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DE PROGRAMMATION
POLITIQUE SCIENTIFIQUE

BiodivERsA

CONTRAT N° [XX/XX/XX]

ANNEXE I – SPECIFICATIONS TECHNIQUES
(version ERA-NET 2012)

ARTICLE 1 : DESCRIPTION DU PROJET**1.1: Titre** Integrating Valuations, Markets and Policies for Biodiversity and Ecosystem Services - INVALUABLE**1.2: Description détaillée du PROJET dans son ensemble**

- **Résumé du PROJET intégré**

Market-based instruments (MBIs) are popular in the field of Biodiversity and Ecosystem Services (B&ES) and are increasingly promoted by public authorities, NGOs, international organizations, and others. But MBIs embrace a variety of instruments ranging from negotiated contracts to the sale of certified products, tradable quotas or mitigation banking. The common characteristics, definition, and underpinning theory of these tools remain unsettled to date. INVALUABLE will lead to a typology of MBIs that will allow us to clarify the levels of expectations regarding their contribution to B&ES. Policy instruments are not a-historical, and the MBI terminology has emerged owing to discourses that created a gap between economic theory, intrinsic characteristics of the instruments, and practice. The first work package will deal with these issues from both theoretical and empirical standpoints, and further study the relevance of MBIs as policy instruments. Fieldwork will be conducted at local and national scales in Europe, USA, Brazil, Costa Rica, Madagascar, and Cambodia. Changes in the international regime for biodiversity conservation induced by a larger emphasis on the commoditization of B&ES will also be analyzed.

Payments for Ecosystem Services (PES) and biodiversity offsetting are given specific attention in this proposal due to their prominence in the field of B&ES. Both are commonly classified as MBIs but they possess contrasted characteristics. They will be studied in the second work package from the perspective of their incorporation in public policies broadly speaking – including institutional settings, property rights regimes and legal frameworks. A common research approach will be elaborated based on four key principles of environmental decision-making (i.e. efficiency, effectiveness, equity and legitimacy), five key governance dimensions (i.e. architecture, agency, adaptiveness, accountability and access), and ecosystem service provision models. This framework will allow partners to draw relevant comparisons across biodiversity offsetting and PES initiatives in Europe and developing countries. Eleven case studies (France, Belgium, UK, Indonesia, Mexico, Cambodia, Costa Rica, Guatemala), will provide partners with data to highlight trade-offs in the management of ecosystem services and to identify strategies to improve MBI and policy performance.

While the current context is one of burgeoning economic valuations applied to B&ES, with the assumption that they will induce better decisions ("we don't protect what we don't value"), little evidence shows that this has truly materialised. This "implementation gap" will be approached conceptually in the third work package with the Science-Policy Interface (SPI). We will formulate recommendations for better integrating science and policy based on (i) an overview over existing SPI-bodies and activities relating to the particular field of MBIs for biodiversity at various scales, and (ii) an assessment of their effectiveness in case studies. With an end user perspective, we will identify avenues for adapting valuation methods to the users' needs. A tool ('Quick Scan') will be applied to explore scenarios of impacts on the environment resulting from policies integrating MBIs and economic valuation. Studies will eventually take place in Europe and the US to investigate how law can promote the use of economic valuation of B&ES in natural resources management policies, especially for MBIs.

- **Themes et Disciplines**

Valuation of biodiversity and ecosystem services (monetary and non monetary) and better incorporation of biodiversity and ecosystem services into society and policy

Economics, ecology, sociology, political sciences, environmental management, law

- **Description générale de la recherche**

B&ES: Biodiversity and Ecosystem Services

MBIs: Market-Based Instruments

PES: Payments for Ecosystem Services

SPI: Science-Policy Interface

Overall research context, hypothesis and main research questions and objectives

While the use of "market-based instruments" (MBIs) for the management of biodiversity and ecosystem services (B&ES) is currently booming (Pattanayak et al., 2010), the definition and underpinning theory of these tools are matters yet to be settled. We argue that major differences exist between these MBI-labelled modes of intervention, not only in terms of which goods and services are appropriate, but also in terms of scale of application, expected effectiveness, legitimacy, extent of state intervention and possible incorporation into public policies. This situation creates difficulties in drawing lessons from academic research and identifying the scope of applicability (Muradian et al., 2010). It is therefore necessary to advance in the definition, theory and consistent classification of these instruments. Besides, policy instruments are not a-historical. On the contrary, they are legitimized through complex trajectories in which the evolution of ideas and power relations are key elements. The recent soaring importance of MBIs for biodiversity conservation and the concept itself of ecosystem services are the outcome of the interplay between influential agents, such as governments, NGOs, scholars and multilateral organizations, at global and national levels, as well as at the locations where interventions take place.

