

## “Accounting for Public Goods: the Social and Natural Capital Imperatives”

8<sup>th</sup> February 2017

### REPORT



On 8 February 2017, ACCA (the Association of Chartered Certified Accountants) held its Brussels President's debate called “Accounting for Public Goods: the Social and Natural Capital Imperatives”. This edition of the President's debate aimed to foster effective engagement among policymakers, investors, landmanagers, businesses, natural capital specialists and accountancy professionals.

**Brian McEnery**, ACCA President, kicked off the event and **Phil Hogan**, EU Commissioner Agriculture and Rural Development, set the scene for the debate. **Maggie McGhee**, Director, Professional Insights, ACCA, moderated the panel's debate which was comprised of **Corrado Pirzio-Biroli**, CEO of the RISE Foundation, **Eva Mayerhofer**, Lead Environment and Biodiversity Specialist, European Investment Bank, **Humberto Delgado Rosa**, Director, Natural Capital, DG ENVI, European Commission, and **Michel Bande**, Senior Executive Vice-President, Solvay.

The debate revealed that

- Social and Natural Capital imperatives are increasingly seen as potentially material issues that businesses of all types and investors should manage and quantify. However, panellists also stated that these goals are not easy tasks to achieve, debating that when accounting for natural capital, the focus is often on ecosystem services and the challenges associated with their valuation, but the valuation of biodiversity has proved even more challenging.
- Given these scenarios, it is therefore timely to have a bold discussion to concretely address challenges and define the next steps to further embed natural capital and social considerations in business decision making.
- The world is facing sustainability issues on a global scale. Biodiversity loss and ecosystem collapse is ranked as a highly likely risk with high impact in the 2017 World Economic Forum's Global Risks Report. Natural capital accounting should help better manage these risks.
- It was stressed that tackling the ecological crisis of today is not only an ethical issue - preserving the variety and abundance of life on earth is also an economic imperative. More and more companies are striving to understand how their activities impact, and depend on biodiversity, and how to become more sustainable. Governments, for their part, need to factor in how natural capital contributes to growth.

## Main highlights

### Brian McEnergy, ACCA President

- All businesses, either directly or indirectly, depend on natural capital - the 'stock' of natural resources - yet we are seeing continued and unprecedented erosion of our natural resources.
- Environmentalists for many years have made the case against the overuse of fossil fuels, deforestation and loss of biodiversity. Policymakers have been warning the world for decades that the type of growth that we have been pursuing is putting unforeseen and unsustainable pressure on our planet. The warnings have been heard, but we are yet to come up with a cohesive and sustainable global solution.
- In September 2015, the UN Sustainable Development Goals were adopted by countries around the world: seventeen global goals to achieve sustainable development by 2030. Several of these goals have direct requirements on business and many of the goals will only be achieved when capital markets and the business community are truly mobilised: we are urged to encourage responsible production and consumption, and business managers are called on to consider the effects of their decisions, not only on finance, but also on social systems and natural capital.
- Natural capital impacts and dependencies, risks and opportunities are being seen increasingly as potentially material issues that businesses and investors should manage.
- **Part of the answer to addressing our natural capital crisis lies with the accounting profession.** Not only can members of our profession help to develop solutions, but they can also assume the responsibility of accounting for business' use of natural capital.
- A little over a year ago, ACCA conducted research into the role that accountants are playing in the development of thinking, practice and frameworks for accounting for and reporting on natural capital by businesses. ACCA did this with the aim of not only identifying the issues, opportunities and challenges that accountants grapple with on this topic, but also to understand and show the value that accountants are capable of contributing to this agenda.
- And in conducting this research, ACCA found that **accountants are playing an important role in the development of natural capital accounting.**
- Many subgroups of the accountancy profession are involved in the development of natural capital accounting and reporting initiatives, working with bodies and initiatives like the Sustainable Accounting Standards Board and the Natural Capital Coalition to develop a framework for accounting for natural capital and sustainability in financial reporting.
- While natural capital has just reached the periphery of traditional financial reporting standards, there will come a time when material impacts on natural capital are considered in mainstream corporate reporting and corporate decision making. Accountants will be required to act then; but many are voluntarily working towards a framework now.
- Traditional professional accounting skills have proved useful in the development of natural capital frameworks and standards: it has required the gathering and analysis of data, a consideration of materiality, the management of risk, a valuation of assets and liabilities and an understanding of corporate reporting, amongst many other considerations. It is truly a case of **'if you don't measure it, you don't manage it'**.
- The research also found that the participation of the accounting profession at this early stage has been valuable, with many accountants holding influential positions in business and encouraging more prominent consideration of natural capital issues at a management level.
- But while the development of a framework, or standard, for natural capital reporting is important, we must also understand the needs of corporate entities who will be the final users.

