

INNOVATIVE MECHANISMS FOR FINANCING BIODIVERSITY CONSERVATION

Policy highlights



THE REPORT SHOULD BE CITED AS FOLLOWS

Ezzine de Blas, D., Kettunen, M., Russi, D., Illes, A., Lara-Pulido, J.A., Arias, C. and Guevara, A. (2019) Innovative mechanisms for financing biodiversity conservation: Policy highlights, in the context of the project “Innovative financing mechanisms for biodiversity in Mexico / N°2015/368378”. Brussels, Belgium.

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CIRAD (French Agricultural Research Centre for International Development) is a public establishment (EPIC) under the joint authority of the Ministry of Research and the Ministry of Foreign Affairs. Its activities concern life sciences, social sciences and engineering sciences, applied to agriculture, the environment and territorial management. Its work centres on six main topics: food security, climate change, natural resource management, inequality reduction and poverty alleviation.

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Mix photos (cover) from Burst :

Forest by SCOTT MURDOCH, sea/beach by MATTHEW HENRY, corn field by GLENN CARSTENS-PETERS

A close-up photograph of a dark beetle, possibly a ground beetle, resting on the yellow, textured center of a flower. The beetle is positioned diagonally, facing towards the top right. The background is a soft-focus yellow, suggesting the petals of the flower.

CONTEXT

THE CONTINUED DEPLETION OF BIODIVERSITY IS DESTABILIZING THE FUNCTIONING OF ECOSYSTEMS WHICH IS PUTTING AT RISK THE FLOW OF RELATED BENEFITS, SUCH AS PROVISIONING OF FOOD AND CLEAN WATER, MITIGATION OF NATURAL DISASTERS, AND PHYSICAL, MENTAL AND SPIRITUAL WELLBEING. THIS IN TURN AFFECTS THE LONG-TERM VIABILITY OF ECONOMIC ACTIVITIES AND HUMAN WELLBEING.

The traditional publically funded sources for conserving biodiversity are not sufficient. This has resulted in a need to explore new sources for funding that build on making a “business case” for biodiversity.

*The costs of biodiversity degradation - and the benefits of addressing the degradation - are increasingly understood however, still **poorly internalized by different economic sectors, including the private sector actors.** International efforts for and by the financial sector to enhance the understanding of impacts and dependencies on biodiversity and natural capital are taking place, with investment portfolios addressing these emerging issues. While pioneering examples of successful business cases for biodiversity exist, comprehensive strategies are yet to emerge to allow **upscaling of financial investment in biodiversity business.***

*To unlock this potential, this report intends to inform business and biodiversity professionals, about a set of **concrete initial examples in the EU and Mexico** that can help to transform the economics and finance of biodiversity.*



SUMMARY

MEXICO AND EUROPE: DIFFERENT STARTING POINTS, SIMILAR CHALLENGES	5
PAYMENTS FOR ENVIRONMENTAL SERVICES: IMPROVING EFFECTIVENESS AND INCREASING PRIVATE SECTOR INVOLVEMENT	7
ENVIRONMENTAL FISCAL REFORM: UNLOCKING THE POTENTIAL FOR BIODIVERSITY	9
OFFSETTING: WHAT CAN MEXICO AND THE EU LEARN FROM THE US?	11
GREEN MARKETS AND IMPACT INVESTMENT: A CALL FOR BIODIVERSITY BROKERS	12
RECOMMENDATIONS: OPPORTUNITIES FOR FUTURE BILATERAL PARTNERSHIP BETWEEN THE EU AND MEXICO	15
REFERENCES	18

1

2

MEXICO AND EUROPE :

DIFFERENT STARTING POINTS, SIMILAR CHALLENGES

Mexico hosts a number of wild mammals and endemic species unique to the world. Several of these including, for example, Mexican Salamander (*Ambystoma mexicanum*) and vaquita (*Phocoena sinus*) are in a critical need of conservation (Llorente-Busquets and Ocegueda, 2008). The **loss of natural habitats, deforestation in particular, due to uncontrolled expansion of economic activities** (e.g. agriculture) is the major threat to the conservation of Mexico's endangered species. The situation is exacerbated by a complex rural socio-economic situation linked to rural poverty, institutional corruption and lack of security.



3

HABITAT LOSS IS ALSO A CAUSE OF CONCERN IN EUROPE. Similar to Mexico, the loss is caused by changes in land use which in the case of Europe means **intensification of agricultural production, urbanisation and abandonment of land in rural areas** (EEA, 2015). For example, intense use of chemicals in upstream watershed areas, and along wetlands and extensive agricultural areas that host biodiversity, have degraded the quality of soils and underground waters and have provoked a problem of bio-accumulation (EEA, 2015). As a consequence of that, the maintenance and restoration of ecosystem quality is a key focal area for European conservation efforts.

