

The Opportunities for External Business Investments in Landscape Restoration



Position paper

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Foreword

This position paper “*The Opportunities for External Business Investments in Landscape Restoration*” has been written as a final assignment for the Advanced Master International Development (AMID) - Centre for International Development Issues Nijmegen (CIDIN) of the Radboud University Nijmegen.

This AMID program is linked to my trainee organization the Centre for Development Innovation – Wageningen UR (CDI-WUR). This position paper should therefore be seen in two lights: firstly it is written for an external audience in the context of the AMID program, secondly it is aimed at providing CDI with new insights into the issue of business investments in landscape restoration.

Table of Contents

- 1. Introduction..... 3**
 - 1.1. Landscape restoration defined 3
 - 1.2. External businesses defined..... 5
 - 1.3. Landscape restoration on the international agenda 5
 - 1.4. Relevance for the Centre for Development Innovation (CDI-WUR):..... 6
 - 1.5. Statement 6
- 2. Why external businesses *should* play a role in landscape restoration investment:..... 7**
 - 2.1. Involve the drivers of deforestation and degradation 7
 - 2.2. Alternative sources of funding 7
 - 2.3. Can generate innovative technologies 8
 - 2.4. There is a business case for landscape restoration investors 8
- 3. Why external businesses should *not* play a role in landscape restoration investment: 11**
 - 3.1. Mismatch of time span..... 11
 - 3.2. Investor-driven agenda 11
 - 3.3. Lack of interest and expertise to invest in landscape restoration in the South 12
 - 3.4. Nuancing the counterarguments 12
- 4. Conclusion 14**
- 5. References 16**
- 6. Annex..... 18**

1. Introduction



“Restoring the Atlantic rainforest in Brazil - Warsaw was the stage for the recent UN-Climate Change Conference (COP19). A two-day side event called the “Global Landscapes Forum” was organised to stress the need for agricultural and environmental convergence and it was during this event that

the following case of landscape restoration in Brazil was used as an example. Veracel Celulose: a joint venture between Stora Enso and Fibria, is a state of the art pulp mill and tree plantation in the south of Bahia, Brazil. In its tree plantation, Veracel has adopted a unique land use model, based on the mosaic landscape approach that combines both growing eucalyptus for industrial use and conserving and restoring the native Atlantic rainforest. Moreover, the approach brings agricultural benefits and productivity. Veracel needs clean water and good soils for the tree plantations to be healthy and productive in the long term. Therefore, it is vital for the company to protect the environment in and around the tree plantations. Well-managed plantations can be a part of the solution” (COP19-GLF, 2013; WWF, 2009).



This quote illustrates how degraded forested areas could be restored by the actual driver of deforestation. But does this case study sketches the real potential or it is an example of green washing where logging and unsustainable management continues elsewhere? There have been allegations of green washing especially in the pulp&paper and plantation industries. To address this issue, this position paper will review this specific investor role for role external businesses in landscape restoration projects.

Although I recognize that preventing land degradation in the first place is a better investment than restoration after the damage has been done, I do believe that restoration of landscapes contains a positive message in the sense that so much can still be done and the opportunities are significant. There is a global consensus that nature needs to be restored as agricultural expansion, mining and free grazing of cattle combined with unsustainable exploitation of forests have led to worldwide deforestation and degradation of land. Around 30 percent of the world's forest cover has been cleared and a further 20 percent has been heavily degraded. The consequences are severe, not only locally: loss of fertile soils and livelihood income, drought, but also globally in terms of changes of climatic conditions (WRI, 2013). However on a positive note, there are many opportunities for this degradation to be reversed by restoring these landscapes, which is often referred to as landscape restoration. This implies a deliberate intervention which requires investments, either from governments, donors, private sector, CSOs or by local people themselves. (Ferwerda, 2013, Elson, 2013).

1.1. Landscape restoration defined

The restoration of nature is not something new, people have always been restoring their environment to safeguard their livelihoods. However, the concept of *landscape restoration* is gaining ground in international debates and more attention is given to the up scaling of “good

practices”(van Oosten, 2013). But before going into the definition of landscape restoration, I would like to first focus on the term “landscape”.

