Summit on the Millennium Development Goals UNO – New-York
- **22 SEPTEMBER**
Debate meeting "How to take territorial vulnerability into account in climate plans?" - Paris
- **24 SEPTEMBER**
Conference "Industrial ecology" Toulouse
- **28 SEPTEMBER**
Working group "biodiversity and economy" Paris
- **6 OCTOBER**
«Club Essec Energie et Développement Durable». Conference on "Business and biodiversity" (with Ghislaine Hierso's participation) – Paris
- **7 OCTOBER**
Presentation of «Ecologie du bonheur», E. Lamin. Ed. Le Pommier
- **11 OCTOBER**
Working group "sustainable management of business parks"
- **13-14 OCTOBER**
EnviroRisk - Paris
- **18 OCTOBER**
Joël Houdet's thesis viva voce and objectives' presentation – AgroParisTech Paris
- **18 - 29 OCTOBER**
COP 10 of the CBD- Nagoya, Japan
- **19 OCTOBER**
Epe - « Business and Biodiversity » - Paris
- **29-30 OCTOBER**
Symposium «L'homme s'adapte-t-il à lui-même» Museum National d'Histoire Naturelle
- **2-5 NOVEMBER**
Expoprotection («Risk» conference by Orée)
- **3 NOVEMBER**
Expandi - Paris
- **16-19 NOVEMBER**
EPBRs – Positive vision for biodiversity Bruxelles
- **17-19 NOVEMBER**
Global Conference – Ateliers de la Terre – Evian
- **24 NOVEMBER**
«Ciné Orée» - documentary movie «Les gardiens de la forêt» M. Huet and E. Pagès (SAF) - Paris
- **29 NOV - 10 DÉCEMBER :**
16th Conference of the Parties (COP 16) - Cancun, Mexico
- **30 NOV AU 3 DÉCEMBER**
Pollutec – Buy and Care «Prix Entreprises et Environnement»
- **10 DÉCEMBER**
Closing event for Biodiversity Kanazawa, Japan
- **2011**
International Year of Forest

For more information : www.oree.org/en

▶ Presentation The Orée team

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From left to right : Anne-Marie Cakpo, administrative assistant. Gaël Gonzalez, biodiversity/expertise officer. Sylviane Bantchik, manager of the association. Thomas Mahias, eco-design officer. Layla Mathieu, communication manager. Paul Schalchli, project manager, industrial ecology / risks. Séverine Halliova, business parks officer. Nicolas Hosatte, trainee risks. Elise Delgoulet, trainee biodiversity



A word from the Managing Director

For the second semester of 2010, Orée offers you new features! First of all, further to the screening of the documentary *Main basse sur le riz* (the

takeover of the rice market) on June 30th, we are launching "Ciné Orée" based on Orée's "debates meeting" model. These film / documentary screenings will be organised twice a year and will be followed by a debate.

Orée also wishes to reinforce its links with regional members and has scheduled events outside Paris. Thus, a "debate meeting" dedicated to transport was held in Montpellier on June 16th, in partnership with the Hérault Departmental Council; a conference on industrial ecology is scheduled in Toulouse on September 24th in partnership with the regional agency for environment (ARPE). The latest meeting of the "Business Parks" working group was held in Lyon on July 2nd with the Plaine de l'Ain business park. Dedicated to biodiversity, this working group was an opportunity to create interactions between two of Orée's priorities and to organise a visit of an industrial park. We wish to continue along this path by developing "on site" visits to build closer links with our members and work in a dynamic context.

Orée is reinforcing its partnerships, for example with the CJD (Centre of young business leaders), to disseminate best environmental practices such as eco-design throughout the national territory, or to integrate biodiversity into business strategies. This year, the association has again teamed up with the MEEDDM (French Ministry of Environment) and ADEME for the joint organisation of the Business Awards for the Environment, which include two new categories: "Biodiversity and Businesses" and "Innovation in eco-technologies". The MEEDDM also supports the actions of the "Biodiversity and economy" working group. The partnerships with the Ministry of the Economy, industry and employment relating to eco-design and industrial ecology are making good progress and we wish to thank these two ministries for their trust in us.

Nathalie Boyer, Orée's Managing Director

Orée working groups

"Biodiversity and Economy"

This year, in line with Joël Houdet's thesis, four case studies (Inddigo, Kenzo, Solabia, Séché) complete those carried out last year by LVMH and Veolia Environnement. A steering committee meets regularly to guarantee the coherence of the different studies and encourage exchanges on the methodology.

"Environmental expertise"

To test the methodology for conducting a debate between environmental experts, developed as part of this working group, a forum will be organised in September on "Is recycling always the best solution?" The proposed method involves three stages which we plan to organise as follows:

- **15 september 2010** : the first meeting of experts aims at presenting major data and everyone's arguments.
- **16 november 2010** : the second meeting's aim is to discuss the positions expressed during the first meeting.
- **18 January 2011** : the purpose of this last meeting will be to agree on the debated issues, and on those for which there continues to be opposition or doubt, while specifying the investigations

"Sustainable management of industrial parks"

The latest meeting of this working group was held on the site of the Plaine de l'Ain industrial park, Europe's first park to be awarded the ISO 14 001 certification and EMAS registration. A tour of the park's green areas was organised in the morning, followed in the

afternoon by a session of presentations and exchanges on the consideration of biodiversity in industrial parks.

The next meeting will be held in Paris in October and will be dedicated to business and industrial ecology services as well as issues relating to the transport of goods / logistics on Industrial Parks, with several speakers expected.

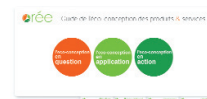
"Environmental risks"

Work on the new version of the guide is making good progress; the content of the publication will be available on an Internet platform in order to make this tool practical and operational. The launch of the work is scheduled for September. This self-assessment tool is a practical aid for the consideration of environmental risks, targeting small and medium-sized business and industry leaders who wish to control risks through a risk management process approach.

The working group will then work on a version dedicated to local authorities.

"Eco-design of products and services"

Since the beginning of the year, the eco-design working group has tackled various cross-sectional themes such as services, design and eco-construction, to enhance and complete the eco-design platform <http://ecoconception.oree.org/>. This platform will be translated into English at the end of the summer. The working group of September 14th will be dedicated to eco-socio-design.



Following the general assembly (last April 1st), the Executive Board's members have been elected (or re-elected).

President, Ghislaine Hierso, Vice President Public Affairs, Veolia Environmental Services

Vice-President Corporate Bruno Lhoste, General Director, Inddigo

Secretary General, Patricia Savin, Solicitor, Savin Martinet Associés

Treasurer, Catherine Ronge, Director of O2 France

Executive board

- Didier Houï, Directeur, ARPE- Midi-Pyrénées
- Monique De Marco, Aquitaine Regional Council
- Alain Chabrolle, Rhône-Alpes Regional Council
- Jean-Michel Youinou, Crédit Coopératif
- Thierry Jacquet, Président, Phytostore
- Cyril Adoue, Systèmes Durables
- Sylvie Bénard, LVMH
- Régis Bergounhou, FNE
- Patrick Jolivet, BMJ Ratings
- Daniel Luciani, CJD

More information : www.oree.org/en