1 Single remaining tree on land cleared for farming in yucatan, mexico.

BY IVÁN GABALDÓN

2 Dense Forest

BY NICOLE DE KHORS

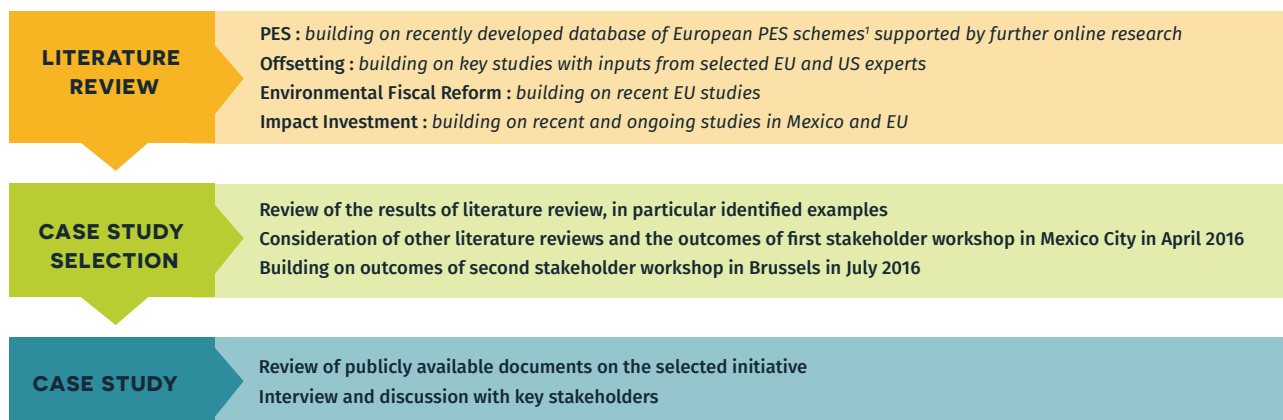
3 Axolotl, *Ambystoma mexicanum*

BY ERNI

Even though the geography and the economic and institutional characteristics are different, some of the **environmental challenges are common to Mexico and Europe, as for example the decline in bee populations** due in part to the intense use of pesticides (Woodcock et al., 2016). Similarly, both Mexico and Europe struggle to make the available **public financial resources match the needs** for implementing their conservation objectives. Were it caused by the low price of oil in Mexico or increased public debt following the financial crisis in Europe, seeking new innovative finance mechanisms to both improve the effectiveness of public funding and **increase the investment of the private sector for biodiversity conservation** is gaining traction on both sides of the Atlantic.

PAYMENTS FOR ENVIRONMENTAL SERVICES (PES), BIODIVERSITY OFFSETS AND HABITAT BANKING, ENVIRONMENTAL FISCAL REFORM AND BIODIVERSITY RELATED IMPACT INVESTMENT AND GREEN MARKETS have been the focus of both development and discussion in the past years.

This executive summary presents a comparative synthesis of the existing innovative finance mechanisms for biodiversity conservation in Mexico and in the EU. The summary is based on the work carried out under the project “Innovative financing mechanisms for biodiversity in Mexico / N°2015/368378” financed by the European Commission (Illes et al., 2017; Lara-Pulido et al., 2017) (**FIGURE 1**). In particular, the report highlights the opportunities in terms of bilateral cooperation between the EU and Mexico and the potential for scaling up the different finance mechanisms analysed in the context of the study.



1. For further information see: Illes et al. (2017) and Lara-Pulido et al. (2017).

Figure 1 : PROCESS AND KEY METHODOLOGICAL STEPS.

For further information see: Illes et al. (2017) and Lara-Pulido et al. (2017).

Illes, A., Russi, D., Kettunen, M. and Robertson M. (2017) Innovative mechanisms for financing biodiversity conservation: experiences from Europe, final report in the context of the project “Innovative financing mechanisms for biodiversity in Mexico / N°2015/368378”. Brussels, Belgium.

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PAYMENTS FOR ENVIRONMENTAL SERVICES : IMPROVING EFFECTIVENESS AND INCREASING PRIVATE SECTOR INVOLVEMENT

Payments for environmental services (PES) are direct conditional contracts negotiated between a provider and a user of an environmental service, aimed at achieving a dedicated environmental outcome. The underlying rationale of PES is that landowners (i.e. the providers) get compensated for actions that help to maintain a certain level of environmental quality that benefits other stakeholders (i.e. the users) (Ezzine-de-Blas et al., 2016).

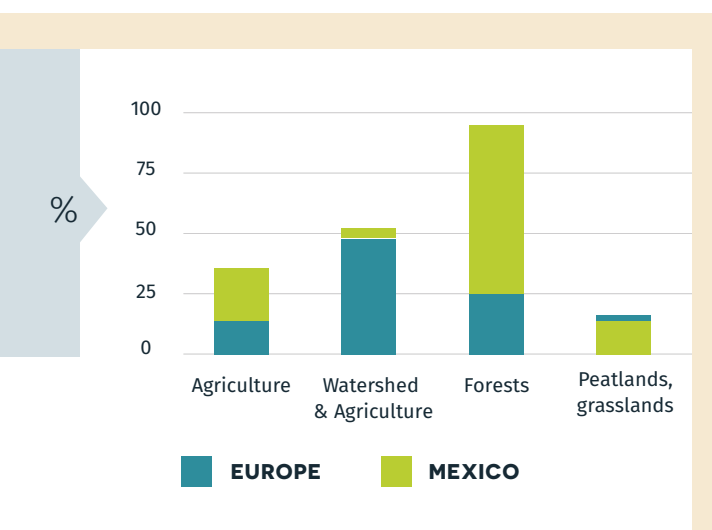


Figure 2 : THE PERCENTAGE REPRESENTS THE SHARE OF THE TOTAL NUMBER OF PES SCHEMES FOUND IN THE LITERATURE REVIEW FOR THE EU AND MEXICO AND PER ECOSYSTEM TYPE.

Public sector is the largest investor in PES both in the EU and in Mexico. In Mexico, since 2003 the national program of payments for hydrological services has enrolled more than 2 million hectares of forests all around the country (Lara-Pulido et al., 2017). In a predominantly dry country like Mexico, forests are vital for the provisioning of watershed services, such as mitigating the erosion and supporting the infiltration of water. Mexican forests have also been historically vulnerable to wildfires and deforestation. In the EU, the EU agri-environment measures are by far the largest PES in terms of areal coverage and beneficiaries involved. These measures are used to incentivise agricultural practises that help to maintain the quality of soils and aquifers, and conserve biodiversity that depends on extensive agriculture practices (FIGURE 2). Both in Mexico and in the EU, the **public PES** schemes established to help to conserve the above key ecosystems **have aimed to evolve towards higher efficiency.**

In the EU, **result-based agri-environment schemes (RB-AEMs)** have been developed to remunerate farmers for achieving the desired environmental outcome, instead of specific management practices as in the most common action-based agri-environment measures (**FIGURE 3**). In many cases **result-based schemes result in higher conditionality and efficiency, while encouraging innovation** (Allen et al., 2015). They are particularly well-suited to situations where it is easy to find proxy indicators for biodiversity conservation and where there is a clear link between conservation practices and provision of an environmental outcome. In some cases, however, result-based schemes may entail an increased risk for farmers with respect to the more traditional action-based schemes, for example when the provision of the desired environmental outcome can be substantially influenced by external factors like weather or where the species targeted are animals that can move from field to field.

