



WATER, FORESTS AND PEOPLE – BUILDING RESILIENT LANDSCAPES

Swedish Forest Agency, 4 May 2015

This was the second seminar arranged by the Swedish Water House cluster group on Water and Forests. Keynote speakers illustrated the importance of intact and restored landscapes to water resources, livelihoods, biodiversity and sustainable development potential. Case studies exemplified how forests are strategically used to secure clean water to urban and rural societies in developing countries, as well as for the production of food, fibre and fuel.

After lunch, participants were invited to discuss how stakeholders from the Swedish forest sector could initiate and support innovative activities and projects that support restoration of degraded forest landscapes and sustainable management of water resources, trees and forests in landscapes in developing countries.

The seminar was held in English.





SUMMARY CONCLUSION

- Links between forests/trees and water are fundamental. Trees require water and trees in landscapes are critical to maintaining the health of the local and regional water system. Trees and forests can contribute to resilience of landscapes to provide goods and services, including access to clean water and mitigating negative water related disasters.
- Such landscape approaches can address many persistent global challenges such as poverty alleviation, biodiversity conservation, food and water insecurity, as well as mitigation of and adaptation to climate change.
- Mechanisms are being developed and tested, which provide incentives to communities and land managers to manage forests and trees on farms to maintain predictable supplies of clean water to downstream water users.
- The importance of the relationships between trees and water are increasingly recognised both in science and in policy.
- To secure satisfactory management of water resources in landscapes some urgent policy development is needed, including stocktaking and lesson learning. Strengthening of existing or new institutional mechanisms which cross-administrative and sectorial boundaries is also needed.
- Large-scale land-use planning by governments and forest industries can support resilient landscapes in developing countries in tropical and semi-tropical regions in the world, by planning for mosaic landscapes and supporting local livelihoods by the inclusion of local stakeholders in tree and forest management.
- Development of forest owners/or users association in these areas is important to empower local people and enable them to manage forest and water resources sustainably. Experience from the development of forest owners association in Sweden can be useful.
- Sweden has a smorgasbord of tools and experiences that we have used in our restoration process over the past 100-150 years. These can be shared and discussed with forest stakeholders in developing countries in bilateral dialogues and enable long-term co-operations.
- Funding can be found with international funds, as well as from Sida.
- From such a broader dialogue, specific aspects of Swedish competences could be chosen for a longer programme adapted to the needs of a specific counterpart. This could for example be done in Training of Trainers like Sida's International Training Programs (ITP), twinning programmes between government agencies, academia and industry, among others.
- Sweden has an international reputation of being skilled in facilitating processes, both nationally and internationally. We can use this capacity and experience to support stakeholder dialogues and building strong networks of existing partners and new partners.
- To share these experiences and to facilitate processes could be part of the Swedish Government's Policy for Global Development.





SUMMARY OF PRESENTATIONS

Resilient forest landscapes – threats and opportunities

Anders Malmer, Director SLU Global and Berty van Hensbergen, Chair of the Board, SSC Forestry

Resilient landscapes are able to provide an ongoing supply of goods and services in the face of normal environmental shocks and the long-term pressures caused by global change. Resilience does not mean that the forest does not change but that the system can accommodate changes in land-use or to increase and restore productivity in such a way that the goods and services supplied remain adequate or even improved.

Our understanding of the role of trees and forests in regulating water at the local level is based on the relative importance of the processes of infiltration, evaporation, surface runoff and subsurface flows. Trees have higher rates of evapotranspiration than other vegetation types which lead to higher use of available water. However, trees also increase water infiltration, thereby reducing surface runoff and increasing the proportion of available water in the soil and a better delayed water resource into dry seasons in groundwater and more even stream flow. The increased evapotranspiration from trees is a local loss, but contributes to increased atmospheric moisture. There is an increasing scientific base for the role of this atmospheric moisture to contribute to regional and continental support for precipitation. Forests and trees thus have potential positive and negative impacts to be balanced.

In general, it can be inferred that in most cases the presence of forests in the landscape provides both local and regional benefits that far outweigh the costs of the reduction in total water flow in rivers. Specific situations where forest plantations have been problematic are semi-arid grasslands which do not support forest naturally, and where trees do not improve already high infiltration, for example in South Africa. Better empirical knowledge on a landscape level would allow determination of optimal tree densities and forest locations in different landscapes. The restoration and maintenance of trees and forests is a key priority for functional and beneficial hydrological regimes in many cases. Notably, forests can offer far more than just water: they also furnish a sustainable supply of a number of resources with the potential to support and improve livelihoods.