Only recently, people working in the forestry sector have been using this term and the same counts for those working in the agricultural sector. According to Terry Sunderland, scientist at the Center for International Forestry Research (CIFOR), a landscape approach entails *“essentially managing complex landscapes in an integrated fashion, in a holistic fashion, incorporating all the different land uses within those landscapes in a single management process”* (CIFOR, 2013). The reason we need to take up this integrated approach is that we have always been segregating functions within a landscape: forest, water, agriculture whilst they are actually inter-connected socially and biophysically. The adoption of a landscape approach allows you to capture the complexity of the different land uses and stakeholders (idem). Moreover, it stresses the uniqueness of each landscape and the need to develop a tailor-made approach for each area. Integrating this approach into the concept of restoration, landscape restoration can be defined as follows:

“turning barren or degraded areas of land into healthy, fertile, working landscapes where local communities, ecosystems and other stakeholders can cohabit, sustainably” (IUCN, 2013).

As the definition explains, landscape restoration does not simply entail planting trees, but instead asks for a more holistic approach where the broader landscape functions are being taken into account. It is about adapting the local practices (be it farming, cattle herding, forestry, mining etc) in such a way that these functions are restored and value is added to degraded land (Sayer & Boedihartono, 2009). Subsequently this can contribute to environmental, social, but also economic goals as economies are dependent on ecosystems. So actually we *“Grow rural economies, not just trees”* as Dominic Elson stated in his study for IUCN (2013:23).

Concrete restoration activities can vary from large scale restoration, such as the example of Atlantic rainforest in Brazil or the Loess Plateau in China (see Figure 1) which requires large investments, to smaller scale restoration which can take place at village or farm level and often requires investments of local actors. Important to note is that restoration almost never happens in an “empty space” and will always have impact on the people present in the landscape, which makes it an multi-stakeholder process (idem).

Figure 1: Large scale restoration of the Loess Plateau in China ,1996-2008



Source: World Bank, 2007

1.2. External businesses defined

The term “business” is very broad and can include several private sector actors and thus needs further defining. In the literature a distinction is made between “local” and “external” businesses, who often have different objectives and modes of operation. The first may mean farmers, local communities and land owners, whilst external businesses include international capital, banks, investment funds as well as domestic investors such as companies. They can invest in the form of capital transactions, but the investment resources can also be broader such as materials, labor, capacity building and employment opportunities (Deweese, 2011). Landscape restoration is often carried out in collaboration with this local businesses, but engagement of the external businesses has become more pressing because of the scale of the problem (Elson, 2013). Therefore, the focus of this position paper will be on the role of these external businesses and not on the local private actors.

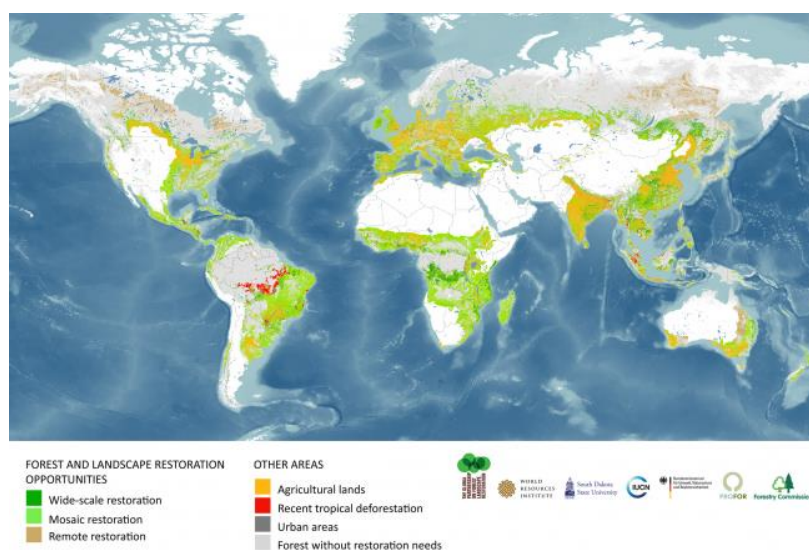
1.3. Landscape restoration on the international agenda