Besides the EU funded RB-AEMs, there are also other interesting and efficient examples of PES in the EU. **Examples exist of schemes financed by public bodies or private companies and, in a few cases, by a combination of the two.** These schemes are commonly implemented at a local or regional scale and most of them address agricultural areas and in particular water catchment areas. The most commonly targeted ecosystem services are those related to water quality, however examples of schemes focused at recreational uses of natural areas, improving flood risk management and increasing carbon sequestration also exist. Programmes are also used to target the conservation of specific species and habitats.

In Mexico, the most relevant evolution of the national PES programme is the Matching-Funds programme. The programme started in 2006 with an aim to encourage private investment in nature conservation by **matching private funding with public investment** (a maximum of one Mexican peso from the public funds per one peso invested by the private sector). Matching Funds are PES schemes designed by the National Forestry Commission (Comision Nacional Forestal - CONAFOR) and a local private institution, and funded by a combination of public (CONAFOR) and private contributions. A number of different schemes have been implemented involving international NGOs and private companies related to drinking water and mining (Saldaña-Herrera, 2013). The last years' plunge in international oil prices plus the structural deficiencies of the Mexican oil industry have affected the allocation of funds to federal programs including the national program for hydrological services. This has pushed CONAFOR to transfer funds from the national program on hydrological services to the Matching Funds programme in an attempt to double the current available funds. **A QUESTION THAT REMAINS IS WHETHER THE SHIFT TO THE MATCHING FUNDS PROGRAMME WILL BE ABLE TO GUARANTEE THE SIMILAR LEVEL OF EFFECTIVENESS AS THE NATIONAL PROGRAMME THAT HAS BEEN ABLE TO REDUCE DEFORESTATION RATES BY 50%** (Alix-Garcia et al., 2015). While the Matching Funds programme is better tailored for the national social-ecological conditions it is also more prone to be influenced by local power dynamics.



River town in Mountains,
Utah, USA

BY BRENTON WALKER

ENVIRONMENTAL FISCAL REFORM: UNLOCKING THE POTENTIAL FOR BIODIVERSITY

Environmental fiscal reform (EFR) refers to the action of shifting the tax burden from economic functions to activities that lead to environmental pressure and entail negative externalities (OECD, 2013). Tax shifting as such is rarely used to target biodiversity conservation and therefore in the context of biodiversity financing EFR covers a broader range of instruments including environmental taxes, environmental fees and charges, environmental tax incentives and ecological fiscal transfers (EFT).



The EU provides a useful range of experiences related to the application of environmental fiscal instruments for biodiversity that could be further mainstreamed across the EU Member States and that Mexico can draw inspiration from. **Taxes on pesticides and fertilizers** are among the most frequently implemented instruments in the EU currently in place in 5 out of 28 EU Member States. **The Danish pesticide tax**, established in the 80s and reviewed in 2013, is the most advanced in terms of relevance to biodiversity with **its level being set according to the health and ecosystem impacts of each substance**.

With regard to environmental fees, some initiatives in the EU show that earmarking can considerably increase the effectiveness of environmental fiscal instruments. **FISHING FEES IN ESTONIA AND IRELAND ARE DIRECTLY USED TO PROTECT FISH HABITATS THROUGH CONSERVATION FUNDS.**

1 River sided by forest
BY MICHAEL BROWNING

2 Fishermen in Baja California
BY XAVIER BASURTO

Such a combination of environmental fees transferred to earmarked conservation funds has proven also to be effective in Mexico. The national program of payments for hydrological services (above) has used federal funds from water taxes. Furthermore, **a recently established Jalisco environmental fund will fund climate change and biodiversity conservation actions through revenue originating from taxes, compensation payments and fines for environmental damage made by private companies, and fees and charges related to controlling vehicle emissions.**

Finally, ecological fiscal transfers (EFT) are an instrument that aims to redistribute non-earmarked tax revenue between different government levels according to ecological criteria, most commonly the coverage of protected areas.

In other words, **EFT recognise the local areas' contribution to biodiversity conservation** and can therefore incentivise further action in this regard. **In Portugal, the evidence indicates that EFT can be effective in fostering the creation of new regional protected areas.** Although the Portuguese central government does not specify the way the transferred resources have to be used (i.e. they are not earmarked for conservation actions), there has been an increase in protected areas in municipalities receiving EFTs payments. Based on this experience, **SUCH A POLICY WOULD ASSIST MEXICAN STATES TO ENDORSE POSITIVE ATTITUDE TOWARDS CONSERVATION AND EVEN INCREASE EFFORTS IN BIODIVERSITY CONSERVATION AT LOCAL LEVEL.**