The understanding of forest landscape hydrology is to a large extent based on experimental results from plantations in moist to wet environments and there is much less understanding of the role of forests and scattered trees in semi-arid environments. There is therefore a need for further research in this area. Furthermore, our understanding of the role of forests and water has been largely based





on studies of the impacts of forests on water. Much less is known about the impacts of water on forests; much of this is inferred from observation and not from experiment.

Forests exist in a social and economic context. They will only continue to exist if the benefits that can be derived from them by the local communities that live with them outweigh the benefits that can be achieved from other land uses, and where local communities have the capacity to protect these resources and their rights to use them. The key limitation to sustainable forest management is the inability of forest rights holders to achieve sufficient value from their resource. Apart from inefficient systems for governance and tenure, this is often caused by inefficient or non-functional markets and sometimes even illegal competition for valuable timber resources. Lack of knowledge of sustainable forest management in different situations is also an important contributing factor. Significant support to forest users in low income countries is required to change this situation so that they can achieve fair value for their products and thereby come to favour forest management as a means to an improved livelihood.

The Swedish forest history offers many examples of how such support can be provided and how stakeholders can be empowered to achieve the values from their forest lands. These values are needed to sustain the forest-human system in a resilient way.

Landscape approaches, potentials for water, forests and people

James Reed, Forests and Livelihoods Programme, CIFOR

Landscape Approaches (LA) have the potential to address many of the persistent global challenges we currently face such as poverty alleviation, biodiversity conservation, food and water insecurity, and adaptation/mitigation to climate change. LA also provide a framework with great potential to contribute to the fulfilment of a number of the forthcoming Sustainable Development Goals. However, challenges remain, and we must continue to co-ordinate our efforts in a collaborative manner to further the development of LA both in theory and practice. Learning from recent conceptual and practical experiences will aid these efforts, along with acknowledgement that a landscape approach is not a panacea and will need to be contextualised to address the challenges within a given landscape.

LA can be seen as a framework to address the increasingly complex and widespread social, environmental, economic and political challenges that typically transcend traditional management boundaries. Such a framework should attempt to bring together multiple stakeholders from multiple sectors across multiple scales to find best management solutions to the inevitable trade-offs that occur within complex, dynamic landscapes. CIFOR have been broadening their landscape research





agenda since 2008 with multiple partners. The concept is not new, but it is increasingly recognized that a refinement of prior integrated management strategies is required. Further, there is a need to achieve a broader understanding of the meaning and utility of a landscape approach. Therefore a systematic review is ongoing, to both frame the concept and analyse how effectively such approaches have been implemented within the tropics.

One example of a landscape approach in practice is the Halimun/Salak National Park in Indonesia. Despite being situated in one of the country's most populated areas and being surrounded by agriculture, settlements and industries (e.g. Danone Aqua which bottles five billion litres of water each year in Indonesia, 15 per cent of which is provided by the forested mountain areas of Halimun and Salak), the national park provides the majority of the drinking water for the Jakarta basin. Industry, local communities and government work together to protect the national park and maintain the provision of vital ecosystem services for agriculture, water, handicrafts and tourism. Applying an integrated landscape approach requires identifying and appropriately managing trade-offs between the different land users of the landscape, and this is not always easy. All users will win some and lose some, but the objective of a landscape approach is to win more and lose less.

Landscapes are dynamic and as such management strategies need to be as flexible as the landscape to which they are to be applied. The landscape approach conceptual framework (Sayer et al. 2013) recommends adaptive and integrative strategies to resolve conservation and development trade-offs. However, challenges remain. Tools and metrics to measure social, biophysical, and production values over large temporal and spatial scales need to be developed and refined. Once established, such tools might provide the information that helps to address further challenges: that of overcoming sectorial boundaries, both at practitioner and policy levels, and engaging the private sector more fully in landscape design and management.

Forest ecosystem services for water – capturing values for rural and urban communities

Jan Cassin, Water Initiative Director, Forest Trends

Forest Trends is a non-profit based in the U.S. with the mission to catalyse markets and policies to drive investments in the natural infrastructure of the planet – wetlands, grasslands, and forests.

- Providing new tools and information resources for practitioners and policy makers.
- Facilitating dialogues and partnerships to bring diverse stakeholders together.
- Developing practical and scalable applications – projects, tools, and policies.