This paradigm shift from sectorial thinking in forestry and agriculture to a more integrated approach such as landscape restoration, is also reflected in international agreements. In 2003, key actors in this field established the “*Global Partnership on Forest and Landscape Restoration*” (GPFLR) with the aim to unite governments, organisations and individuals with one common goal: “*restoring the world's lost forests*” (GPFLR, 2013). In 2011 the Bonn Challenge was established at a ministerial roundtable with the agreement to restore 150 million hectares of deforested and degraded lands by 2020 (idem). This target relates directly to other international commitments such as Convention on Biological Diversity, which calls for the restoration of 15% of degraded ecosystems by 2020 (CBD, 2011), the UNFCCC REDD+ goal and the Rio+20 land degradation target (GPFLR, 2013). It seems that landscape restoration has become fully incorporated in the international environmental politics in the last decade, offering opportunities to support broader goals as climate adaptation (van Oosten, 2013; CIFOR, 2013).

The World Resources Institute (WRI) has taken the next step by conducting a global assessment on forest and landscape restoration potential. A result of this study is an interesting map which illustrates the restoration opportunities - more than two billion hectares worldwide – which is an area larger than South America (WRI, 2011).

These mapped opportunities and international commitments now ask for action, but who is going to pay for this? Landscape restoration will require sustained sources of funding and in today’s world where governments have to deal with decreased budgets, the need to look at business involvement becomes pressing (Schuyt, 2006).

Figure 2: Forest Landscape Restoration Opportunities



Source: WRI, 2011. View larger map in the annex

1.4. Relevance for the Centre for Development Innovation (CDI-WUR):

The Centre for Development Innovation has been involved in projects related to landscape approaches and landscape restoration for some years now. Since 2005, we are a partner of the Global Partnership on Forest Landscape Restoration and we facilitate the online learning network which aims for exchanging information on restoration practices carried out throughout the world. The role of investors has never played a major role in our work, until recently, when we were asked to develop a 5-year project with partners on landscape restoration and the potential role for external business investors. This study can help to formulate a stance for CDI in the further detailing of the project. The scope of this paper is therefore on external businesses who invest in landscape restoration in the South.

1.5. Statement

The following statement will be central in this paper: ***External businesses have to play a role in landscape restoration investments in the global South.*** This position paper is an attempt to convince colleagues within CDI and even a broader audience interested in landscape restoration, that there are still many untapped opportunities for external businesses to contribute to the sustainable restoration of degraded lands.

The controversy of this statement lies in the general perception of businesses as an unreliable and incapable partner in the environment and development sector. It is assumed that their main goal is to realise quick economic returns in a low-risk investment climate. This seems opposite of what is needed for long-term landscape restoration in the global South which requires a specific expertise. Although I do acknowledge that there are certain serious limitations, there are many opportunities as well which are currently not sufficiently explored because of this perception of businesses as the “bad guy” and thus excluding them a priori from the process. I believe that it should be our job to look for innovative solutions that make restoration economically attractive and develop mechanisms that encourage businesses to become involved. Wouldn't we be solving the problems of deforestation and degradation by getting the drivers on our side? (Schuyt, 2006; Ferwerda, 2013).

2. Why external businesses *should* play a role in landscape restoration investment:

2.1. Involve the drivers of deforestation and degradation

Understanding and identifying the drivers of deforestation and degradation is crucial if restoration activities are to be carried out in a sustainable way. According to a recent study by CIFOR (Hosonuma, 2012), the most important drivers for deforestation and degradation are: commercial agriculture, timber extraction and mining followed by more subsistence-driven activities such as fuelwood collection and charcoal production, uncontrolled fire and livestock grazing. Especially in the first three categories, (external) businesses might be the driving force and thus adapting their modes of operation and involving them in restoration activities can have a major impact on the environment.