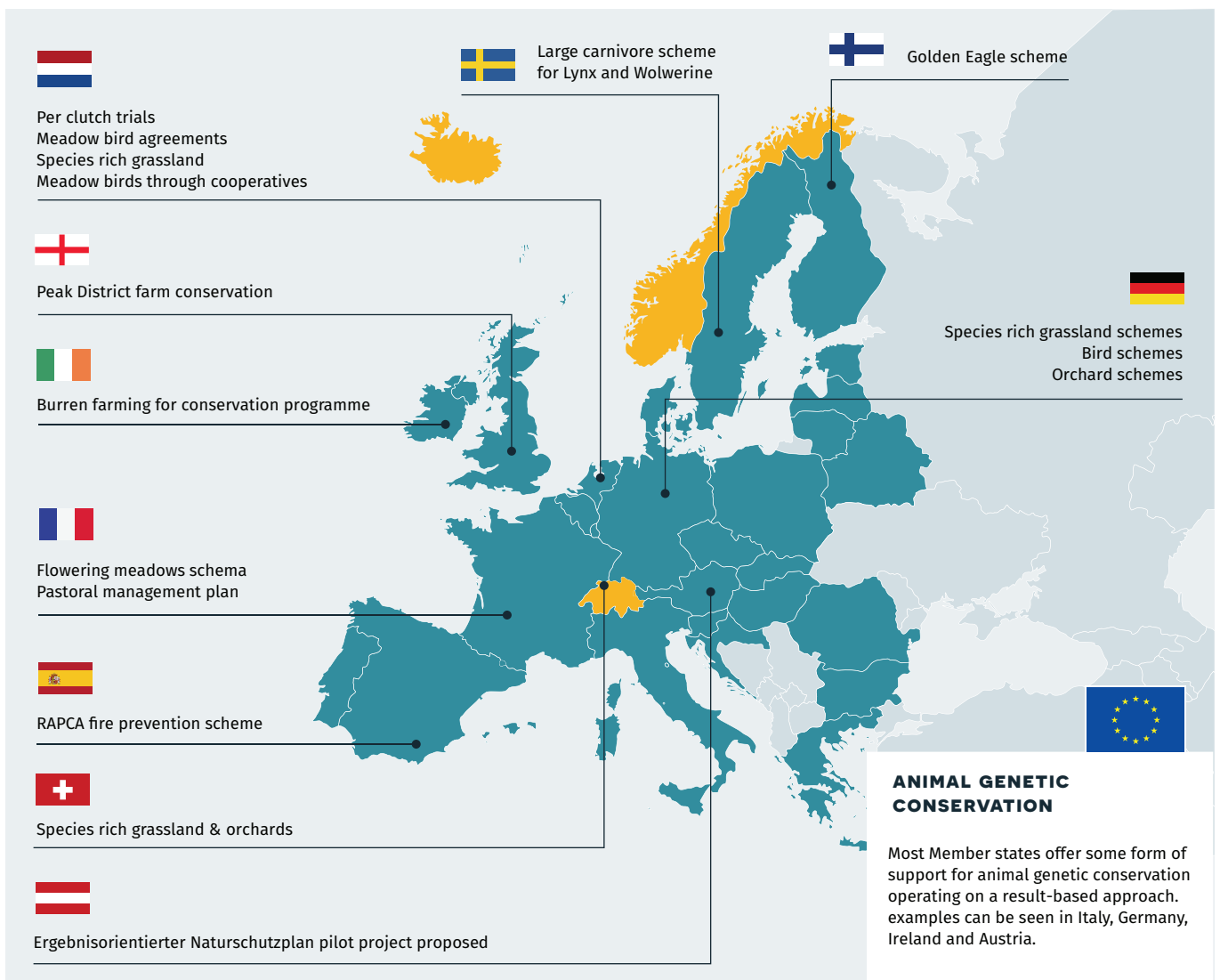


figure 3 : EXAMPLES OF RESULT-BASED AGRI-ENVIRONMENT MEASURES IN EUROPE (2015)



OFFSETTING: WHAT CAN MEXICO AND THE EU LEARN FROM THE US?

Biodiversity offsets are defined as measurable conservation outcomes of actions designed to compensate for significant residual adverse biodiversity impacts that arise from project development after appropriate prevention and mitigation measures have been taken (Business and Biodiversity Offsets Programme, 2013).

Offsetting and habitat banking have yet to deliver their supposed promises for biodiversity conservation. Europe is still debating the risks and benefits of offsetting with some pioneering countries, such as Germany, having concrete experience in implementing legislative frameworks for offsetting (Illes et al., 2017). In Mexico, more substantial discussion on offsetting and habitat banking is yet to take place. An analysis of the experiences from the US offers food for thought for both of the regions.

No robust studies demonstrating the ecological effectiveness of the US wetland mitigation banks (US WMB) are available. A local assessment of the wetland mitigation banking –a habitat banking system for the compensation of destroyed wetlands- in the state of Ohio concludes that from 12 banks covering 400 hectares, 50% were not restored or remain in poor condition after they were (25%) (Mack and Micacchion, 2006). The assessment concludes that the promise of achieving a higher quality “product” of wetland restoration has not been attained in the practice. An assessment of Chicago offsets reveals that the wetland mitigation banking has resulted in the movement of wet-

lands from high opportunity cost urban “white” areas, to low opportunity costs rural “ethnic” areas (Ben Dor et al., 2014). Such a trend combined with the geographical pattern of dispersed losses versus concentrated restoration can cause a reduction in the social value of the ecosystem services delivered by wetlands.

Therefore, **although the US wetland mitigation banking has been able to enrol large ecologically homogeneous areas, there has been a lack of long term monitoring and success into getting the ecological equivalence between destroyed and restored areas.** The US experience therefore seems to validate the concerns for conserving ecosystem quality in the context of habitat banking, e.g. indicating that **THE EFFECTIVE IMPLEMENTATION OF THE MITIGATION HIERARCHY REMAINS ONE OF THE MOST CRUCIAL BUILDING BLOCKS OF ANY OFFSETTING OR HABITAT BANKING SCHEMES.**

GREEN MARKETS AND IMPACT INVESTMENT:

A CALL FOR BIODIVERSITY BROKERS

Impact investing refers to investments made into companies, organizations, and funds with the intention to **generate a measurable, beneficial social or environmental impact alongside a financial return** (GIIN 2016).