Forest Trends has a number of initiatives, including the Ecosystem Marketplace (a website which tracks trends in conservation finance and environmental markets), the Marine Ecosystem Services Program, Forest Trade and Finance, and Public-Private Co-finance. The two programs most closely linked to sustainable forest management are the Water Initiative and the Business and Biodiversity Offsets Program. The Water Initiative is focused on scaling up investments in the natural infrastructure of watersheds, ensuring sufficient clean water for people and nature. Currently, on-the-ground demonstration projects in six countries are supported, developing tools for practitioners, and building knowledge.

The link between forests and water is fundamental – forests require water and forests, along with other natural systems, are critical to maintaining the health of the global water system. Because forests in particular play key roles in the water cycle, forests can be an extremely important tool for managing water supply, maintain quality, and mitigating hazards. Forests can provide more cost effective solutions, but also importantly can complement and enhance the operation of more traditional ‘gray’ infrastructure for water. Water treatment costs increase significantly as forest cover in a watershed declines, and there is good documentation from cities around the world on the water treatment and flood control costs that can be avoided through watershed protection.

However, watershed protection alone is not enough, as the forests in most watersheds support people whose livelihoods depend on using or converting forests to support economic activities. The concept of investments in watershed services has developed to support both healthy watersheds and thriving livelihoods. The concept aims to find mechanisms that provide incentives to upstream communities and land managers to manage forests and farms to maintain predictable supplies of clean water to downstream water users that benefit from healthy watershed services upstream. These programmes have grown in popularity – as of 2014 a land area the size of India was being managed under these programs – mostly via forest protection, reforestation, and sustainable forest management or agroforestry.

Three ongoing programmes in Latin America illustrate the wide diversity of these mechanisms and the factors contributing to success:

- Small watersheds in Bolivia where upstream and downstream communities are connected through family and communal ties, there is strong local knowledge on the connections between forests and water, and the communities negotiate reciprocal agreements whereby upper watershed land managers receive supplies and technical assistance for alternative economic activities, paid for by water tariffs in the downstream towns.





- The mega-city of Lima, Peru, where national water regulators and municipal water utilities must justify watershed protection as a viable complement to build infrastructure to maintain water supplies. Comparative information on the costs and benefits of ‘green’ vs. ‘gray’ infrastructure shows that green infrastructure can be as or more cost effective and has provided the basis for significant new investments in watershed protection.
- In some watersheds in the San Martin region of Peru, relying on a single water user to pay for watershed services may not provide sufficient resources. In these cases, ways to value the multiple benefits of forests are being explored – for water but also for other ecosystem services, such as non-timber forest products or supporting local fisheries, as well as climate mitigation. Tapping additional sources of investment based on these multiple values of forest can provide more sustainable funds for watershed management, better support to local livelihoods, and benefit a broad array of stakeholders.

Challenges remain in terms of clearly linking water outcomes to forest management practices, measuring outcomes and in particular moving from outcomes at the site or parcel level to the scale of a whole watershed, and communicating the value of forests for water in ways that a diversity of stakeholders understands. However, these challenges may provide significant opportunities for the Swedish forest experience to contribute to better management of forests and water in developing countries in tropical and semi-arid regions.

Policy support to resilient landscapes

Thomas Hofer, Team Leader Watershed Management and Mountain Forestry Department, FAO

The importance of the relationships between forests and water is increasingly recognised, not only in the scientific world but also in policy discussions. Accordingly, forests and water is a priority topic in the work of FAO’s Forestry Department. From FAO’s perception, the following urgent policy needs emerge to secure satisfactory management of water resources in the forest landscape:

1. Stock-taking and lessons learning, particularly at national level, of existing legislations, policies and institutional mechanisms related to forests and water and creation of capacities.
2. Strengthening of existing or setting up of new institutional mechanisms which cross administrative and sectorial boundaries.
3. Rethinking common myths in the understanding of forests and water linkages and ensuring a continuous scientific monitoring of forests and water related activities and projects.
4. Ensuring the communication of research results related to forests and water interactions into policy relevant and action oriented messages and recommendations.





5. Integrating forests and water-related interventions into the broader landscape planning and implementation.
6. Harmonising policy frameworks and trade-offs between the consumption of water by forests and trees and the water-related environmental services they provide.