A next step should be to assess per landscape the key drivers and their potential to contribute to landscape restoration and thus to the broader goal of climate change mitigation. Worldwide many restoration activities are already taking place, however these are not happening at the scale required to restore the broader landscape. The challenge is to upscale these existing activities or look for areas which allow for up scaling (Dewees et al. 2011). This means that external businesses should work together with local businesses and public and civil society actors and improve their strategic cooperation and coordination (Ferwerda, 2013). I believe that the way to achieve this is by aligning commercial interests with the wider economic, social and environmental objectives (see 2.4 for more on the incentives for businesses). This implies that restoration is not a goal on itself, but a means to contribute to a healthy and productive landscape.

An important factor for encouraging businesses, is an enabling political environment. In the recent years, governments are increasingly developing policy measures on the international and national level that enable increased private sector participation in restoration activities (Dewees et al. 2011, Schuyt, 2006). A lucrative mechanism that can support these policy changes is “Payment for Environmental Services” (PES). The idea behind PES is that environmental services (e.g. biodiversity, watershed protection and carbon sequestration) can be sold by suppliers to users. Last September, I visited a PES scheme in the Cidanau watershed in Indonesia where national steel industries downstream pay local communities upstream for restoring their agricultural land so that their water supply is safeguarded. Water thus becomes a marketable product.

This is just one very practical example of how farmers and investors are encouraged to adopt sustainable practices that contribute to landscape restoration. Moreover it illustrates that is possible to align objectives of local communities (livelihood security) with those of national businesses (safeguarding access to water resources).

2.2. Alternative sources of funding

One of the priority goals set during the RIO+20 Conference on Sustainable Development was the target to restore 150 million ha of degraded land by 2020. Based on a TEEB study conducted in 2009, the estimated costs for this initiative are €450 billion over 20 years which is approximately €2.25 billion a year (Ferwerda, 2013). In addition to these costs, public funding is decreasing as well as overseas development assistance (ODA) (Schuyt, 2006).

Moreover, the capacity for implementing restoration activities are limited especially in developing countries (CBD, 2013). The prospects for future finance in agricultural and environmental sectors in the South are therefore relatively weak. In light of these pressing environmental problems and limited financial sources of funding, there is need to look for alternative sources of funding.

In case large businesses would invest more in landscape restoration, bigger investments can be made which in return leads to relatively quicker results. IUCN latest analysis reveals that once 150 million ha are restored, over \$80 billion will flow back into the national and global economies (Ferwerda, 2013).

2.3. Can generate innovative technologies

Throughout the years, many innovative “re-greening” technologies have been developed by businesses and research institutes. These are often science-based, but low-tech which means easy to be used by a big user group at low costs. When organisations involved in restoration acquire an open attitude towards businesses, these inspirational ideas could be captured and connected to businesses, governments and local communities (Ferwerda, 2013). Two examples of such technologies are:

A. Groasis Waterboxx

This device has been invented by former Dutch bulb grower Pieter Hoff. The waterboxx is designed to capture the humidity in the air which is used to water the plant (see Figure 3). This way, water savings are 90% higher compared to other planting techniques. Secondly, the soil will also be improved by using a certain biomimicry technique. According to Hoff, this device can be instrumental when re-greening arid and eroded areas (Groasis, 2013; Ferwerda, 2013).



Figure 3: Groasis Waterboxx
Source: Groasis, 2013

B. Hydroseeding

This is a planting process that uses the slurry of seeds and sprays it on the prepared topsoils (see Figure 4).

This technology is used for the restoration of heavily degraded lands such as former mining areas and ski slopes. It is an efficient way of restoring large areas of degraded land, but the disadvantage is that it is a quite expensive technology and requires user knowledge (GPFLR, 2013; erosioncontrol, 2013).



Figure 4: Hydroseeding in Indonesia
Source: GPFLR, 2013

2.4. There is a business case for landscape restoration investors

Worldwide good initiatives on reducing business' their environmental impact have been set up through the introduction of sustainable and environmental friendly production processes. An famous example are the diverse certification schemes such as the Forest Stewardship Council, Fair Trade and Rainforest Alliance. However, until now business models which move beyond the “do-no-harm” to a “do-good” model have not yet sufficiently been explored.