- Over the past decade or so, financial and corporate reporting has been steadily growing broader as companies are called to disclose more than the traditional figure-heavy financial report. Integrated reporting, for example, calls on the report-preparer to paint a broader picture of the company than the numbers alone would necessarily indicate.
- This is positive—there is often more to a company or entity than is necessarily on its balance sheet—but has also led to a steadily increased level of disclosure, to the point of, to borrow a phrase from the IASB, 'disclosure overload.'
- **Materiality is more important than ever**, and different perspectives need to be considered before we can come to a single conclusion on the way in which we should report and account for natural capital. A rush to formalise external reporting too soon could jeopardise corporate support for this initiative.
- We are facing sustainability issues on a global basis, and while the accountancy profession is already playing an important role in the natural capital accounting arena, there is certainly more to be done.

#### **Phil Hogan**, EU Commissioner Agriculture and Rural Development

- A smart, sustainable agriculture policy can deliver a multitude of public goods for the people of Europe. And we need a strong CAP to ensure this delivery.
- Agriculture is at its most basic level the provision of food for consumption by our people – as such it cannot technically be defined as a public good. But we can probably all agree that maintaining food security, in a continent that for most of its modern history was ravaged by war, is very much serving the common good.
- The way we conceptualise agriculture policy, and the way we construct policy supports to underpin it, has evolved enormously in recent decades.
- Today, we expect our farmers to maintain the environment and contribute to the fight against climate change. In this regard, agriculture is delivering not only measurable public goods, but measurable global public goods. But of course, this sector can do more.
- Farmers are now central to the debate in relation to how we can ensure the adequate provision of public goods for our whole society. The Paris Agreement on climate change of December 2015 and the 2030 Sustainable Development Goals adopted last October are the most prominent examples.
- As always, the devil is in the detail: It is always very nice to talk about public goods, but it is worth asking what exactly this means. And how can we all contribute to their provision? Accountancy can attach a value to natural capital.
- Farming has contributed for thousands of years to the maintenance of a healthy and varied countryside. Responsible and sustainable agricultural land management has been a positive force for the development of rich landscape and habitat varieties, including a mosaic of woodlands and wetlands as well as extensive tracts of open countryside. But the links between the richness of the natural environment and farming practices are complex.
- In the past, many public goods were provided as side effects of profitable agricultural production. However, as agriculture underwent major changes, involving the intensification of land-use and the abandonment of marginal farmlands, the provision of public goods could no longer be taken for granted.
- Europe's Common Agricultural Policy has evolved to address the challenges of the day and has been reformed with a view to ensuring the best use of public funds. This means that in addition to ensuring the provision of affordable, safe and good quality food products, the CAP now has an increased focus on meeting other societal needs. After all, our farmers are the only "boots on the ground" that can deliver and implement the policy.
- Accordingly, in today's globalised world, agricultural policy is not exclusively about farming. We need to promote the multidimensional nature of agricultural policy –

emphasising its role in encouraging the provision of public goods, its contribution to food security, economic growth, social cohesion, sustainability and geo-political stability.