So far, no formalised global processes related to forests and water and landscape rehabilitation exist. However, FAO is currently engaged in two frameworks that are of relevance to the forests and water agenda and the building of resilient landscapes:

- The Forests and Landscape Restoration Mechanism, which was launched on the occasion of the Committee on Forestry in 2014 and which is linked to the Bonn Challenge – a global aspiration to restore 150 million hectares of the world’s deforested and degraded lands by 2020.
- The Forests and Water Action Plan that calls for action in the areas of science, policy, economics and practices. This Action Plan was drafted over the last two years by an expert group and partner organisations from around the world and will be launched at a two-day special event (8-9 September) on the occasion of the XIV World Forestry Congress in Durban in 2015.

The sustainable development goals, which are currently in the final stages of negotiation by the United Nations General Assembly, make reference to forests and water in two goals/targets and will provide in the future a very solid policy framework to promote forests and water related initiatives and to put them into a landscape context:

- “6.6 by 2020 protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes”
- “15.1 by 2020 ensure conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands...”

The target 2020 might in the end be changed into 2030. To measure outcomes, finding the right set of realistic indicators is important.





How can forest industries support resilient landscapes

Ola Svending, Manager Environmental Affairs, Stora Enso

Stora Enso is a leading provider of renewable solutions in packaging, biomaterials, wood and paper to global markets. The company operates FSC certified plantations in five areas in South America and Southeast Asia. All areas have suitable climate, precipitation and soil for eucalyptus plants.

In Guangxi, China, Stora Enso leases existing eucalyptus plantations in remote hillside areas that do not compete with agriculture. A low-density plantation strategy favours ground vegetation, which adds biodiversity and reduces soil erosion. Water quality and quantity is improved in a series of villages through a shared value creation pilot project: <http://waterguangxi.com/>.

In Veracel, Brazil, about 50 per cent of the company's land is set aside to re-establish natural forest. The previously prevailing Atlantic Rainforest was felled in the 1960s and 70s by other industries, since when the land has been used for pasture. Today, Stora Enso re-create some 400 hectare rainforest annually, mainly in valleys and close to watersheds, using species natural to the specific region. This reduces soil erosion, creates water buffer zones and creates corridors of fauna and flora connecting original rainforest remnants. Carbon benefit measurements have not been accounted for, and species replanted in the set aside areas are not accounted for in terms of commercial value.

See more at https://www.youtube.com/watch?v=iwrV_yQ46Q0

Empowering forest smallholders – a key to secure water resources?

Christer Segerstén, Chairman, Södra Skogsägarna

Founded in 1938 and currently with 50,000 members, Södra is Sweden's largest forest owner membership association. The overall assignment for the association from its members is to promote the profitability of forest estates through responsible forest management, sales of forest products, market rates and business and policy lobbying.

Södra has developed from being a simple membership association to a successful company and a strong stakeholder in Swedish forest industry. Today, Södra's members own forests and process wood products to sawn timber, pulp and bioenergy. Södra employs some 3,500 people, and has annual sales of SEK 17 billion. It is a Swedish company, operating on the global market.

Managing water resources is important for the business. Ten years ago the industry experienced oil peak, now it is water peak. Therefore, Södra's capacity building and training courses are not only about efficient forestry, but also about how to take care of water and biodiversity. In Swedish





forests, water consideration is focused on how to create functional edge zones and take extra care at the so-called discharge areas, as well as to reduce rutting/soil damage.

Södra, together with the other forest owners associations in Sweden, would like to expand its international network. Södra is currently engaged in the Right Holders Group, supported by the Global Alliance of Community Forestry, the International Alliance for Indigenous and Tribal Peoples of the Tropical Forest and International Family Forestry Alliance. They have an ongoing exchange with smallholders in Kenya, and have also been involved in a dialogue with national, regional and local forest authorities in Indonesia. But, Södra wants to do more and plan a side event together with Sida at the World Forestry Congress in Durban. Södra has a lot of knowledge in terms of co-operation and empowering smallholders. Sharing knowledge on co-operation is useful for people, forests and water.





SUMMARY OF GROUP DISCUSSIONS

Participants – including speakers and conveners – were divided into three groups with three different themes: Water, Forests and People. All groups discussed the overall issue for the seminar; *What Swedish knowledge/experience can support restoration of landscapes and sustainable management of forest and water resources in developing countries in tropical and semi-arid regions?*

The group discussions are an important input in an ongoing process for the seminar conveners, to propose projects and activities where the Swedish forest sector can contribute towards a more secure water resource management in forests globally. To keep as much of the nuances and pieces of information for the following discussion and conclusions in the cluster group, the group- and plenary discussions are edited to a minimum below.