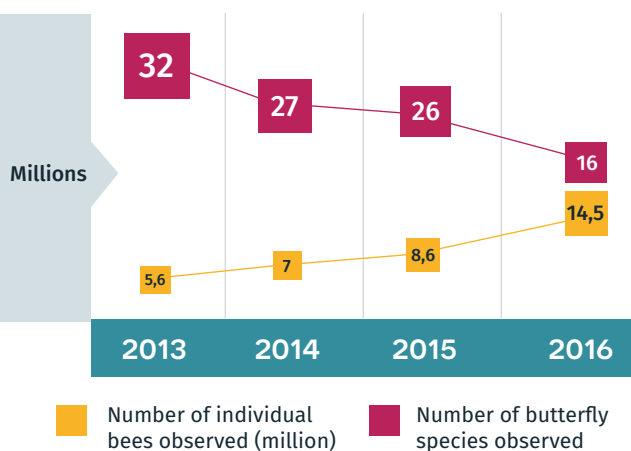


figure 4 : BEE AND BUTTERFLY POPULATIONS OBSERVED IN FRANCE AS INDICATORS OF THE ECOLOGICAL EFFECTIVENESS OF THE INITIATIVE

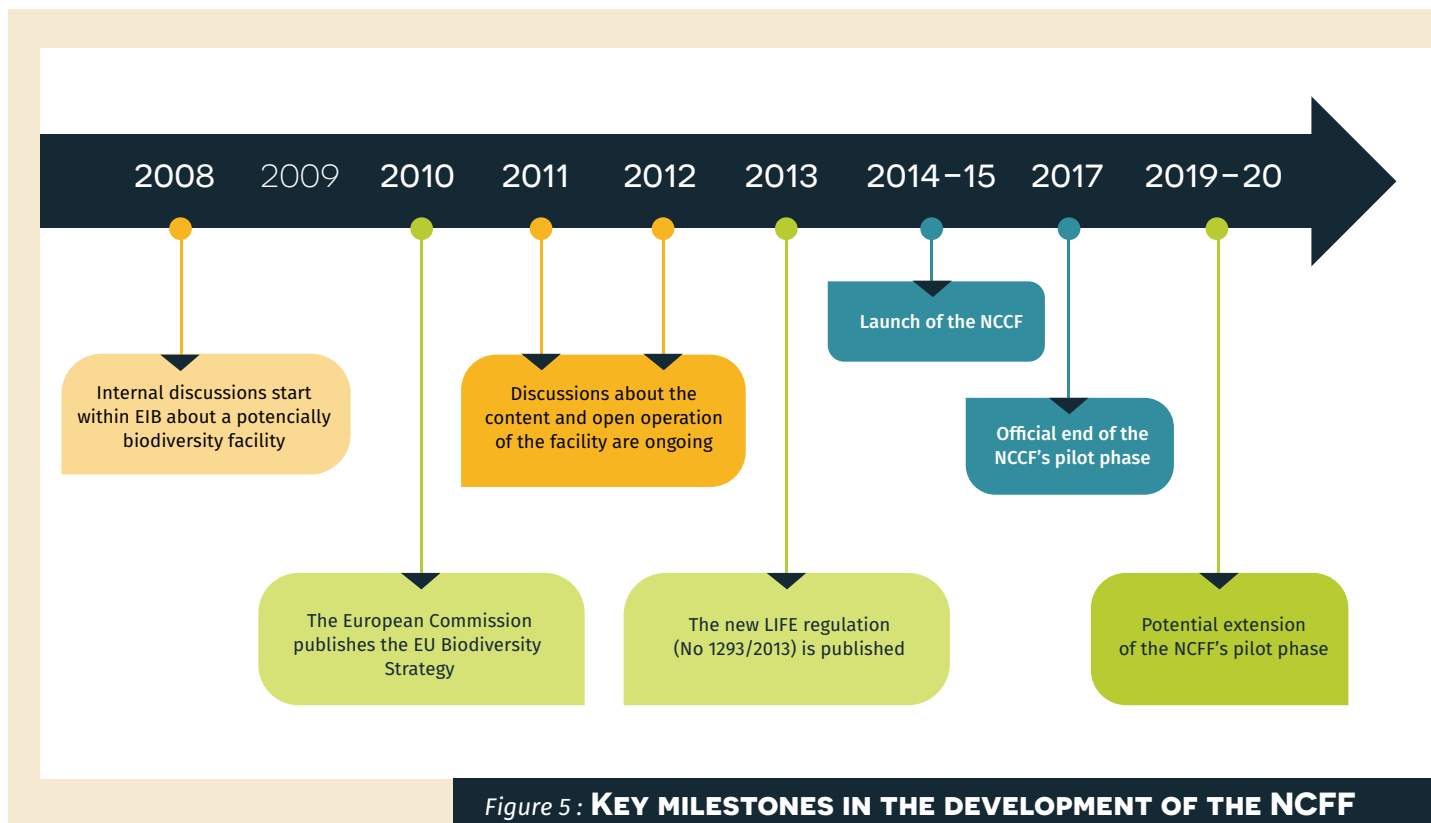
Source : Illes et al. (2017)

In Mexico, impact investment and the emergence of viable business models for biodiversity is advancing as a joint action by communities, NGOs and **“biodiversity brokers”** which act as entrepreneurs that help to connect biodiversity project with the business sector. To mainstream this bottom-up process, an involvement of large-scale multinational companies (i.e. agricultural companies such as Bimbo or Nestle) and investment funds is required. Such an involvement is in part hampered by the **lack of existing “bankable” project opportunities** and the availability of biodiversity brokers that can link identified conservation needs with financial expectations. Some interesting examples include the work done by small impact investment funds that act as small-scale triggers of business viable ideas such as **El Buen Socio** and **FIDA** (Lara-Pulido et al., 2017).