- The sustainable management of natural resources could by itself be considered a public good from a long term perspective. Preserving good quality of the rural environment and the countryside are clearly of vital interest for human well-being – and agriculture plays a key role in these.
- However, this will not happen unless farmers are incentivised and rewarded for playing this crucial role on our behalf, and from which all of us benefit - current and future generations.
- Policy action is needed to strengthen the ability of farmers to generate these public goods. We need stronger results when it comes to the decline of many species and habitats; when it comes to counteracting water scarcity and forest fires; when it comes to tackling soil erosion; as well as the exodus of people from rural to urban centres, which does not maintain a holistic balance between city and country.
- The Commission has recognised that policy initiatives cannot work in isolation to deliver public goods in an area as wide and fundamental as water policy.
- For this reason, there is a strong collaboration with Commissioner Katainen, Commissioner Moedas and Commissioner Vella through a Task Force on Water to develop a long-term alliance between different Commission services. Joint work will be initiated to boost necessary investment and spread best practice with a view to foster transition to water sustainability in EU agriculture.
- Agriculture and rural development policies have an important potential to contribute to the provision of public goods, indeed they are already contributing significantly. Since 1990, the CAP has achieved a 23% reduction in carbon emissions and a 17.7% reduction in nitrates in rivers. Approximately €57 billion will be spent on research and development in the 2014-2020 period to improve the sustainability of European agriculture. This contribution is more and more recognised by the public at large, as evidenced by successive Eurobarometer polls.
- In order to work towards this goal, policy can intervene in three ways: regulation, compensation, and facilitation. And we use all these tools in the CAP to support the provision of public goods. **Regulation** refers to the imposition of requirements: for example farmers in Nitrate Vulnerable Zones must respect certain conditions such as seasonal restrictions on spreading manure on fields to avoid polluting water courses. **Compensation** is used to financially support farmers subscribing on a voluntary basis to specific management practices for increasing environmental benefits. An example would be late mowing and improved habitats for nesting birds. **Facilitation**: this means helping to develop schemes which capture a market return for environmental efforts. For example support for marketing or certification initiatives, which enable consumers to identify and choose specific production systems, or local tourism.
- All these instruments are accompanied by related training measures and other support from the Farm Advisory System, which helps farmers to implement appropriate solutions for their specific situations. And some keynote figures underline that what the CAP delivers is real, and measurable: about 43.8 billion EUR of the total European Agricultural Fund for Rural Development budget has been allocated to Priority 4 (restoring, preserving and enhancing ecosystems related to agriculture and forestry). Together with the 7.6 billion EUR for priority 5 (resource efficiency and climate action) the total allocation to the two Priorities accounts for 51.8% of the total EU budget for rural development. These funds will trigger 2.7 billion EUR of public and private investments for projects aimed at reducing GHG and ammonia emissions. In addition, about 18 % of agricultural land and 3.8 % of forest land is under management contracts supporting biodiversity and/or landscapes.
- The CAP is investing a lot in order to support the provision of public goods. But we can always do better, and I am currently in the middle of a process to identify specific ways to do better.

- The CAP has undergone several waves of reforms, with the latest reform decided in 2013 and implemented in 2015. Since then, the context in which that reform was forged has shifted significantly. In particular:
- Agricultural prices have fallen substantially and market uncertainty has increased – we need to find appropriate tools that help farmers to cope with these difficulties.
- The emphasis of trade negotiations has moved more visibly from multilateral to bilateral deals, requiring a careful balancing of offensive and defensive interests.
- And the EU has signed up to new international commitments, especially those concerning climate change, through the Conference of Parties COP 21, and broad aspects of sustainable development through the UN's Sustainable Development Goals.
- These developments together with first insights from the implementation of the 2013 reform prompted a vigorous public debate about whether the 2013 reform went far enough to meet broader challenges, including the widest possible delivery of public goods.
- Against this background, the Commission is now conducting a comprehensive public consultation on the simplification and modernisation of the CAP. The results of this consultation process will be published and communicated in a public conference in July 2017.
- We all agree that agriculture plays a key role in the provision of public goods and the safeguarding of natural capital. This means that the 22 million farmers in the EU are the greatest resource that we have in terms of ensuring the protection and improvement of the rural environment. They are our people on the ground. And when we ask them to raise their level of environmental ambition, it is only right that our society rewards them appropriately. The agri-food sector is an essential and integral part of any solution to ultimately deliver the "social and natural capital imperatives" for rural areas and society as a whole.