Among MBIs, Payments for Ecosystem Services (PES) and biodiversity offsetting are increasingly regarded as promising tools in supporting biodiversity conservation and rural development and in involving private actors in conservation finance (Pascual and Corbera, 2011). Yet evidence regarding the design and performance of these instruments is still scarce and far from being conclusive. Recent reviews of biodiversity offsets suggest that more research is required to understand which policy and legal frameworks are supportive to develop these instruments, and highlight the need to learn from existing initiatives and pilot projects (Crowe and ten Kate, 2010). PES reviews highlight the need to explore how the potentially multiple environmental and social outcomes of these initiatives are achieved and negotiated (Pattanayak et al. 2010; Caplow et al. 2010). There is also a need to thoroughly investigate the synergies and trade-offs involved in the provision of single or "bundled" ecosystem services (Raudsepp-Hearne et al. 2010), as well as to identify the enabling institutions, the appropriate legal and contractual frameworks, and the most effective compliance mechanisms (Chevassus-au-Louis, 2009; Smith et al., 2006). These are important questions to be addressed internationally and at EU level, since the current negotiations for the reform of the Common Agricultural Policy are contemplating the possibility of incorporating PES in the near future (or to extend if agro-environmental measures initiated in 1992 classify as PES).

Public policies have an essential role to play in ensuring that the main types of ecosystem values are identified and taken into account (TEEB, 2009). To this end, economic valuations may be helpful for allocating public spending for conservation and natural capital investments purposes, for building public support to PES schemes (Smith et al., 2006), for setting guidelines and regulation in offset-schemes (Ruhl et al., 2007) as well as for setting adequate taxation levels (Pearce & Seccombe-Hett, 2000), just to name a few examples. However, research so far shows that the integration of such information into policy and legal frameworks is not satisfactory in many countries (TEEB, 2009). The common assumption that available economic valuations would be integrated in policy-making and inform decisions, following the principle of "we don't protect what we don't value", has fallen short of expectations. There are reasons for such an "implementation gap" that we need to better understand in order to find the right approaches.

In this context, the overall objective of INVALUABLE is to clarify the potential of market-based instruments to better integrate biodiversity & ecosystem services into society, based on appropriate institutional arrangements for relevant public policies and an improved utilization of economic valuation approaches. In order to achieve this goal, the project is organised around 4 Work Packages (including one for project management) with the following objectives:

- To elaborate a comprehensive theoretical framework to define MBIs for the management of B&ES, to develop a typology of this kind of instruments, and to identify their scope of application based on their conceptual characteristics and policy specifications (WP1);
- To conduct a historical account of the notions of market-based approaches to B&ES with a focus on institutions, epistemic communities, social networks and individuals that have played a key role in their design and development or that have opposed to them (WP1);
- To examine how the application of MBIs has changed the role of stakeholders and the governance structures for the management of B&ES (WP1);
- To develop a conceptual and methodological framework for case-study research drawing on principles of environmental decision-making (Adger et al., 2003) and governance (Biermann et al., 2009), supported by

ecosystem service provision models (Raudseppe-Hearne et al. 2010) (WP2);

- To investigate the role of biodiversity offsets and PES in reinforcing public conservation policies, and to examine their supporting governance frameworks and outcomes to date, drawing comparative lessons across case studies (WP2);
- To provide an overview of existing SPI-bodies and activities relating to the particular field of MBIs for biodiversity conservation at various scales (global, national, local), assess their effectiveness through case studies, and formulate options to better integrate science and policy (WP3);
- To apply an innovative participatory modelling tool such as 'Quick Scan' to explore scenarios of impacts on the environment resulting from the integration of MBIs in public policy (WP3);
- To identify shortcomings of valuation methods and results, and possible improvements/adaptations needed to make them operational for practical use in the context of policy making at both EU and Member State levels (WP3); and
- To analyse how and which legislations supports the use of economic valuation in MBIs and broader conservation policies and, conversely, how such valuation influences the legislative process (WP3).

ARTICLE 2 : TACHES DU PROJET

Contribution de l'INSTITUTION au PROJET dans son ensemble

Within the PROJECT as a whole, the INSTITUTION is

- **contributing partner of WP2** "Incorporation of market-based instruments into public policy: Biodiversity offsets and Payments for Environmental Services". As contributor partner of tasks 2.2/ 2.3/2.4 the INSTITUTION will carry on, under the supervision of Tom Dedeurwaerdere (CPDR, UCL) et Ch. Farcy (EFOR, UCL), a case study focused on agri-environmental measures and Natura 2000 conservation regime in Walloon Region to investigate the PES system and compensation actions for environmental impacts.

- **Work Package leader of WP3** : "Science-Policy Interface: utilization of economic valuations of biodiversity and ecosystem services for MBI design and implementation". As task leader 3.3, the INSTITUTION will investigate (task3.3), under the supervision of Charles-Hubert Born (SERES-BDIV, UCL) what legal framework is needed to promote an enhanced utilisation of economic valuation for designing and implementing MBI's.

Specic contributions of the INSTITUTION are highlighted hereunder.