In Europe, examples of impact investing can also be found. For example, the food and beverages company **Mondelez International** has been pioneering an initiative that focuses on sustainable agriculture and biodiversity protection targeting the wheat supply chain. Farmers enter a charter with voluntary quality requirements – similar to a private PES scheme – and the company uses an informal certification as a way to increase the quality of the products and therefore its sales and marketing image. The agricultural practises promoted by Mondelez cover around 40,000

hectares of land and are creating an impact in altogether six EU Member States (**FIGURE 4**). Another relevant public-private initiative is **the Natural Capital Financing Facility (NCCF) supported by the European Investment Bank (EIB) and the European Commission**, which seeks to cover initial start-up costs of biodiversity investments (green markets, PES etc.) in order to incentivise the private sector to unleash larger investments once the sources of risk have been integrated (**FIGURE 5**). Both examples are interesting schemes to be replicated in Mexico.





A recurrent bottleneck for impact investment to happen at a larger scale is the lack of biodiversity investment champions - or biodiversity brokers - that have the capacity to identify and design investments that fit the local conservation needs and translate them into a proposal that appeals to the financial sector. Such champions are the missing lynchpin in the chain of actors that need to be aligned for biodiversity investment to happen (**FIGURE 6**).

Such biodiversity investment champions must understand the language, needs and enabling conditions of each relevant actor. This implies understanding local livelihoods and rural productive systems in both socio-economic and

ecological terms while connecting with the civil society actors (e.g. NGOs). Therefore, such **CHAMPIONS NEED AN UNDERSTANDING OF SOCIAL-ECOLOGICAL COMPLEXITY AND INTERDISCIPLINARY, FOR EXAMPLE COMING FROM A FINANCE BACKGROUND AND GETTING TRAINED INTO SOCIAL-ECOLOGICAL LOCAL SYSTEMS.**

Developing these skills and putting them in the market will require novel master and training programs that can build on the analysis of existing successful biodiversity business cases and integrate internships with private companies to build new biodiversity investments.

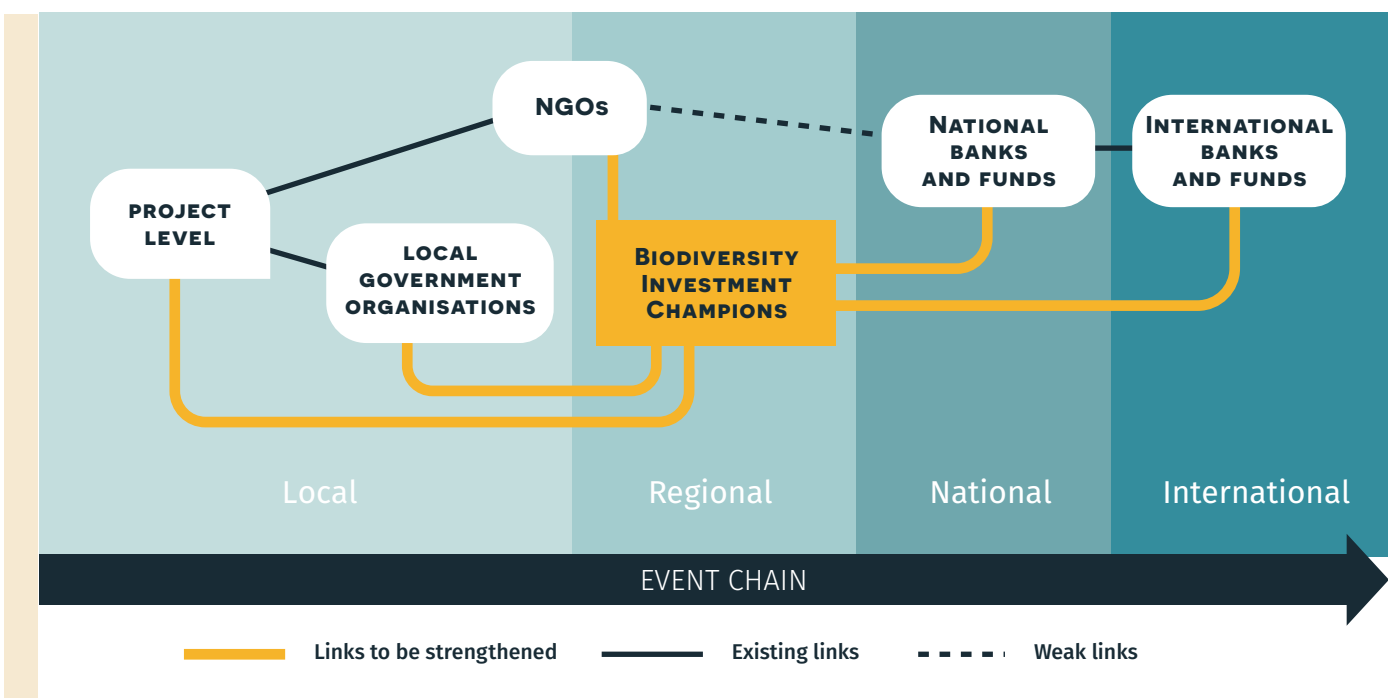


Figure 6 : ROLE OF BIODIVERSITY INVESTMENT CHAMPIONS TO CONNECT LOCAL AND NATIONAL SCALES TO COMPLETE THE EVENT CHAIN.



CECILIA LATAPI

SVX MÉXICO, INVEST FOR IMPACT

www.svx.mx

1. How would you trace back the emergence of the concept of Impact Investment for Biodiversity and Ecosystems in Mexico?

The concept of Impact Investment for Biodiversity and Ecosystems in Mexico is recent, tracing back to the last 5 years. It started in the fishing sector, after the initiative of a family office that turned to investment instead than to traditional philanthropy, because it was aligned with its investment criteria and interests. Seemingly, the Fondo Mexicano para la Conservación de la Naturaleza (FMCN) has been an important actor putting this concept on the table, given its institutional agenda on the social profitability of conservation. However, impact investment is still a nascent concept. Impact investment has so far been developed mainly in the social sector. Profitable investments dealing with biodiversity and ecosystems are difficult to find, due to the fact that they have to deal with issues of scale, partnerships and marketability. We won't be able to properly talk about Impact Investment for Biodiversity until such projects are mature and in the market.