**Maggie McGhee**, Director, Professional Insights, ACCA

- Climate change, resource scarcity, the increasing pace of digital innovation, are just some examples of the many drivers reshaping business and the role and expectations of professional accountants across the world.
- ACCA recently published a global study called [Professional Accountants-the Future](#), which gives an in-depth insight into the future of the profession - the drivers of change through to 2025, the demands on the profession and the skills that will be required to meet those changes and demands.
- The report namely reveals that, as it becomes more holistic, corporate reporting will become less concerned with the numbers and more with the strong narrative, story, of the organisation, including sustainability, transparency, and ethics, to only name a few.
- These findings have led ACCA to make changes to its qualification, which now entails a stronger focus on non-financial reporting as well as an Ethics and Professional Skills module that focuses on developing the complete range of professional skills employers have told us they need.
- It is time to have a bold discussion to concretely address these challenges and define the next steps to further embed natural capital and social considerations in business decision making.

**Corrado Pirzio-Biroli**, CEO of the RISE Foundation

- According to UNEP's International Resource Panel, globally, "food systems are responsible for 60% of global terrestrial biodiversity loss, around 24% (by 2050 even 30%) of the global greenhouse emissions, 33% of degraded soils, the depletion of 61% of commercial fish populations, and the overexploitation of 20% of the world's aquifers. A

2010 TEEB study on the economics of ecosystems suggests that the welfare losses in terrestrial biodiversity is of the order of €50bn, close to 1% of GDP a year, and rising steeply. In this context, accounting for public goods is of the essence to save the environment. My focus will be on European agricultural policy and its forthcoming modernization.

- While **European Agriculture** plays a positive role, notably as regards food and fibre supply, soil carbon and renewable energy, it continues to cause environmental damage, notably as regards soil degradation, water extraction and non-CO<sub>2</sub> gas emissions. The next CAP reform must also take into account the international commitments entered into with the UN Sustainable Development Goals (SDGs) and COP 21 on climate change, and the conclusions of the Cork 2.0 Conference and of the agro-market task force regarding the food chain. They notably call for enhancing the delivery of public goods by farmers. Policy adaptations appear anyway inevitable for internal reasons, notably because our current food production is unsustainable, and eventually becomes a threat to our own food security.
- The future sustainability of agriculture depends above all on the **land managers**. These engage practically the whole farmed area, invest in it and absorb a substantial amount of public finance support. Hence, in addressing the pervasive environmental externalities which surround agriculture it is imperative to enhance, better integrate and streamline the role of the land managers.
- However, many EU farmers run their often small businesses sandwiched between the immense market power upstream of input suppliers and that of downstream processors and retailers, not to speak about the pursuit of further liberalization of international agricultural trade. Many farmers, who have invested all they have in their land, feel there is too little return. With their back to the wall, their primary objective is to stay in business, rather than innovation. This leaves them **little leeway** to produce more sustainably and cater for the environment. If ecological objectives are to be enhanced on farm, their economic sustainability cannot be ignored so as to avoid that too many land managers are left to pay bills beyond their capacity to enhance public goods production.
- Besides, as the delivery of public goods benefits everybody, consumers, producers, and citizens at large, it cannot rely on land managers alone. While according to the polluters principle the environmental impact of farming should in the first instance be paid by the farmer, is it still acceptable that the trade and consumers don't as yet contribute to internalise into food prices the cost of environmental damage caused by the production of the food they are purchasing?
- The CAP is not well adjusted to steer EU agriculture to a well-structured viable and environmentally sustainable industry. It is actually falling short for environmentalists and isn't even working for farmers either. That policy is therefore **outdated**. This may explain why at Berlin's Green Week Phil Hogan has struck out for a modernization of the CAP, announcing a stakeholder meeting in July and a proposal early 2018. To contribute to the current consultation process, the RISE Foundation is undertaking an "out-of-the-box study" on the CAP post-2020.
- Laying down strategic goals for sustainable agriculture is the task of public policy. Implementation requires appropriate data about the value of natural capital in order to measure improvements or deteriorations resulting from land management. This is why work on **Natural Capital Accounting**, in particular ecosystem accounts, such as