Description détaillée du PROJET

Work Package 1: Market-based instruments for the management of biodiversity and ecosystem services: addressing the complex interface between theory and practice

Lead partner: CIDIN; Contributing partners: IRD; CIRAD; IDDRI

Specific research context for WP1

Taking stock of the confusion around MBIs and other types of instruments – in the debates and documents devoted to MBIs, the characteristics and specificities of markets tend to be forgotten (e.g. TEEB 2009) or taken for granted (Madsen et al 2010) – it is necessary to advance in the definition, theory and consistent classification of these instruments. This will pave the road for both the clarification of the research subjects of the proposed program and the development of meaningful contributions to the policy debate. Markets have to be understood in their institutional, social and cultural contexts, particularly when they deal with common goods (Ostrom, 2010). Therefore, a comprehensive theory of MBIs requires incorporating insights from different disciplines, such as economics, cultural anthropology and economic sociology, in order to consider the various dimensions that shape market transactions for B&ES. A historical and stakeholder analysis is also necessary to locate these tools in their socio-political framework, which is essential for assessing their scope of applicability and functioning. Indeed, in order to function properly, markets require a particular set of institutional features. When it comes to the management of natural resources, markets bring about institutional and/or social changes, which might alter significantly the motivation of agents for environmental stewardship, as well as governance structures. For example, markets mechanisms might crowd out intrinsic motivations to preserve environmental common goods

(Fehr and Falk, 2002; Bowles, 2008), and induce changes in the perception of agents about their relationship with ecosystems (Kosoy and Corbera 2010, Lescuyer 2008). The emergence of MBIs has also influenced national conservation policies and the role of the state, and has consequences for the international regime of biodiversity conservation, particularly in relation to the attribution of responsibilities among the public and private spheres.

Main research questions

- What are MBIs for the management of B&ES and do they deserve their name?
- How and why have these mechanisms emerged?
- When are they appropriate policy instruments for improving biodiversity conservation and the provision of ecosystem services?

Methodological approach

The clarification of MBIs will be focused on theoretical development, stemming from the conceptual literature and lessons learned from implementation through different sorts of empirical studies. This component will develop an overview of the institutional arrangements promoted under the name of MBIs, such as actual offset markets, cap and trade mechanisms, and others. It will also identify and discuss the gaps between discourses and theory, and will result in the definition of categories for classification. The analysis of the emergence of MBIs will be done through historical analyses at the global and national level, taking five countries as case studies: Brazil, Costa Rica, France, Madagascar and Cambodia. The analysis of the relevance of MBIs as policy instruments will be based upon fieldwork conducted through case studies in the same five countries, and on examples of mitigation banking in Europe and the US. Changes in the international regime for biodiversity conservation induced by a larger emphasis on the commoditization of B&ES will also be analyzed. Over the course of the study, coherence of analysis and proposals from ecological and resource management points of view will be reinforced by advice and support from experts in these disciplines. Worth noting, the three components of this WP are closely related, as empirical evidence will provide critical insights for testing, validating and revising the theoretical component.

Workplan

Task 1.1 Setting the conceptual framework clarifying concepts and terminology (months 1-22) (IDDRI, IRD). It will define a common analytical approach, and will support the elaboration of a typology.

Task 1.2 Historical and stakeholder analysis (months 1-36) (IRD, CIRAD). It will conduct a historical and stakeholder analysis on the genesis, emergence and evolutions of MBIs at global and national levels.

Task 1.3 The effects of commodification on governance structures and motivations/roles of stakeholders (months 1-36) (IRD, CIRAD, CIDIN). It will supervise fieldwork at the local level, and conduct an analysis at the national and global levels.

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Work Package 2: Incorporation of market-based instruments into public policy: Biodiversity offsets and Payments for Environmental Services

Lead partner: ICTA-UAB; Contributing partners: CIRAD; IDDRI; UCL; IEEP

Specific research context for WP2

Biodiversity offsets are measurable conservation outcomes resulting from actions designed to compensate for environmental impacts arising from project development after appropriate prevention and mitigation measures have been taken (Crowe and ten Kate, 2010). A growing number of nature conservation initiatives promoted by the EU (e.g. the Habitats Directive 92/43/EC) and national governments require offset actions under certain conditions. PES, in turn, can be defined as a transfer of resources between social actors that aims to create incentives to align individual and/or collective land use decisions with the social interest in the management of natural resources, and that should ideally be efficient (Ferraro and Kiss, 2002), and involve some degree of "additionality" (i.e. activities should be beyond business as usual) and "conditionality" (i.e. payments can only be realised after provision) (Wunder et al., 2008; Muradian et al., 2010). As argued in the overall research context for INVALUABLE, evidence regarding the role and impacts of these two instruments for B&ES is still lacking. The understanding of the appropriate policy and legal frameworks, of the outcomes for the environment and society, and of the synergies and trade-offs involved in the provision of single or "bundled" ecosystem services are all important questions to be addressed internationally and at the EU level.

Main research questions

- What can we learn from the design and implementation of biodiversity offsets and PES schemes in the EU and in developing countries?
- Are there trade-offs between efficiency, effectiveness, equity and legitimacy principles in biodiversity offsets and PES implementation?
- What are the appropriate governance characteristics of biodiversity offsets and PES schemes, at international, national and sub-national levels?

Methodological approach

WP2 will examine 11 case studies that focus directly or indirectly (i.e. as part of a "bundling" service approach) on biodiversity conservation. They reflect the variability of biodiversity elements and ecosystem services targeted by offset and PES programs, as well as their geographical scope and underlying policy and legal provisions. We differentiate between mitigation-based initiatives offsetting the production of negative externalities (case studies 1 to 4) and those that compensate for the provision of positive environmental outcomes through direct payments (case studies 5 to 11). A complementary integration task will bring together the main lessons learned from all case studies.