2. Do you think the use of the concept has brought major changes to the environmental agenda in Mexico? If yes, which ones?

Impact investment has come to the policy agenda at a time when institutions were discussing the harm that agriculture and biodiversity subsidies were causing. The natural step was to move from subsidies to productive projects and conditional schemes such as Carbon Credits and Payments for Environmental Services. Nevertheless, the policy agenda has not yet caught up with impact investment because of the lack of interest from the private capital industry. At present, the largest changes are happening bottom-up, with the emergence of new entrepreneurs that are envisioning their activity as sustainable businesses.

3. What are the priorities of the major Mexican institutional organizations regarding Impact Investment for biodiversity and ecosystems?

The government has not yet identified impact investment as a policy solution. NGOs are the ones pushing forward the approach as a source of innovative finance. The exception at the moment is the Commission for Natural Protected Areas (CONANP), expressing their interest regarding working with the

private sector. At the moment, CONANP has listed the different productive projects that take place in Natural Protected Areas to understand under which conditions they are emerging. The bank sector is also moving closer to the concept of impact investment for biodiversity through the inclusion of green criteria for productive and housing credits. In any case, institutions are beginning to recognize that social development and environmental conservation have to come along.

IMPACT INVESTMENT NEEDS TO FIND AND HELP GROW REGENERATIVE SOCIAL-ENVIRONMENTAL RURAL BUSINESSES.

4. If we imagine ourselves in 10 years' time, what vision and long-term impacts do you envision?

Environmental conservation, social inclusion and equality have to come hand by hand. There is a need for a holistic vision in which human well-being is seen as dependent on environmental conservation. Moreover, in a number of cases ecosystem and biodiversity conservation depend on the economic decisions of vulnerable people: Conservation needs to benefit them to avoid ecosystem degradation. For a development plan to emerge that considers such inclusive agenda, the different government institutions need to coordinate to align policies and avoid contradictory measures such as e.g. avoiding fuel subsidies for harming fish activities that deplete fish banks to transfer these financial resources to fish regenerating activities. Moreover, financing conditions need also to evolve. Currently, economically vulnerable rural producers find finance requirements too steep to accept them. New forms of economic activities such as cooperatives with a scheme of inclusive shareholding are also fundamental for the development of the sector. Profitability needs to contribute to the better well-being of every stakeholder. This includes inequity measures, but also investments that target the restoration and regeneration of ecosystems and social relations. Impact investment needs to find and help grow regenerative social-environmental rural businesses.



BORIS SPASSKY

ALTHELIA MIROVA

www.althelia.com

1. When and why did Mirova's Land Degradation Neutrality Fund (LDN Fund) start? What are its main missions and where are located its target areas?

The LDN Fund was created in response to the great need for more investment in sustainable land use and land restoration. It is an impact investment fund that invests in profit-generating sustainable land management (SLM) and land restoration projects worldwide to reduce or reverse land degradation. It will provide long-term financing to projects that meet strict environmental and social standards. Public resources alone will not be sufficient to reach the Sustainable Development Goal of achieving LDN by 2030; attracting increased private sector investment for SLM and land rehabilitation is crucial. The LDN Fund is an innovative financing mechanism that aims to catalyze the huge available pool of private capital by leveraging limited public resources. The LDN Fund is promoted by the UNCCD Global Mechanism (GM) and Mirova, a responsible investment firm. The GM initiated and spearheaded the LDN Fund project, with the Fund structured and managed by Mirova. An agreement with the UNCCD was signed during the Paris accords at COP21, the Fund closed on December 14, 2018.

2. Mirova's LDN fund was the first of its kind when it was launched: how has the institutional and investment environment changed since?

We see that the "natural capital" asset class is progressively structuring itself, with public and private investors converging with NGOs and the industry. We see that initiatives like for example the 20X20 in Latin America are joined by a broad range of players, what shows a keen interest in sustainable land management.

3. What have been your main successes and difficulties so far? What are the obstacles to overcome?

In terms of difficulties, fundraising has proven difficult, as few European investors are equipped with the right financial instruments to invest in primary agricultural production in emerging

markets. Institutional investors prefer liquid assets such as bonds and equities, preferably in North America or Europe. Development finance institutions are realizing such a need and working on ramping up their share in primary agriculture. For example, in Africa 60% of the population lives in rural areas, 30% of GDP comes from agriculture, while agriculture weighs less than 2% in Africa's banks' portfolio.

In terms of successes, the LDN fund's junior investors have played a key role in de-risking the LDN Fund's private investors. The buffer they have provided has transformed the risk-return profile of the sector into a more attractive option to private investors.

WE EXPECT THE MARKET OF SUSTAINABLE LAND MANAGEMENT TO MATURE, JUST LIKE THE RENEWABLE ENERGY SECTOR HAS MATURED OVER THE PAST 20 YEARS.

4. What evolutions do you foresee for the LDN fund and its institutional and investment environment in 10 years?

We expect the market of sustainable land management to mature, just like the renewable energy sector has matured over the past 20 years. 20 years ago developers proposing wind farms to institutional investors needed to ask for public guarantees and feed-in tariffs. Such projects are now run by the private sector, with no need for public funding. In the field of sustainable land use, project developers will grow more robust, while investors will get used to the asset class once a track record is built.