undertaken by the European Commission, the European Environment Agency, by the EIB and by the UN, as well as MS experiences are so important.

- In its recent study on Sustainable intensification the RISE Foundation has stressed that sustainability improvements depend on the availability of appropriate **indicators**. More research is of the essence for effective agro-ecological policy and land management. We need environmental impact and environmental threshold indicators of agricultural production. We need benchmarking of practicable farm level indicators of environmental performance, and assessing the unsustainability of parts of European agriculture with respect to specified indicators (such as regarding water quality, GHG emissions, and biodiversity). We must devise frameworks helping land managers judge the environmental value and economic cost of adopting practices to improve environmental performance. We ought to include farm-level environmental performance into the Farm Accountancy Data Network (FADN). It would also be useful to assess the past and prospective contribution of commercial certification and sustainability schemes to improved environmental land management. Without vast additional research work on sustainability indicators by the JRC, the Commission and others it would be difficult to effectively design, implement and measure policies enhancing our social and natural capital in European agriculture.
- The predominant role of area-based **direct payments** – accounting for 72% of the CAP budget and 28% of the whole EU budget – causes growing **controversy**. They provide substantial annual support to farm incomes, but are badly distributed with only 5% going to farms with incomes below the median farm. They are also very badly targeted, and they leak to landowners outside agriculture, to suppliers of other factors of production and downstream to food processors and distributors. There is little evidence that direct payments are an effective, efficient or equitable way of achieving the objectives of supporting farming incomes, food security, farmers' resilience to shocks, or sustainable agriculture.
- The modernisation of the CAP suggests **abandoning its obsolete two-pillar structure**, and revising the existing instruments which are over-complex for farmers and administrators alike, lack coherence and have doubtful cost-effectiveness. Instead, one should deploy a wider set of instruments including inputs from the private sector.
- One could notably adopt **multi-annual land management schemes** and measures for the provision of public goods the market does not pay for, reducing negative externalities. These could be flanked by safety-net measures to help farmers until direct payments are phased out over time, preferably over 10-15 years.
- Such a transition to a significantly **different model of production** where land managers pursue a wider range of goals with greater provision of ecosystem services **can only be durable if** these earn **sufficient returns** for their farm products from the market, and receive sufficient remuneration for the public goods they produce. The challenge is **how to do** this with instruments that are less cumbersome, less over-lapping, less complex and less centrally controlled than at present. Considering growing EU and national budgetary pressures due to new priorities such as immigration and security, the key question is how to remunerate land managers for the delivery of public goods.
- Past experience shows that past reforms have not gone far enough to make European agriculture more sustainable and its management simpler and less bureaucratic. More needs to be done. There is in particular a need to find new ways to incentivize farmers to

revise their production models. As far as possible this should be done through the market.