General Background

The seminar “Vision for the World’s Forests”, 16 December 2014, highlighted several challenges related to forests and water, but also promising ways forward. The effects of deforestation on water, biodiversity and climate were clearly demonstrated. Restoration of productivity and deliverance of ecosystem services from degraded forests in parallel with sustainable management of forest landscapes was repeatedly mentioned as crucial.

Research by World Resources Institute give that there are more than two billion hectares of former or degraded forest land relevant for restoration – land that today does not generate the products and services for which it has the potential. A general term to include the regain of ecological integrity as well as to enhance human wellbeing is “Forest Landscape Restoration”. More recently, the term has developed and FAO use “Forest and Landscape Restoration”, adapted from the “Global Partnership on Forest and Landscape Restoration (GPFLR).

The significance of addressing institutional aspects and accommodating different stakeholder’s interests as part of a landscape approach was demonstrated during the seminar. Including and empowering the many rural stakeholders in restoration initiatives in developing countries was stressed as crucial. As part of this, their land- and/or user rights need to be secured as well as their possibility to earn a decent income by providing forest products and services on a competitive market.





Forest group

Lead by Thorsten Celander, Swedish Forest Agency and Ola Svending, StoraEnso

Introduction

The development of a successful Swedish forest sector has to a large extent been a forest restoration “project”. A combination of enabling policies and institutional frameworks, the development of competitive forest companies, the formation of strong forest owner associations, research and education with operational implications, as well as an active and engaged civil society, have all contributed to this achievement and to the development of sustainably managed forests in Sweden.

Sustainable management of forests and restoration of degraded forest lands has the potential to provide incomes from a variety of forest and tree-products all over the world. Incomes from timber, fibres and bio-energy will be the most important ones also in the developing countries, but in more densely populated areas agroforestry and wood lots can produce other non-timber products such as fruit, fodder etc. In less populated areas, natural forests can provide incomes from recreation and tourism.

Payment for eco-system services could become an important part of income – especially in restoration and protection situations where short-term incomes from the forest products are small or non-existing, and major investment in management are necessary. Jan Cassin and James Reed discussed in their presentations strategies to create a mix of income-streams to make it possible to secure resilient landscapes and a good livelihood for local people. Ola Svending shared experiences on how the forest industry can support resilient landscapes and sustainable livelihoods.

Can the Swedish experiences of combining production and environmental considerations in the forest landscape contribute towards restored and sustainably used mosaic landscapes in tropical and semi-arid regions?

Group assignment:

1. Make a list of the key success-factors for Swedish forestry – starting from 100 years ago. How was this success achieved?
2. Based on this list, suggest a strategy to share these experiences with the stakeholders in developing countries. Focus on one or two key areas where the group have experience and interest.
3. Can persons/organisations included in this group also be partners in this future work? Try to identify synergies where Swedish stakeholders have common interests with the stakeholders in these regions to build new, (policy, business or aid or a combination), alliances. Do you have ideas on financing?





Outcome of discussions

Before the group started to discuss the specific questions listed above, a general discussion about the development of "forestry" in Sweden over the past 100-150 years resulted in an overall conclusion that while there are convincing examples of many successes there are also examples of failures or less successful interventions. Both successes and failures should be considered as lessons learned. As a consequence terms such as "success stories", "Swedish model" etc., are not the most appropriate. A more humble approach should not hinder our ambition that we have something to offer.

Swedish forest sector development can be viewed as a very successful "restoration programme" in terms of reforestation and restoration of degraded land and forests particularly as this has been achieved while at the same time providing raw material to the forest industries. The forest sector has been a significant contributor to Sweden's export earnings and an important source of employment and rural development for many years.

Other "values", such as environmental services and social/cultural considerations, were not initially part of the "restoration agenda". These issues gained increased attention after the Stockholm Conference in the seventies and after UNCED in the 90s. They could be seen as significant aspects of "today's" restoration agenda.

1. Make a list of the key success-factors for Swedish forestry – starting from 100 ago.

Key success factors:

- Dynamic and relevant policy development and effective implementation relating to successive development of societal goals.
- Long-term profitable forestry production and early introduction of refinement of forest products (pulp and paper industry important in the Swedish case).
- Establishment of land rights/forest tenure rights.
- Predominant use of indigenous species.
- Good knowledge of the forest resources and forest eco-systems (forest inventories, research and education).
- Establishment of "Wood measurement associations" as an independent body ensuring fair prices in supply chain.
- Rights based policy approach, transparent societal development, little corruption and gender approach (in later years).
- Many forest smallholders with increasing policy/economic influence.
- Fruitful policy dialogue between stakeholders.