RECOMMENDATIONS: OPPORTUNITIES FOR FUTURE BILATERAL PARTNERSHIP BETWEEN THE EU AND MEXICO

Our study has identified a number of innovative biodiversity finance mechanisms currently in use in the EU that could also be taken up in Mexico:

1. **PAYMENTS FOR ENVIRONMENTAL SERVICES (PES)** : The efforts to improve the EU agri-environment measures, making them more result-based provide an important innovation that could also be pioneered within the current framework for subsidies and credits for the Mexican agricultural sector. Such schemes could potentially have direct **benefits for grassland diversity, forest conservation and pollination services in Mexico**, all of crucial importance when aiming to increase rural resilience under climate change. A number of the private PES programmes in place in the EU could also provide interesting insights for Mexico. For example, the cooperation model for the protection of drinking water in the **Lower Saxony state (Germany)** demonstrates how a levy on water extraction could be used to generate funds to compensate for management and monitoring activities. Alternatively, PES financed by mineral water companies like **Evian and Vittel in France provide insights in involving the private sector in PES financing schemes**.
2. **FISCAL INSTRUMENTS** : The **Portuguese** example of **Ecological Fiscal Transfers (EFT)** indicates that such an instrument could help to increase the designation of regionally-governed national protected areas (NPA) in Mexico. It also appears that the key for increasing NPAs in a direct manner would be to **earmark EFT to the designation or management of NPAs**. Alternatively, increase and earmarking of national protected area entrance fees could be used to directly finance protected area management and maintenance costs. The existing information on the visitors' willingness to pay indicates that an increase in the level of fee would be possible. Hence a political reform in the congress would be needed as the concrete next step.
3. **PRIVATE SECTOR AND IMPACT INVESTMENT**: Hybrid public-private partnerships could encourage private sector investment in emerging new markets in Mexico. The **Natural Capital Financing Facility (NCF)** in Europe is an example of such a strategy: by funding start-up costs for PES, offsets and green markets, NCF helps to cover the initial costs and associated risks of setting up a biodiversity-related business initiative. Such a scheme could be **set up in Mexico by rural banks such as FIRA (Financiera Rural)** or government executive bodies such as the secretariat for agriculture and natural resources (SEMARNAT);

With regard to the Mexican finance mechanisms that could inspire innovative policies and investments in Europe we highlight the following:

4. **PAYMENTS FOR ENVIRONMENTAL SERVICES: The Mexican Matching Funds** programme has seen a sharp increase in private investment in the sustainable management of natural resources and biodiversity in the last years. The success of the program is linked to the **freedom given to local actors** when designing the program and targeting the payments. Although no empirical evidence is yet available to assess the scheme's efficiency, matching funds are seen as a promising scheme for the future with a **potential to deliver benefits to local actors**, and public and private sectors. Reflecting on the Mexican experience, an EU-level initiative could be established to explore such a design at national or regional level, for example in the context of the EU agri-environment schemes.
5. **PRIVATE SECTOR AND IMPACT INVESTMENT:** In Mexico, a wide number of biodiversity entrepreneurs and organisations are teaming up and taking the lead in enhancing private sector involvement in biodiversity conservation, with limited public support. The projects implemented by the **Mexican Nature Conservation Fund (FMCN), el Buen Socio** and FIDA are an example of such **bottom-up multi-stakeholder developments**. The Mexican examples could help to improve the understanding of **stakeholder governance mechanisms** needed to stimulate the bottom-up process for private sector involvement also in Europe.



Finally, a number of conclusions emerge that are applicable in both regions :

6. **PAYMENTS FOR ENVIRONMENTAL SERVICES** : Despite the initial criticism on their potential lack of additionality and negative impacts into the intrinsic motivations of stakeholders, PES schemes have proven to be an **effective auxiliary** for delivering funding for biodiversity conservation. Continued public sector led innovation of scheme designs proves this instrument is still policy relevant. PES programmes need to be **tailored to local conditions** in order to maximise conditionality and additionality, while trying to improve equity and adapting to the local institutional context. To improve the schemes further, increasing the understanding of the conditions under which the **motivations of stakeholders** to conserve biodiversity are either eroded or enhanced is needed. Moreover, there is a need to move towards the **“end of line” type PES schemes that seek to support a permanent shift from biodiversity damaging practices** by providing asset-building incentives to invest into biodiversity-friendly productive systems.
7. **FISCAL REFORM**: Examples from Europe, including the Danish pesticide tax and the Portuguese Ecological Fiscal Transfers, prove that in principle **fiscal instruments can be reformed to deliver concrete biodiversity benefits**. However, environmental fiscal reform requires further efforts to deliver its potential. Institutional inertia and political interests seem to be the main constraints for a wider reform and adoption of fiscal instruments for biodiversity. **A continued informed advocacy from the scientific and civil society communities is required to increase the uptake.**
8. **POLICY MIXES** : Rather than just one instrument, a **mix of different financing instruments** has proved to be the successful solution for delivering identified biodiversity objectives. For example, **PES combined with certification and organic markets** and/or the **alignment of subsidies** to enable private investments can create a supportive framework for delivering concrete net benefits for biodiversity conservation.
9. **HABITAT BANKING** : The **US experience** on offsets and habitat banking indicates that, while such a framework can be useful in certain well-defined circumstances, it has **limited capacity to deliver robust results** in terms of ecologically effective restoration. Although offsets and habitat banking are useful as an **instrument to facilitate the take up of compensation projects**, it has also a high risk of compensating just on paper. The existing experience lets to conclude that such an instrument should **be used strictly following the mitigation hierarchy but not as mainstream policy.**



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Given the unprecedented combination of ecological and social crisis any decision we take now will affect the wellbeing of hundreds of millions of people for decades. On one hand, the multifaceted degradation of ecosystems driven by climate change, natural resources exploitation and accumulation of organic and chemical waste, is pushing the biosphere to a regime of uncertainty. On the other hand, continuing on a business-as-usual trajectory will have dramatic adverse for human development and well-being. The present publication “Innovative Mechanisms for Financing Biodiversity Conservation” aims to contribute to discussions on resource mobilisation and economic instrument design to support the Convention on Biological Diversity through a strengthened cooperation between Mexico and the European Union.

This policy brief outlines the key messages of the technical reports and introduces the mechanisms, providing an overview of promising areas of work in both regions. It assesses cross-Atlantic cooperation possibilities building from the threats and successful experiences implemented by the public and private sectors, and the civil society in Mexico and the European Union.