Table 1 WP2 selected initiatives

Name	Focus	Type of initiative	Location (Region)	Key research innovations	WP sub-task (Lead partner)
1) Biodiversity Offsetting France	Biodiversity offsets	Voluntary biodiversity offsets	France (EU)	Linking various governance levels and investigating the feasibility of a nested approach for biodiversity offsets through voluntary schemes at national level within the framework of European legislation	Task 2.2 (CIRAD)
2) Natura 2000 conservation regime – Walloon Region	Biodiversity offsets & PES (Mitigation)	PES (agro-environmental; habitat management and restoration) & Compulsory offset program (art. 6.4 Habitats Directive)	Belgium (EU)	PES and offset mechanism under construction with complex land tenures and property rights issues, both in forest and farmlands	Task 2.2/2.3 (CIRAD)
3) Reducing Deforestation and Degradation National Program	PES – carbon offsets + biodiversity conservation (Mitigation)	Elaboration of REDD+ strategies and activities in relation with the deal with Norway	Indonesia (Asia)	Analysis of the translation of international PES programs into national policies and measures	Task 2.2 (CIRAD)
4) Fondo Bioclimático Project	PES – carbon offsets + biodiversity conservation (Mitigation)	Payments for carbon sequestration and biodiversity in agroforestry systems	Mexico (Latin America)	Analysis of early participants' response to the end of the payments period (10-years) Emphasis on project interactions evolving sub-national REDD+ projects	Task 2.2 (CIRAD)
5) Upstream Thinking	PES for bundled services	Payment for water purification services (agricultural system)	UK (EU)	Linking private and public investment	Task 2.3 (ICTA-UAB)
6) Grassland agri-environment scheme:	PES for farm-based biodiversity	Payment by results for management of species-rich grassland	Baden-Württemberg (Germany)	Payments have an additional PES element if farmers manage the grassland to achieve a threshold level of species diversity	Task 2.3 (ICTA-UAB)
7) National Program of Payments for Biodiversity Services	PES for biodiversity conservation	Conservation of endemic species and key habitats (forests and agricultural landscapes)	Mexico (Latin America)	In contrast with the country's program on Payments for Hydrological Services, this has not yet been analysed in-depth	Task 2.3 (ICTA-UAB)
8) PES programs implemented by	PES for biodiversity conservation	Direct payments for ecotourism and certification of biodiversity	Cambodia (Asia)	Analysis of atomized PES projects with diverse institutional arrangements and associated	Task 2.3 (ICTA-UAB)

international conservation organisations (WCS, WWF and WCS)		friendly products		effects in a common weak institutional framework. Links with the increasing integration of PES in conservation policies	
9) National Program for Organic agriculture	PES for bundled services	Payment for carbon sequestration, biodiversity and water regulation on agricultural lands	Costa Rica (Latin America)	In contrast with the forest national program of PES, newly developed Rewards for Organic Agriculture has been poorly documented	Task 2.3 (ICTA-UAB)
10) COLUP European project	PES for bundled services	Institutional arrangements to promote land policies involving local communities, taking into account ecosystem services	Indonesia (Asia)	PES under construction with complex institutional issues and use of scientific knowledge on ecosystem services	Task 2.3 (ICTA-UAB)
11) Local Water Funds	PES for bundled services	Payment for water regulation services (forest, agro forestry and agricultural system)	Guatemala (Latin America)	This local initiatives ONG or cooperation driven has been poorly documented yet	Task 2.3 (ICTA-UAB)

Workplan

Task 2.1 Development of the multidisciplinary analytical framework (months 1-6) (ICTA-UAB, CIRAD, IDDRI, [UCL](#)). It will liaise with WP1 and develop the analytical framework and the shared research methods to apply across case studies.

Task 2.2 Biodiversity and carbon offsets (months 7-27) (CIRAD, ICTA-UAB, IDDRI, IEEP, [UCL](#)). It will apply the framework designed in Task 2.1 for biodiversity and carbon offsets.

Task 2.3 Biodiversity conservation through PES (months 7-27) (ICTA-UAB, CIRAD, IDDRI, [UCL](#) + contributing partner in Mexico: National Institute of Ecology). It will apply the framework designed in Task 2.1 for PES at national and local levels.

Task 2.4 Results integration (months 28-32) (ICTA-UAB, CIRAD, IDDRI, [UCL](#), IEEP). It will integrate the results across case studies and compare the similarities and differences between governance frameworks in selected cases.