- One can indeed devise instruments to submit ecosystem maintenance and enhancement to the market system. For instance create cap-and-trade systems like the European Emission Trading Scheme (albeit with a serious carbon price) to control environmental *bad*s, or promote contracts for services through the private purchase of environmental services provided by land managers, or encourage offsets, whereby developers are asked to offset environmental degradation connected with their projects by paying an amount into an Habitat Bank that would then finance farmers committed to supply environmental services over the long term.
- If such kind of measures did not provide the farmer with sufficient revenues from public goods production, public authorities should promote a shortening of the food chain to increase the farmer's share of food income, directly align payments with public goods objectives, more stably reward farmers for the delivery of public goods than for food production, or also spread water rights and introduce water management schemes, and incentivize land managers' actions to engage in carbon sequestration by raising the price of carbon.
- A concrete instrument of public goods promotion is Germany's flexible **Eco-Point System** which aims at asking developers to compensate for damages caused to the environment, making the money available to land managers as eco-loans for public goods production. The former buys eco-points, which are then sold to land managers to pay for their losses for environmentally restricted land use or as extra pay for public goods production.<sup>1</sup>
- **Habitat banking** is a market instrument by which credits from actions that create, restore or expand different types of habitats, benefitting ecosystem services may be purchased to offset the debit from environmental damage caused by a range of developments, from housing to industry to infrastructure. Through the Habitat bank, a developer that uses a piece of land to build will need to purchase credits to allow to recreate ecosystem services (eg. biodiversity, soil composition, water quality via e.g. buffer strips, hedges, no till soil management or crop rotation) "offsetting" those lost by land development. National or regional governments should demand that local planning offices make offsetting a condition of building permits. Banks can insure against the failure of habitat restoration and there is a system of recourse in case land managers default.
- As the bulk of the farmers are still small and medium scale, their support could include microfinance on the **Grameen banking model** combining conventional, commercial banking practices with a mission, not be just combating poverty (as in Grameen's case), but improving sustainability. One could actually take the **Kiva model** of a non-profit facilitator of microloans, which encourages partnership relationships through the internet, whereby prospective entrepreneurs have a profile page with a description of the use of their requested loan, and the potential lenders choose the loan request they would like to finance and the amount (as little as €25) and then team up with other lenders to fund the full amount of the requested loan.

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<sup>1</sup> The eco-point system has been inscribed in Germany's federal laws for the Protection of Nature and for Buildings, and is managed by Germany's Länder. To that effect, Rhein-Pfalz has created an eco-pool and an eco-account.



- As rural areas tend to be neglected by the market, rural development could also be fostered through a new EU instrument to be set up within the EIB on the model of **FAO's Investment Centre and related Banker's Program**, which engage with the private sector, microfinance and value chain development. A dozen experts could help advise and even work out rural development projects, setting up a network of banks who would in principle be prepared to finance projects outlined by the Investment Centre that they wish to support. The investment centre could also promote increased corporate private sector investment in agribusiness through studies and involvement in local government plans, when requested. It could also help design microfinance projects and help include smallholders in value chains.