According to Schuyt (2006:161): “*The key to tapping into private and public sector funding opportunities for forest landscape restoration lies in making it financially and economically attractive.*”

Therefore, it is crucial to identify those benefits for external businesses to invest in landscape restoration. Awareness of these can trigger interest as well as commitment. Willem Ferwerda founder of the Ecosystem Return Foundation argues there is a definite return on investment for businesses (Ferwerda, 2013) These can be categorised into three groups: economic, environmental and social return.

Economic return: the first step when mobilizing investment is to understand that investment is attracted by a value proposition. What is in it for a business to invest in these activities? (Deweese et al., 2011). Restoration contains a positive approach: the message is about “adding value” to a landscape in terms of food, water, topsoil, biodiversity, jobs, aesthetics. So by investing resources, businesses can restore degraded land and gain an economic return from it by e.g.:

- Higher revenues due to a sustainable productivity increase
- Selling the restored and more productive land with profit
- Tapping into new markets for forest and tree products

Important to note is that a site-specific business case and an appropriate form of up-scaling needs to be developed for each unique landscape together with the involved parties.

The point above indicates that there is a financial return for business to invest in restoration, but if we view investment only through the lens of monetary gains then we overlook other reasons for restoring landscapes.

Environmental return: “*There are no economies without ecosystems, but there are ecosystems without economies*” (TEEB, adapted from Ferwerda, 2013: 13). The bottom-line is that economies and societies need ecosystems to become more resilient. Restoration programs can sustain key landscape services for the well-being of people and businesses, thereby also contributing to global challenges such as climate change adaptation and mitigation (Calmon et al., 2011)

Social return: Landscape restoration can also contribute to the local economy by the generations of jobs and an increased income for local communities. Besides these direct benefits, there are also indirect benefits for example by improved infrastructure (Calmon et al., 2011; Schuyt, 2006).

The protection of ecosystems is no longer seen as solely the responsibility of governments and environmental organisations, but increasingly as a role for businesses. Indicated by the points above, engaging in restoration programs does have a return on investment and at the same time can contribute to a good business reputation.

To conclude this chapter, I would like to refer to the broader theoretical debates where this perspective of harmonizing ecology and economy is supported. *Ecological modernization* is an example of a theory that reflects such thinking. It holds an optimistic view that technological innovations can offer solutions to environmental problems which have been created by modernization processes. To do this, we have to look for solutions *within* the

capitalistic system, but an important condition for success is to raise the importance of ecological rationality. Just like political and economic rationality, should ecological rationality be incorporated on political agendas independently from the others. The environment is thus an equally good starting point for economic growth (Mol & Jänicke, 2009).

3. Why external businesses should *not* play a role in landscape restoration investment:

3.1. Mismatch of time span

Restoring degraded landscapes through regeneration, agroforestry, analog forestry or any other form of sustainable landscape management, is a time-consuming process. Ecologists often talk in a time span of 20 years, while businesses often expect a financial return on their investments in the short or medium term. In the literature, authors also address this mismatch of time span in terms of commitment. Below just some of these quotes:

“What is needed are governments, companies and other stakeholders who are interested in long-term, intergenerational projects instead of short-term, lacklustre activities that achieve no real impacts in terms of sustainability” (Ferwerda, 2013: 23).

“Forest landscape restoration is a long-term process and will generally require sustained sources of funding” (Schuyt, 2006:161).

“A basic tension underlies the relationship: Private capital and business flow to activities that generate short- and medium-term financial returns”(Dewees et al., 2011:46).

The challenge is to find external businesses who are committed to a long-term investment, but is this realistic? The idea behind sustainable landscape restoration is to find investors who allow for up-scaling of good practices, so it is not a matter of finding a handful of interested businesses, but a larger business community. For now, it seems that investment in these green technologies are untested investments and therefore includes a higher risk than their business-as-usual approach (WRI, 2012).