Less successful aspects or failures:

- Restoration was primarily and initially a question of managing forests and forest land in order to enhance growth and wood for the market/industries in Sweden.
- Environmental considerations (bio-diversity, water aspects etc.) appeared on the agenda as a result of the Stockholm conference in the seventies, UNCED in Rio in the early nineties and national debate. Social considerations have been systematically highlighted even later.
- An indicator of the previous points is that Sweden has relatively small areas of protected forests particularly in more fertile sites and in southern Sweden.
- In this sense one could perhaps claim that Sweden since some years back has entered a second “restoration” phase in order to address these challenges in different ways, for example by increasing biodiversity values in managed forests.
- In the 1950s – 70s the tree species in focus was primarily Scots Pine and Norwegian Spruce, while deciduous species like e.g. Birch and Aspen was considered as “weed”. Later, from the 80’ies, broad education in the sector has stressed the ecological adaption of species and forest management adapted to site specifics.
- Larger scale introduction of alien tree species since the 70s has been problematic.

2. Suggest a strategy to share these experiences with the stakeholders in developing countries.

- Instead of us defining the needs and prescribing what to do, the group tended to favour a “smorgasbord” of experience to share, this smorgasbord should be shaped to fit the intended audience as well as possible to implement according to known prerequisites.
- Fundamentals like legal compliance, human rights, democracy and gender equality needs to be highlighted, as well as transparency and accountability throughout the supply chain.

3. Can persons/organisations included in this group also be partners in this future work?

The group believed that an important prerequisite would be to go beyond traditional silos and use inclusive dialogues between different actors.

- One strategic entry point could be to assess existing organizations/partnerships/networks and build on them. Organizations mentioned as examples were the Food and Agriculture Organization of the United Nations (FAO) and the Rights and Resources Initiative (RRI).
- The cluster group’s further work on synthesis needs to be relevant in relation to many of the international processes that are particularly important e.g. SDG and the Climate Change agenda. This is a challenge in itself, as neither “forestry” nor “water” are rarely highlighted in their own rights in many of the more significant global processes. The water and forest agenda needs to be integrated in all land-use and especially with agriculture. This is not necessarily a disadvantage, but points to the need of being very strategic.



People group

Lead by Klas Bengtsson, SSC Forestry and Eskil Matson, Focali

Introduction

People in rural areas are key stakeholders to achieve sustainable management of natural resources. Sweden has unique experiences of successful inclusion of relevant stakeholders to be part and contribute towards responsible management of forest resources. One significant example is the empowerment of forest smallholders in Sweden and the development of Swedish forest owners associations. The development of one of those associations, "Södra Skogsägarna", was presented by Christer Segerstén.

Can the Swedish experiences in empowering forest smallholders and the formation of forest owners association inspire similar but locally adapted processes in other countries? Would empowerment of rural people in the developing countries contribute towards restored and sustainably used mosaic landscapes in developing countries in tropical and semi-arid regions?

Group assignment:

1. Make a list of the key success factors for the Swedish forest smallholders – starting from 100 years ago. How was this success possible?
2. Based on this list, suggest a strategy to share these experiences with forest smallholders and other stakeholders in developing countries. Focus on one or two key areas where the group have experience and interest.
3. Can persons/organisations included in this group also be partners in this future work? Try to identify synergies where Swedish stakeholders have common interest with the stakeholders in developing countries to build new, (policy, business or aid or a combination), alliances. Do you have ideas on financing?

Outcome of discussion:

1. Key success-factors for the Swedish forest smallholders

- Long-term tenure rights, stability and access to markets.
- Revenues through common ownership.
- Successively improving infrastructure on many levels.
- A democratic society and governance at all levels are key for property rights and family forestry.
- Functional legal system and well organized forest smallholders to handle a legal system.
- More lately, certification facilitates reliable and sustainable supply chains.
- Existing industries and markets and safe economic return.