**Eva Mayerhofer**, Lead Environment and Biodiversity Specialist, European Investment Bank

- The value of nature is still very much invisible to society and the benefits provided by natural capital also remain quite invisible to policy makers. We need to move forward in terms of valuation of biodiversity and ecosystems in order to be able to mainstream biodiversity into economic activities.
- We need an enabling environment and strong policy signals that create that demand. We don't want a lot of regulation, but it is something that investors, especially private sector, need in order to feel comfortable in investing in natural capital. Governance tools also need to be put in place. Therefore, the economics and ecological perspectives need to blend together in a solid joint and transparent framework.
- With the [Economic Appraisal of Investment Projects](#) (2013) EIB aims to look beyond the financial viability of a project but also appraise its socio-economic costs and benefits, by taking into account externalities. EIB started integrating cost for environmental externalities in project appraisal in late 1990s: carbon and local air pollutants in energy and transport projects. So far, the EIB is using value of carbon (based on extensive review conducted by Stockholm Environmental Institute in 2006) in project CBA, but aiming to broaden the range of externalities considered, such as loss of biodiversity and ecosystem services.
- By accounting for biodiversity externalities in its cost & benefit analysis of projects, as part of its due diligence, the EIB hopes to leverage a wider system-change effort to mainstream biodiversity into its investments. It will also allow the Bank to better understand the trade-offs. Currently social and natural capital is mainstreamed through standards/safeguards for project investments. This debate is an opportunity to gather insight from different perspectives on accounting for social and natural capital and to share the needs and expectations of large IFI/MDBs as well as the challenges faced
- As one of the largest MDBs, the EIB can influence design and implementation of projects, hence channelling investments to environmentally and socially sustainable businesses. The EIB is aiming at a more proactive approach to increase the flow of financing to biodiversity.
- However there are number of challenges associated with this: **1. Diversity and number of projects to be assessed.** A good accounting tool for MDBs would need to be applicable to a wide variety of projects, from different sectors and of different scales. A streamlined methodology applied by the EIB and its peer institutions would ensure a consistent valuation of natural and social capital, and facilitate reporting. **2. Data availability and reliability.** Value estimates (usually in USD per hectare per year) for different habitats, by type of ecosystem services, have been building up with the growing environmental valuation literature. However, coverage and reliability of estimates greatly vary by habitat, by region, and by services. Collaboration with a wide variety of stakeholders is essential to build-up a reliable database: leading institutions must support the development of a strong scientific and economic evidence base. **3. Value elasticity.** Ecosystem service values are not easily transferred from one location to

another. Values are affected by the local GDP, the other ecosystems present nearby, the local population concentrations, etc. Collaboration with relevant stakeholders is key to ensure the local specificities are incorporated in the service values.

- Valuation of biodiversity has proved even more challenging: ecologists are gearing towards a general consensus that diversity in an ecosystem is linked to its stability and resilience (see OECD 2016 study '[Cost benefit analysis and the environment](#)'). A meaningful measure must be found to incorporate the diversity of an ecosystem (and the impacts of a project on that diversity) in the CBA process.
- EIB has several directorates that are frontrunners in natural capital and climate change. But it also has some more conservative directorates whose role is to safeguard the Bank. It is important to reconcile different approaches and align the different interests. Communication is very important and accounting for biodiversity and its services will provide more and more a persuasive case for the protection of biodiversity, ecosystems and their services as well as their sustainable use.

**Humberto Delgado Rosa**, Director, Natural Capital, DG ENVI, European Commission

- It was the economic instabilities of the 1930's that spurred the development of national accounts and the measure of GDP. Today, it is our ecological resources that are in danger of collapse – and natural capital accounting should help us better manage them. Biodiversity loss and ecosystem collapse is ranked as a highly likely risk with high impact in the [2017 World Economic Forum's Global Risks Report](#).
- All this is having negative impacts on our lives and our economy, because we all depend on ecosystem services. Preserving, protecting and improving the state of nature are not only environmental objectives - they are also the basis for smart and sustainable growth – and are objectives of the EU.
- Key economic sectors depend directly on ecosystem services: water, food and beverages, apparel and many others. These depend on natural fibres, on the pollination of crops, on the filtration of water and many other outputs that biodiversity offers. As well as, of course, on tourism, leisure and recreation benefits based on nature.
- So **tackling the ecological crisis of today is not only an ethical issue - preserving the variety and abundance of life on earth is also an economic imperative**: more and more companies are striving to understand how their activities impact, and depend on biodiversity, and how to become more sustainable; while governments need to factor in how natural capital contributes to growth.
- Major issue of this century is the quest for sustainability. We need to look at this issue as if it was a wedding cake: it has three layers. The underlying layer is the biosphere. On top of that you have the society and the economy. This model helps us understanding how fundamental natural capital is.
- Accountants do not have all the solutions but we certainly need them. The challenge is: **How can accounting help integrate the values and services of nature into economic decision making to make more sustainable choices, and how can it support businesses to take better decisions?**
- Within the EU, we have started work towards more comprehensive Natural Capital Accounting at national level. Eurostat has already developed environmental accounts covering for example air emissions, or environmental taxation.
- The objective now is to extend this to ecosystem accounts, their services and their values. The Commission is working on this with the relevant Commission services and the European Environment Agency in the EU institutions, building on the experience of Member States (such as the Netherlands and the UK), with the aim of having some first EU accounts by 2020. The EC also supports the development of ecosystem accounts in a number of partner countries outside the EU through initiatives with the World Bank and the UN Statistical Division.