3.2. Investor-driven agenda

Landscape restoration should be a multi-stakeholder process whereby a site-specific program is developed in a participatory way. However, the risk of engaging external investors in this, is that they might dictate the agenda that favors them rather than what is best for the landscape and its inhabitants. The agenda for restoration can then become investor-driven which brings along other risks such as land grabbing and green washing (Elson, 2013).

This statement is supported by a PROFOR study by Dewees (et al., 2011) in which they discuss how population pressure has increased the demand for agricultural land and that some investors opt for large-scale investments in plantations or agricultural lands which has resulted into the so-called “land grabs”. In many cases, land is sold as being “underused” or “abandoned”, while actually rural families use these lands to grow food. As a result of these land acquisitions, which were not made properly, those families will be evicted or lose access to these landscape resources (Oxfam, 2013).

Land grabbing is more familiar in the Global South, especially in those countries with a weak land governance where governments have failed to set high standards in land acquisition. The argument to engage external businesses into landscape restoration investments is therefore risky as they might not have the right intentions. These will then be difficult to monitor in countries with a weaker governance.

3.3. Lack of interest and expertise to invest in landscape restoration in the South

The investment climate of a specific country is crucial for external businesses to consider engagement in landscape restoration. As the focus in this paper is on countries in the Global South, it implies that restoration activities often take place in a relatively unpredictable socio-ecological context involving many stakeholders and many competing interests (Menz et al., 2013). The broader political context can also be fragile with weak governance institutions and complex issues such as insecure land tenure. You can wonder, why external business would be interested in these countries where the investment risks are higher compared to the so-called “low hanging fruit” in areas with more stable economies?

Besides the risks concerning the general investment climate, getting involved in restoration may also trigger conflicts related to land tenure and resource access. According to van Oosten (2013:663) studies have shown that large-scale restoration investments *“increase the risk of creating new claims on forested landscapes that may potentially overlap with existing claims, thus creating or exacerbating existing conflicts over land-use rights and resource access.”* Investments in these contexts bear higher risks and could therefore be an important reason for external business not to be interested in landscape restoration investment.

A lack of limited expertise could be another reason for businesses not to engage in this. First it can be a lack of expertise on the activities concerning landscape restoration. One can wonder if these large businesses have the specific knowledge to deal with the more social-institutional side of restoration: local multi-stakeholder processes as well as the more ecological side: the appropriate restoration techniques. Second, they might also lack the general experience and networks for doing business in the South.

3.4. Nuancing the counterarguments

The counterarguments addressed in this chapter are very relevant and do have to be taken seriously when talking about business investments. However, I would like to nuance the arguments and discuss some of the solutions to the above mentioned challenges. To start with the first argument “mismatch of time-span”, this is indeed a frequently mentioned problem and I would therefore suggest to focus on a certain type of external business, because not all businesses would be suitable investors for landscape restoration. So attract those companies that have a “green” vision, receive large benefit flows from landscape services or those that understand the importance of long-term commitment such as family companies, social entrepreneurs and entrepreneurial development banks (Ferwerda, 2013). Another solution could be to establish long-term trust fund which is supported by short-term funding of interested businesses who would then have a quick exit-strategy. This is currently being set up for post-mining restoration in Indonesia and the US (GLF, 2013).

With regard to the second argument on the investor-driven agenda, I again refer to the critical selection of suitable businesses stated above. But there is also a role for the government and the international community in terms of regulations. I would like to propose the development of a set of voluntary guidelines specific for landscape restoration which should be enforced by national governments. Through these guidelines, governments can favor good investors and encourage sustainable landscape restoration in social,

environmental and economic terms and thereby minimizing the risks of land grabbing and green washing (Deweese et al., 2011).

Lack of specific expertise and interests was mentioned as a third counterargument. I argue that restoration programs should always be carried out in a partnership which means that local actors, governments, experts could all play a role by contributing in their own field of expertise. Businesses might not have the specific knowledge the traditional actors have, but there are many complementary ways they could contribute in terms of innovative business models, access to other networks and technology (see 2.3). CSOs and knowledge institutes such as CDI should therefore not be replaced by businesses, but they should look for synergy by focusing on their own added value.