Work Package 3: Science-Policy Interface: utilization of economic valuations of biodiversity and ecosystem services for MBI design and implementation

Lead partner: [UCL](#); **Contributing partners:** IFP, CIRAD, IEEP, IDDRI, Wageningen

Specific research context for WP3

The consideration of economic values for B&ES related policies (and specifically for MBIs) depends on the existence of a strong supportive legal framework. As a matter of illustration, but keeping in mind the limited results for the environment, we can cite the requirement of cost-benefit analysis and similar techniques by European or international organisations before implementing some development projects (Pearce et al, 2000; Secretariat of CBD, 2007). Comparing the 'benefits and costs of action or inaction' is a mandatory requirement for preparing EU environmental policy (Art. 191.3 TFEU) and several environmental legislations such as the Habitats Directive 92/43/EEC, Water Framework Directive 2000/60/EC, Marine Strategy Framework Directive 2008/56/EC or the Regulation (EC) 1698/2005 on rural development suggest the use of ex ante economic valuations, yet without defining the modalities. The Environmental Liability Directive 2004/35/EC is more explicit as it allows the competent authority to use monetary valuation to determine the complementary and compensatory remedial measures (see Camproux-Duffrène, 2010). In international law, the recent ABS Nagoya Protocol addresses the issue of economic benefits sharing from the exploitation of genetic resources. Unfortunately, however, the use of economic valuation as a supporting policy tool is less prevalent in developing country contexts and requires further policy integration in the EU context.

This so-called "implementation gap" (i.e. the lack of utilisation of economic valuations of B&ES for decision-making) can be approached conceptually with Science-Policy Interface (SPI) studies (Clark and Majone, 1985). These studies lead to different and partly contradictory valuation models within academia (UNEP, 2009) as well as partly clashing interests in the policy arena. In this context it is hard to believe in the provision of completely impartial 'solutions' by science to decision-makers (Weingart, 1999). This translation process appears as an issue in its own right: scientifically informed policy making may analytically rather be grasped "as a social communication process through which scientists, decision makers, advocates, and the media interact to define relevant questions (while leaving others unasked), mobilize certain kinds of experts and expertise (while leaving others out), and interpret findings in particular ways" (Cash and Clark, 2001) in order to reach decisions. In light of all these aspects a major problem regarding effective B&ES policies is to find politically relevant, i.e. legitimate, solutions that better integrate societal needs or values, including 'alternative' knowledge, with 'hard facts' (Funtowicz and Ravetz 1992, Pellizoni 2003). We therefore assume that improved biodiversity conservation and ecosystem management will not result from methodological refinements of economic valuations per se, but instead from re-connecting the results of such valuations with the policy process and the reality of practitioners and MBIs participating actors. Consequently, there is a need to develop tools that allow a fast-track analysis of different policy-making scenarios and tailor economic valuations to the explicit demand by those who intend to use them.

Main research questions

- How can economic valuation methods be better integrated into decision-making process relating to B&ES management (science-policy interface, SPI)?
- How can the relevance of valuation methods for decision makers be assessed from an end-user point of view?
- How can law enhance the use of economic valuation in public policies related to natural resources and land use management, especially into MBIs?

Methodological approach

Existing SPI activities will be reviewed, with additional expert and stakeholder interviews, and case studies of promising and failed SPI employing the conceptual framework of SPI literature with adjustments to the very peculiarities of MBIs for B&ES. 'Quick Scan' is a tool being developed by the European Environmental Agency and the Geo-Information laboratory of Wageningen University. It will be applied to results from case studies addressed in WP1 and WP2. Researchers will analyse how valuations might fit into fast-track policy-making tools, based on literature review and own expertise. Additionally, a legal analysis will be conducted, based on classical legal research methods (legislation, case law and legal writing/literature). The analysis will be embedded in international law, EU law, and national legal systems (Belgium, France, UK, USA and possibly WP2 case studies). Specific cases on environmental damage liability, as well as EU Commission "jurisprudence" on Article 6.4 Habitats Directive (compensation) will be also analysed and a complementary integration task will bring together the main lessons.

Workplan

Task 3.1 Filling the implementation gap between economic valuations and decision: insights from the policy science interface (months 1-27) (IFP, IDDRI). It will seek to provide options on how to close the implementation gap.

Task 3.2 Economic valuations for MBI: what methods match end-users needs and expectations (months 6-15) (Wageningen, IEEP). It will explore scenarios of impacts on the environment for various policies integrating MBIs by applying tools such as 'Quick Scan'. Based on these results, it will also identify shortcomings of valuation methods and associated changes for improved use by policy makers, particularly for use at both EU and Member State level.

Task3.3 Economic valuations for public policies and especially MBI: what legal framework to promote an enhanced utilization? (months 16-27) (UCL). It will analyse how law promotes or impedes the use of economic valuations of biodiversity in policy making, especially for MBIs, and, conversely, how such valuation influences the legislative process; recommendations will be made for improvement.

Task 3.4 Results integrated report (months 28-32) (IFP, IDDRI, IEEP, CIRAD, UCL).