2. Suggest a strategy to share these experiences with smallholders in developing countries.

- International sharing of knowledge, training programmes.
 - Dialogue between Swedish stakeholders has been key and can be shared.
 - Use experience from forest owners organisations.
 - Sweden could initiate a platform to have courses in democracy and how to organize oneself in a forestry context.
 - New communication technologies, e.g. smartphones and pads.
 - Existing systematic approaches to fair efficient and transparent supply chains.
- Start with pilot projects in countries and then scale up.
- We should primarily approach countries where governments contribute to inefficient system. The whole system cannot be approached at the same time, but start with one or two areas that are easy to start improving.
- To help support the development of sustainable forestry among small holders is important, and also access to markets for sustainably produced forest products. Group certification can be an incentive for forest smallholders to get organized and transfer to sustainable forestry. Group-certification in Chile is one example of an embryo where local stakeholders start organizing themselves and start discussing what is right or wrong – the individuals start feeling responsible.

3. Can persons/organizations included in this group also be partners in this future work?

YES, for example by initiating international funding to support forest smallholders and local enterprises/entrepreneurs including:

- Forest user's organizations
- Forest management
- Local industries
- Marketing



Water group

Lead by Lotta Samuelson, SIWI/Swedish Water House and Linnea Jägerud, Swedish Forest Agency

Introduction

Trees and forests are central to managing water resources at a landscape level. On a general level, there are three main water challenges; (i) too much; (ii) too little; and (iii) too low quality. Throughout the seminar the central role of forests and trees for safe access to water of good quality was illustrated. Global needs from growing populations coupled with climate change will within short time put the water resources under very large and increasing pressure.

In this perspective the regulating role of forests on the hydrological cycle in different landscapes will play an increasing role. This function can be maintained and improved by many actions like forest conservation, sustainable forest management and increasing tree density in agricultural landscapes with both food and forest production. Improved water resource management needs to be an integrated part of land management and vice versa. Sustainable forest management and tree planting will be key factors to manage water resources more sustainably.

Water availability is not an issue in Sweden, but water quality is a growing concern for forest management. Water protection is managed with a combination of regulations and informed dialogues between stakeholders. Are there institutional or operational experiences in Sweden that could contribute towards better consideration to sustainable management of water resources in landscapes with forests and trees in developing countries in semi-arid regions of the world?

Group assignment:

1. Make a list of the key milestones and the most relevant water protection activities in Swedish forestry today. How did these come about? What have been the main drivers?
2. Based on this list, suggest a strategy to share these experiences with the stakeholders in developing countries. Focus on one or two key areas where the group have experience and interest.
3. Can persons/organisations included in this group also be partners in this future work? Try to identify synergies where Swedish stakeholders have common interest with the stakeholders in developing countries to build new (policy, business or aid or a combination) alliances. Do you have ideas on financing?





Outcome of discussion:

1. Key milestones and most-relevant water protection activities in Swedish forestry today:

- Enabling conditions for private forest owners, for example:
 - Suppression of corruption.
 - Establishment of forestry owner association.
 - Establishment of the Swedish wood measurement association.
 - Education/capacity building within forest companies, forest owner's organisations and at the Swedish Forest Agency, on forest water resources management.
- Enabling conditions and frameworks, such as:
 - Progressive development of the Swedish Forestry Act during the 20th century, and the paradigm shift in the 1994 Act, where production and environment were set as equal objectives in forestry.
 - Mapping of forest, enabling planning for water resources management.
 - Including science in forestry management and monitoring.
 - The Warsaw Resolution on Forests and Water, taken at the Fifth Ministerial Conference on the Protection of Forest in Europe 2007. It recognises the close interrelation between water and forests and the obligates signatory nations to maintain and enhance the protective functions of forests for water and soil, as well as for mitigating local water-related natural disasters through sustainable forest management, including through public and private partnerships.
 - The EU Water Framework Directive 2000, with environmental objectives aiming for long-term sustainable water management based on a high level of protection of the aquatic environment and its focus on public participation in the establishment of river basin management plants.
 - The entering in force of the INSPIRE Directive in May 2007, establishing an infrastructure for spatial information in Europe to support Community environmental policies, and policies or activities which may have an impact on the environment.

2. Suggest a strategy to share these experiences with the stakeholders in developing countries.

The experiences and milestones mentioned above could all be useful. Exchange between Swedish and these stakeholders can be done through facilitated stakeholder dialogues, and by sharing "toolboxes" to:

- Build non-corruptive, transparent governance systems which enable legal business to be equitable and profitable long-term.
- Support stakeholder dialogues.
- Support establishment of forest owners/users associations.