- This work also aims to contribute to the UN experimental standard on ecosystem accounting. The potential is that in time such systems of accounts can be integrated and used alongside the system of national accounts and contribute to decisions at macro-economic level.
- At the same time, the EC is working with the private sector. The Commission is working to **further define non-financial disclosure**, and is preparing non-binding guidelines to help companies to implement the Non-financial Reporting Directive. It is important that shareholders, investors and other stakeholders get from large companies a comprehensive picture of their business, including environmental and social aspects, so that they can make well-informed decisions.
- And through the **EU Business and Biodiversity Platform**, the EC is helping business to integrate biodiversity and natural capital into their accounting and decision-making.
- There are also very useful developments at international level, and hopefully the launch of the Natural Capital Protocol last year will encourage more companies to move towards integrating natural capital into business decisions and procedures. Contributions from the private sector such as the paper by ACCA on '[Natural capital and the accountancy profession](#)' will also help to make progress in this direction.
- Within the private sector, a key challenge is accounting for biodiversity more specifically: clearly the overall framework of the natural capital protocol is a key milestone but it also needs to be complemented by a specific approach focusing on biodiversity, to represent and integrate the full range of features of ecosystems in an accounting system.
- The Commission is identifying some key questions that are also relevant for the private sector: What information can be used to describe different types of ecosystems and services? What are the linkages between the status of ecosystems and ecosystem services? How to reflect their value?
- For example, we know the value of many provisioning services: such as the market price of various types of timber. But, what is the value of ecosystem services such as air filtration from a forest, or of pollination – this should not be ignored. And can accounts indicate when ecosystems are not used sustainably and possibly in danger of collapse?
- The EU business and biodiversity platform provides a forum to exchange and make progress on these issues – it is open for all to share their best practice.
- A **key dimension for corporate private accounting systems** is the need to be simple enough for businesses to use, and the need to be relevant, to pass the 'materiality test' and the need to be based on data that are available. **Public accounting of natural capital faces similar challenges**: the need for a common metric and the challenge of data availability. Hence, there is a clear scope for learning from each other and benefits in further cooperation and sharing best practice. Hopefully such cooperation will result in a system of integrated accounts for natural capital that can support consistent and streamlined reporting, whether in the public sector or at corporate level.
- Environmental education does a lot but environmental taxation is much more efficient – we need to put the cost where we want the behaviour to change.
- There are good reasons why climate change is much more attractive than biodiversity in policy: it is much more measurable, easier to tackle and it appeals better to society. Biodiversity issues are, however, not less important.

**Michel Bande**, Senior Executive Vice-President, Solvay

- The Chemical Sector is one of the most transparent due to their business model but also to regulation.
- Disclosure is often mandatory, the sector is publishing an enormous amount of data, the priority is to publish comparable information country by country, company by company.
- The main problem is not the release of chemical substances but the exposure to harmful substances which is a different concept.

- Not only the costs but also the general impacts have to be taken into consideration.
- More problems with the **human social impacts**, there we are facing a lack of standards and of academic studies.
- Solvay has developed two tools: 1. Solvay has selected 43 best practices. 20 of them are related to societal impact. It is measured every year by internal auditors, also by external auditors. 2. Sustainable Portfolio Management tool. The SPM methodology serves as a strategic tool to develop information on the portfolio and analyse the operational impacts but also the customers expectations.
- Solvay is one of the frontrunners in **integrated reporting**. It has developed a bottom-up approach for materiality. Connectivity and conciseness in reporting are very important.
- Generally speaking the **competition between the companies is not on methodologies** or standards, **but on results**.

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