Résultats attendus

No	Title	Delivery date
1.	Kick-off meeting	month 1
2.	Dedicated website (WP4)	month 2
3.	Methodological Workshop (WP1)	month 2
4.	Methodological Guidelines (WP1)	month 4
5.	Theoretical and methodological framework for the analysis of biodiversity offsets and PES (WP2)	month 6
6.	1st Coordination meeting (WP4)	month 8
7.	Policy briefs and four-pages synthesis (WP4)	month 10
8.	Expert workshop (WP3)	month 11
9.	Progress Workshop (WP1)	month 12
10.	1st Annual report (WP4)	month 13
11.	Progress Report (WP1)	month 14
12.	2 journal publications with preliminary data from case studies (WP2)	month 15
13.	Progress report (WP3)	month 15
14.	2nd Coordination meeting (WP4)	month 16
15.	Expert workshop (WP3)	month 18
16.	1st Seminar (WP4)	month 20
17.	Policy briefs and four-pages synthesis (WP4)	month 22
18.	Working Papers (WP1)	month 22
19.	2nd Progress Workshop (WP1)	month 24
20.	2nd Annual report (WP4)	month 25
21.	2nd Progress Report (WP1)	month 26
22.	3rd Coordination meeting (WP4)	month 27
23.	4 journal publications derived from case studies (WP2)	month 28
24.	2nd Seminar (WP4)	month 30
25.	At least 4 scientific conference papers built on case study data (WP2)	month 32
26.	Integration results report (WP2)	month 32
27.	National meeting in The Netherlands (WP4)	month 32
28.	Summary for policy-makers and practitioners (WP2)	month 32
29.	Synthesis integrated report (WP3, 20 p.)	month 32
30.	National meeting in Belgium (WP4)	month 34
31.	National meeting in Germany (WP4)	month 34
32.	Policy briefs and four-pages synthesis (WP4)	month 34
33.	Summary and recommendations for executives (WP3)	month 34
34.	Book (WP4)	month 36
35.	Final report (WP3)	month 36
36.	Final report (WP4)	month 36
37.	National meeting in France (WP4)	month 36
38.	National meeting in Spain (WP4)	month 36
39.	Peer-reviewed publications (min. 3) and non-peer-reviewed publications (min.	month 36

2) (WP3)

40. Working Papers and Policy oriented publications (WP1)

month 36

Relevance and proposed exploitation of research results

INVALUABLE outcomes will provide critical insights for a better understanding of how biodiversity and ecosystem services provision can be better integrated in public policy through MBIs, while informing on the relevance and better use of economic valuation in public policy and MBIs in particular. **WP1** will help to clarify the conceptual background of MBIs for E&BS and will develop a sound classification of these mechanisms. This will help policy makers to map the available instruments in terms of characteristics and scope of application. It will also clarify how MBIs are embedded within particular global and national policy agendas, thereby facilitating policy makers and practitioners to position themselves in specific policy streams and debates. **WP1 and WP2** will inform about when and under which institutional conditions MBIs result in appropriate policy instruments for E&BS and will help users to reflect upon the implications of valuing and commodifying ecosystem services. This is a key issue that deserves due attention by practitioners, since unintended changes in governance structures and the motivations of agents might lead to unexpected impacts of MBIs. **WP3** will provide insights on how economic valuation methods have been to date integrated into natural resources management policies (TEEB, 2009; Chevassus-au-Louis, 2009). It will highlight the epistemological, methodological and legal conditions that enable or constrain the use of such methods in biodiversity conservation policies and MBIs. It will innovatively test a tool ('Quick Scan') for making better informed decisions on B&ES policies through a number of scenario driven workshops with policy makers in selected EU and developing countries. WP3 will contribute to fill the "implementation gap" between science and policy that is currently slowing down the recognition of B&ES values in land use and natural resource management policies.

INVALUABLE audiences and end users are numerous. They involve all actors, from farmers to policy-makers, involved in our case studies to wider audiences at government and civil society levels. We expect them to benefit from engaging in the project as research subjects, as well as from being recipients of the project's multiple outcomes. The latter will benefit the scientific community by proposing new theoretical and methodological frameworks and producing new empirical data on the valuation and governance of B&ES. The policy community will benefit from our application of the 'Quick Scan' tool and the lessons learned identified through the project.

Key research messages and WP summaries for policy-makers and practitioners will be translated into the main languages spoken in our case study countries and locations. These outputs will be accompanied by presentations developed for the project's final national meetings in order to guide future improvements and reform of existing MBIs and broader conservation policies. INVALUABLE will also produce a high number of scientific publications in leading international journals and share their key findings through conferences, workshops and a variety of web-based tools.