4. Conclusion

In this position paper, I have shown that there is a need for landscape restoration, that there is a large potential for restoring degraded lands, but that there is also a demand for investments to carry out sustainable restoration activities at the required scale to have an impact. *Therefore, I argue that external businesses should play a role in landscape restoration investments in the South for several reasons.* First, we would have a greater impact if we would include the drivers of deforestation and degradation in restoration activities. This can be done by working in partnerships and designing financial mechanisms that allow businesses to get engaged. Second, we have to pay a price for restoring our degraded ecosystems and therefore we need to look at alternative sources of funding. Interestingly, there is growing belief that businesses can become a partner in environment and development projects and are no long perceived as only the “bad guys”. More and more businesses have become more aware of their sustainability status and want to improve their modes of production. This idea that economic growth can go together with environmental protection is also reflected in the theory *ecological modernization* where technological innovations are seen as part of the solution to environmental problems. Examples of hydroseeding and the waterboxx have shown that indeed these low-tech design can contribute to restoration activities.

Engaging external businesses in landscape restoration also bears risks and limitations which have to be taken seriously such as the relatively short-term commitment of businesses which is at odds with the long-term finance needed for restoring degraded areas. Another risk is that the investor might dictate the agenda which is not in the best interests of local people in the landscape. A last point of concern is the lack of specific expertise and interest to invest in restoration activities in the South. The investment climate might be too risky and unfamiliar for them.

To minimize these risks and to make the engagement of external businesses effective, I believe that the following three aspects have to be stressed:

- 1. Start at landscape level:** during the Global Landscapes Forum in Warsaw (November 2013) it was repeated over and over that participation of local actors in these landscapes is key for restoration or any other project to be sustainable. So restoration programs should always start at the landscape level where its dynamics institutions and stakeholders can be identified.
- 2. Look for suitable partnerships:** after gaining a better understanding of a specific landscape, a partnership should be established involving local actors, the government, CSOs, experts and private sector (local or external). External businesses can play an important role here, however focus should be on those suitable businesses which have a genuine sustainable vision.
- 3. Design voluntary guidelines on sustainable landscape restoration:** FAO has drawn voluntary guidelines on the responsible governance of tenure of land, fisheries and forests. It would be very useful to further tailor some of these guidelines to landscape restoration which could favor good investors. Some of the issues addressed in this position paper could be further developed and integrated as well such as:

- Alignment of investor objectives with local and global needs
- Alignment to international agreements such as the Aichi targets
- Multi-stakeholder approach in program design and implementation
- Building on existing institutions

To conclude this paper, I would like to focus on the role of CDI regarding the topic of external business investments in landscape restoration. Dewees stated in his study for PROFOR: *“More explicit analysis of the convergence of private and public interests in landscape restoration can help identify promising opportunities for cooperation”* (Dewees et al., 2011:4). I agree with Dewees in that more evidence is needed on success stories of external business engagement and strategies for upscaling. Here I see a role for CDI as a knowledge broker, especially since we are on the brink of a five-year project regarding this topic which allows us to share our results and design success criteria which can contribute to future sustainable landscape restoration projects.

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Other:

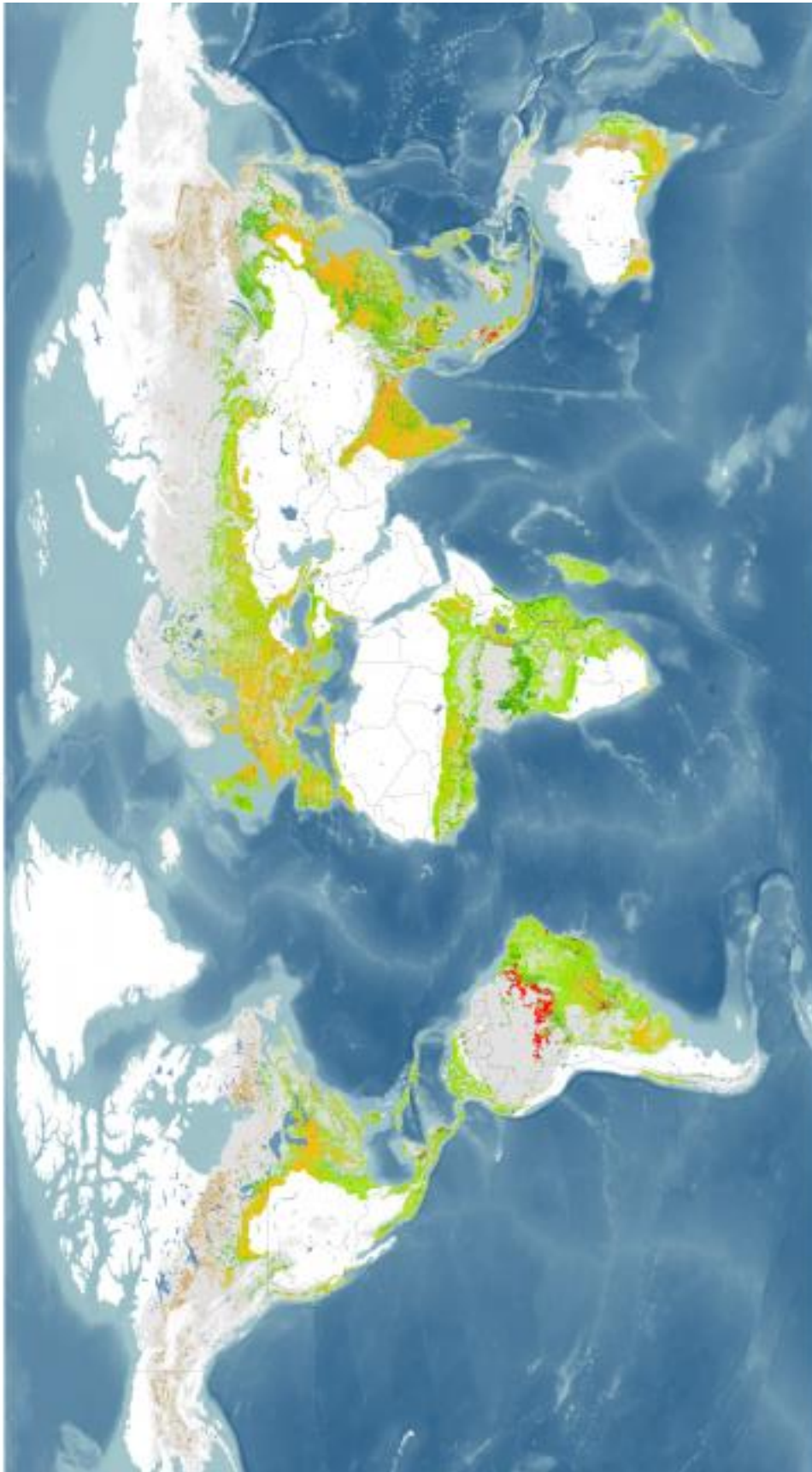
- ❖ Presentation: Willem Ferweda: Ecosystem Return Foundation – restoring large scale degraded ecosystems through partnerships with businesses. Wageningen: 1st of October 2013
- ❖ Event: GLF - The Global Landscapes Forum. Two day side-event of the UNFCCC COP19 in Warsaw: 16-17 November 2013.
- ❖ Field visit: Cidanau Watershed – PES scheme. West Java, Indonesia. September 2013

6. Annex

A World of Opportunity for Forest and Landscape Restoration



BONN CHALLENGE
on forests, climate change
and biodiversity 2030



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| FOREST AND LANDSCAPE RESTORATION OPPORTUNITIES | OTHER AREAS |
| <ul style="list-style-type: none"> Wide-scale restoration Mosaic restoration Remote restoration | <ul style="list-style-type: none"> Agricultural lands Recent tropical deforestation Urban areas Forest without restoration needs |