- Integrate science in policies and management.
- Enable social and environmental planning.
- Share scientific knowledge and how to implement it in forestry policies and management.
- Start mapping forests and forest resources.
- Support use of communication technology in forestry planning and practices, not the least to provide correct information on boundaries for logging concessions, ownership of land etc.
- Share relevant Swedish technologies for forestry and processing of forest products.
- Support/share the value of cross sectorial thinking.

Swedish stakeholders can also connect to international processes led by FAO, specifically the “Water and Forest Dialogue”, and the landscape restoration facility to share experiences and support capacity building.

It was also support and strengthen ongoing partnerships between Swedish stakeholders and the forestry sector in developing countries, not the least between public, private and academic stakeholders.





CONCLUDING DISCUSSION

All participants in seminar, chaired by Anders Malmer

Anders concluded that there was coherence between the groups in their suggestions for what Sweden can share to promote restoration and sustainable forest and water resource management. The timing for making these proposals is good; there might be a possibility to align effort with the renewal of the Swedish government's Policy for Global Development, (PGU), as well as with the forthcoming implementation of the UN Sustainable Development Goals. The international attention for "landscape approaches" is also increasing, for example with the "Global Landscapes Forum" as a side event to the yearly Climate COPs. There are furthermore opportunities to share knowledge and build networks at the upcoming World Water Week and at the Water and Forest Dialogues during the World Forestry Congress in September 2015.

The question is with whom should we work? One possibility mentioned was to work with forest smallholders – organizing and training smallholder associations in several countries, and to enable the sharing of knowledge between them. Strategies for training need to be adapted from country to country due to different governance and ownership.

Maps, national inventories and indicators were raised as important tools to succeed with sustainable forest and water resource management. How could Sweden enable more efficient use of maps in landscape, trees and forest management in the tropical and semi-arid regions? Which mechanisms can be used? It was proposed that Sweden's tradition of facilitating informed multi stakeholder dialogues and processes is valuable to support the establishment of partnerships and more transparent systems, based on maps and other baselines and forecasts.

The next important question was where we best connect with the international process. FAO was pointed out as a platform for sharing experiences, dialogues, maps etc. The "Forest and Water Dialogue" at the World Forestry Congress in Durban in September this year could be a starting point. Other suggestions for international processes were to build on existing partnerships such as Sida's existing bilateral university collaborations or relevant multilateral programmes.

It was pointed out that it is not easy to use trees and forests in landscapes as an entry point to improve water resource management. The presentations and discussions have shown the complexity and if it's not easy for experts it is much more difficult for the policymakers to understand. Starting small scale in collaborative projects was suggested as one solution for successful large-scale implementation.





So, why should Sweden take international lead in water resource management with trees and forests in landscapes as an entry point, when water scarcity is not critical in Sweden? Besides global trade issues such as the import of water demanding products, the key answer is the Swedish forest history in the last century. Swedish landscape 150 years ago was to a large extent similar to many degraded areas in other parts of the world today, degraded and barren due to short-term objectives to obtain timber, coal and agricultural lands. Since then, we have built an institutional system and incentives for long-term restoration and sustainably managed forests, taking the many provisioning services of the forest ecosystem into account, productive, environmental as well as recreational. The drivers, processes and activities we have had and developed are likely to be valuable to share to other countries that are about to start a similar process. Sharing can help/facilitate/catalyse their restoration process, but off course it cannot be the same process, it must off course be adapted to the individual countries.

Throughout the three seminars within the cluster group for Forests and Water, Swedish institutional arrangements have been pointed out as relevant and valuable to share. Transparent governance systems, mapping/monitoring, establishment of forest owners associations, participatory stakeholder dialogues and enabling legal business to be profitable has repeatedly been mentioned as key to the successful development of sustainable forestry in Sweden.

In conclusion, Sweden has a smorgasbord of tools and experiences that we have used in our restoration process over the past 100-150 years, which can be shared and discussed with forest stakeholders in developing countries. Funding can be found with international funds, as well as from Sida. We can, for example, engage in Training of Trainers, and we can aim be part of the Swedish PGU. Sweden has an international reputation of being skilled in facilitating processes, both nationally and internationally. We can use this capacity and experience to support stakeholder dialogues and building strong networks of existing partners and new partners. The upcoming Water and Forest Dialogues during the World Forestry Congress in September 2015 offer good opportunities for starting discussions with partners operating in degraded areas on activities and projects where Swedish stakeholders can share experiences, and contribute to restoration of resilient landscapes.