Figure 1 INVALUABLE conceptual framework

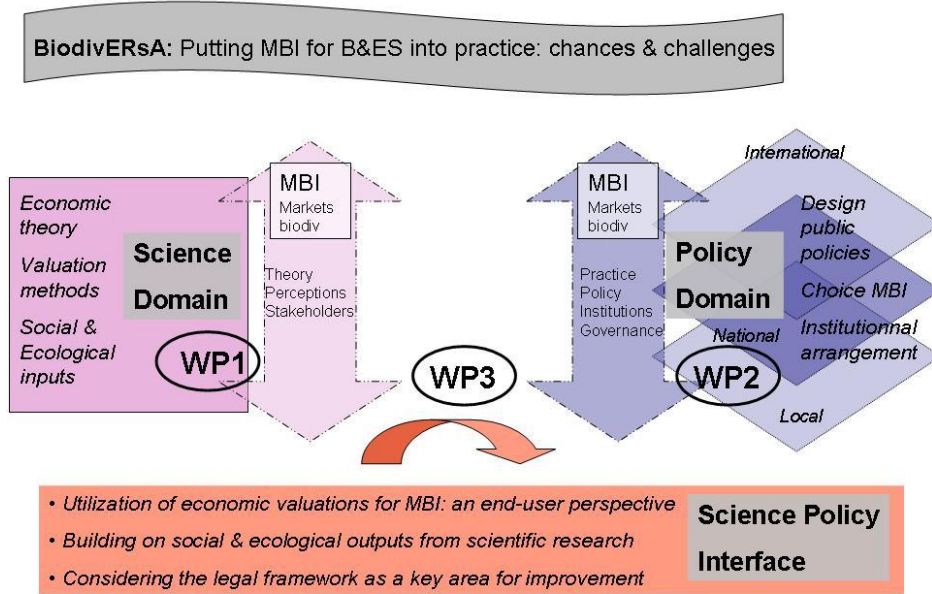
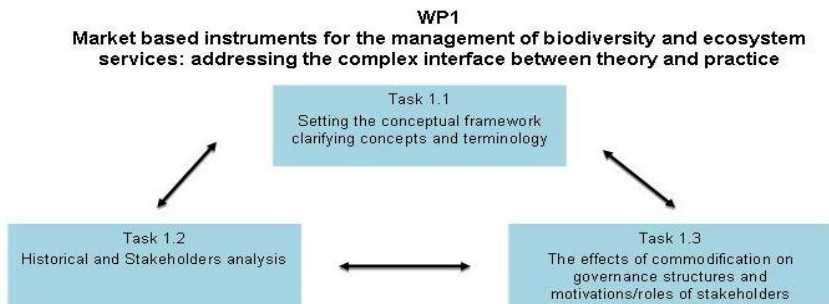
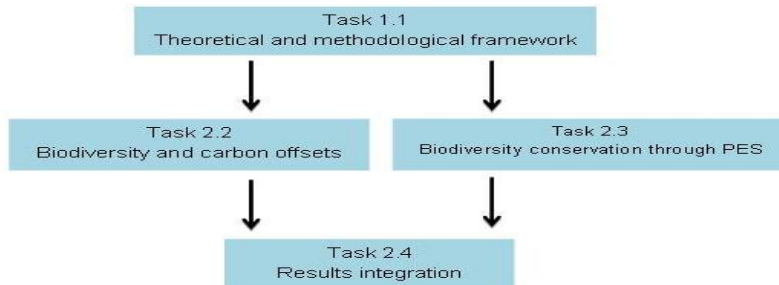


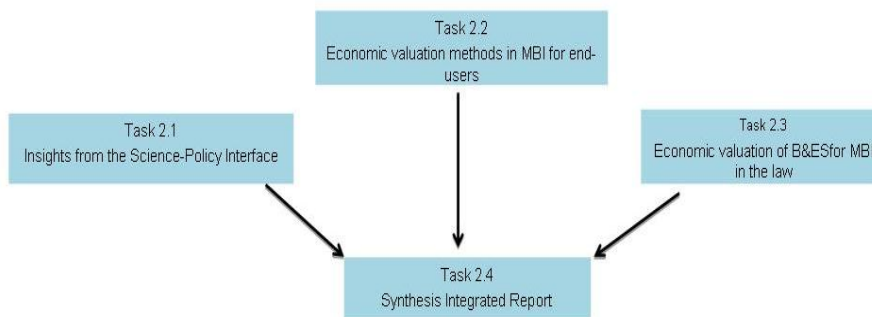
Figure 2 INVALUABLE operational framework



**WP2
Incorporation of MBIs into public policy: Biodiversity offsets and Payments for Environmental Services**



**WP3
Science-Policy Interface: utilization of economic valuations of biodiversity and ecosystem services for MBI design and implementation**



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ARTICLE 3 : CALENDRIER DES TACHES DU PROJET

3.1 : Le commencement et l'achèvement des tâches décrites à l'article 2 de la présente annexe correspondent respectivement au DEBUT OPERATIONNEL et au TERME OPERATIONNEL.

3.2 : Les délais d'exécution des tâches sont les suivants :

Annexe I [XX/XX/XX]

WP	Task	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42												
WP1 Market-based instruments for the management of biodiversity and ecosystem services: addressing the complex interface between theory and practice																																																							
1	1		■		■										■								■																																
1	2		■		■										■													■																											
1	3		■		■										■													■																											
WP2 Incorporation of market-based instruments into public policy: Biodiversity offsets and Payments for Environmental Services																																																							
2	1						■																																																
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WP3 Science-Policy Interface: utilization of economic valuations of biodiversity and ecosystem services for MBI design and implementation																																																							
3	1															■													■																										
3	2											■																																											
3	3															■														■																									
3	4																																																						
WP4 Coordination, Management, Communication and Outreach																																																							
4	1		■							■							■																																						
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4	3										■																																												

Nombre estimé d'Hommes/Mois (H/M) par WP

No.	Partner 1	Partner 1a	Partner 2	Partner 2a	Partner 3	Partner 3a	Partner 4	Partner 5	Partner 6	Partner 7	Months per WP
1.	8	-	12	-	72.5	-	18	-	-	-	110.5
2.	19	6	35	1	-	11.5	-	61.2	-	-	133.7
3.	2	-	-	6	-	10.5	-	-	25	9	52.5
4.	27	-	-	-	-	-	-	-	-	-	27
Total :	56	6	47	7	72.5	22	18	61.2	25	9	323.7

Partner 1	Partner 1a	Partner 2
8	-	12

ARTICLE 4 : REPARTITION BUDGETAIRE ANNUELLE

4.1 : Le budget tel que stipulé à l'article 1.4 du contrat de base est réparti par année et par catégorie comme suit (montants en EUR) :

EUR	2012	2013	2014	TOTAL
Personnel	13000	56000	13000	82000
Fonctionnement courant	3000	3000	2500	8500
Fonctionnement spécifique	0	0	0	0
Overheads	520	1960	500	2980
Equipement	0	0	0	0
Sous-traitance	0	0	0	0
TOTAL	16520	60960	16000	93480

4.2 : Les reports annuels des soldes au sein d'une même catégorie de dépenses du budget sont automatiques. Pour les transferts budgétaires entre catégories, l'article 5 du contrat de base est d'application.

ARTICLE 5 : RAPPORTS

Nonobstant les dispositions de l'article 2.2 de l'annexe II, l'INSTITUTION fournit au GESTIONNAIRE DE PROGRAMME, les rapports suivants pour approbation :

5.1: Rapport initial : Le rapport initial est remis dans les trois mois à dater du DEBUT OPERATIONNEL. Il comprend:

- une description de l'état de la connaissance, dans le domaine du projet,
- une liste nominative du personnel qui participe au PROJET et qui est à charge ou à disposition du PROJET,

- une liste des équipements mis à la disposition du PROJET,
- une liste des conventions et contrats, en ce compris ceux de valorisation des résultats, qui lient l' INSTITUTION, ou qui sont en voie de conclusion, dans le domaine de recherche du PROJET. Les éventuels brevets dont dispose l'INSTITUTION sont également mentionnés. Cette liste comporte au moins l'intitulé et l'objet des contrats, conventions et brevets, leur durée et leur incidence financière, ainsi que l'identité des contractants et déposants, et ce sans préjudice de l'article 13 de l'Annexe II.

Nonobstant les dispositions de l'article 4.7 de l'annexe II, toute modification de l'information fournie dans le rapport initial est signalée dans le rapport d'activités transmis au terme de l'année cours duquel ce changement survient.

5.2: Rapports d'activités périodiques

Les directives concernant le contenu et la forme des rapports sont transmises par le GESTIONNAIRE DE PROGRAMME à l'INSTITUTION.

Les rapports sont remis annuellement.

Le rapport d'activités comprend deux parties distinctes :

- Un rapport administratif de 5 pages maximum, rédigé dans la langue de l'INSTITUTION, dans lequel l'état d'avancement de la recherche est fourni, ainsi que les prévisions pour la période suivante. Cette information se réfère explicitement aux tâches et au calendrier des tâches réalisées par l'INSTITUTION dans le cadre du PROJET dans son ensemble, décrit aux articles 2 et 3 de la présente annexe et comprend la liste du personnel soumis à ce contrat de recherche, ainsi que la liste des publications et des missions réalisées au cours de la période écoulée.
- une copie des rapports annuels produits par le PROJET dans son ensemble.

Les rapports d'activités contiennent également en annexe copie des comptes-rendus des réunions avec les partenaires européens dans le cadre du projet.

5.3: Rapport final: Ce rapport est remis avant le TERME OPERATIONNEL ou, le cas échéant, dans les deux mois qui suivent la date à laquelle il est mis fin au contrat conformément aux dispositions de l'article 13 de l'annexe II. Il donne une description complète du PROJET, des résultats obtenus et de leurs éventuelles applications scientifiques et technologiques et indique la mesure dans laquelle les objectifs fixés ont été atteints.

Conjointement au rapport final, une fiche (maximum 2 pages) décrivant les résultats du projet, les conclusions éventuelles et les indications nécessaires pour la gestion en matière de diffusion et de valorisation est fournie. Ce document est rédigé en néerlandais, français, ainsi qu'en anglais.

Les directives concernant le contenu et la forme des rapports sont transmises par le GESTIONNAIRE DE PROGRAMME.

5.4: Rapport destiné à l'évaluation externe du PROJET:

Si le SERVICE le juge utile, il peut demander, conformément à l'article 2.5 de l'annexe II, un rapport d'activités destiné à une évaluation externe du PROJET.

Les directives exactes portant sur le contenu et la forme du rapport, ainsi que la date pour laquelle le cas échéant ce rapport doit être remis, sont transmises par le GESTIONNAIRE DE PROGRAMME.

5.5 : Rapport de valorisation : L'INSTITUTION s'engage à fournir au GESTIONNAIRE DE PROGRAMME, à chaque fois que la demande lui en sera faite, un rapport en vue de soutenir scientifiquement des actions de valorisation et support ayant trait au PROGRAMME. Les modalités concernant la remise de tels documents seront déterminées par le GESTIONNAIRE DE PROGRAMME.

5.6: Sur la base du calendrier des tâches établi à l'article 2 de la présente annexe, les rapports suivants doivent être remis aux dates suivantes:

RAPPORTS	Date de remise
Rapport initial	mars 2012
Rapports d'activités	mars 2013, mars 2014
Rapport final	février 2015

Cette annexe comprend 5 articles.

Fait à Bruxelles en 3 exemplaires, le

POUR L'INSTITUTION:

Charles-Hubert BORN

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