



POLICY BRIEF

Water, forests, people – building resilient landscapes

The SIWI Swedish Water House Cluster Group for Water and Forests started with a mission to highlight the importance of forests and sustainable forest management for secure water resources globally. From our discussion process we have concluded that establishing resilient landscapes is the most promising way forward and that Swedish experience and knowledge have the potential to make a substantial contribution.

Why water and forests?

Trees and forests moderate water budgets, reduce erosion and runoff, and clean water. If they are sustainably managed, the goods and services they provide benefit rural communities as well as urban areas.

Of the original forest cover of the world, 15 per cent remains intact, 38 per cent is fragmented, 20 per cent is degraded and 28 per cent has been deforested. The negative effect of forest degradation and deforestation on biodiversity and climate change is well recognised in global sustainability discourse. In contrast, the negative effect on water resources is not as well understood or given due emphasis. However, trees and forests are central to managing water resources effectively, and to meeting the global challenges of too little, too much or too dirty water.

This is why SIWI Swedish Water House took the initiative and brought together Swedish expertise and stakeholders in forest-related water management. The objective has been to identify key knowledge and experience on sustainable water resource management in forests, which could be shared with a larger audience both nationally and internationally. The Cluster Group “Water and Forests” became active in the first half of 2014. Forest, Climate and Livelihood Research Network (Focali), the Swedish Forest Agency, Swedish University of Agricultural Sciences (SLU Global), Svensk SkogsCertifiering AB (SSC Forestry), StoraEnso, Sveaskog, SIWI Climate Change and Water Programme and SIWI Swedish Water House are core members of the group.

This brief provides a summary of results from the Cluster Group process. It highlights the urgent need for global landscape restoration and integration of water resource management in sustainable forest management. We argue that Sweden can do more to contribute to these developments.

We believe that experience and knowledge gained from the restoration of Swedish forests could enable a more effective process, and integration of a broader set of ecosystem services in landscape restoration, in other parts of the world and at an earlier stage than has happened in Sweden. This would benefit people, forests and water resources globally. Our ambition is to:

1. inspire Swedish forest stakeholders to engage more in international forest and water dialogue and processes
2. initiate bilateral and multilateral activities to build resilient landscapes, for the benefit of water resources, forests and people.

The in-depth results are available in the report “Water, Forests People – Building Resilient Landscapes at: www.swedishwaterhouse.se/en/cluster-groups/water-forests

Increased pressure on water resources calls for restoration of resilient landscapes

The needs of a growing global population, coupled with climate change, put water resources under large and increasing pressure. An increased burden on freshwater use and availability has a negative impact on the ecological functions of forests, and the ecosystem services they provide. These services include provision of food and fibre, habitats for biodiversity, carbon sequestration and climate regulation.

Integrating water resources in sustainable forest management is becoming increasingly vital. A mosaic of forest management practices e.g. forest conservation, forest restoration, agroforestry and sustainable forest management, is needed to perpetuate resilient landscapes that maintain and improve water regulation, support food production and allow sustainable livelihoods for communities co-existing in the same landscapes. Land users have a key role to play in maintaining and restoring these landscapes. They need to be recognised for the environmental services they provide and to be offered attractive incentives for their contributions.

The World Resources Institute shows in its publication “A World of Opportunities” that, parallel to the urgent need to halt deforestation, there are significant opportunities that come from restoring degraded forest land. Approximately two billion hectares have the potential to be restored to some form of wooded landscapes. For this to happen, partnerships are essential.

Restoring Resilient Landscapes – experiences from Sweden

Sweden is a humid country, rich in water resources. The biophysical relationships between forests, trees and water here is different from seasonally dry regions of the world, where integration of water resource management in forestry is even more urgent. Nevertheless, experience and knowledge gained from restoration of the Swedish forest landscape could contribute to a more effective restoration process in developing countries.

The value of the contribution from Sweden lies not in specific details of forest management, but in societal strategies to restore and/or maintain forests and trees.

By the end of the 1800s the Swedish forest resource was largely depleted. One hundred years later a massive restoration effort resulted in a complete change, with larger areas of managed forests than ever before, roughly a doubling of the total standing volume and a highly developed forestry industry. The successful restoration of the Swedish forests would not have been possible without broad inclusion of different forest stakeholders, combined with an enabling institutional and policy environment.

Key features in the Swedish forest restoration project

When the Swedish restoration project started it was primarily a question of sustaining yields, improving forest management and providing a growing industry with wood. From a production point of view, the Swedish case can be seen as an example of a successful restoration of a national forest resource. Some of the following key features developed gradually over hundreds of years and some of them more recently:



Degraded forest landscape in China



Resilient mosaic landscape in Rwanda

- governance based on societal development, transparent systems and avoiding corruption
- private forest tenure and ownership
- systems for public participation and education
- collaboration between science and practice
- a prosperous forestry industry
- an integrated landscape approach
- dissemination of Best Management Practices
- forest management plans
- integration of water resources in forest management

Key challenges in Swedish forest and water governance today

The features above enabled the Swedish restoration process and remain key to Swedish forest policy today. One could argue that Sweden has entered a second restoration phase. Now we are addressing the challenges of preserving and developing multiple ecosystem services on the same land e.g. wood production, biodiversity and recreational values. Integration of water resources in forest management is one of these challenges.

Challenges such as a globalised market, environmental problems and climate change have profound impacts on forests and forestry today. They will increasingly require a holistic approach to sustainable forest management. Forest and landscape restoration will continue to be both a major challenge and opportunity. In Sweden, attention is increasingly being paid to restoration of a wider range of environmental and social values. On a global scale, the emphasis on some of the key features of successful forest restoration, listed above, still needs to be developed.

Swedish contributions to restoration of global landscapes

In the seminars and discussions arranged by the Cluster Group, there was wide support for the broad Swedish resource base to engage in international forest processes, and to contribute towards forest landscape restoration. Contributions can be made at all levels: regional, national, local and private business levels. Sharing, adapting and developing the systems and tools already available in the Swedish or Scandinavian market could generate important instruments to speed up forest sector development in other countries. This could also be an interesting business opportunity for Swedish companies.

Swedish involvement in international processes on global forest and water resource management is not new. Support has been targeted at: smallholder organisations; transparent and fair value chains; policy development; policy adaption to the evolving scientific understanding; stakeholder dialogues; capacity building by and of government agencies; and stakeholder inclusion in policy development. Examples of these were all presented in the Cluster Group events. Depending on needs at the national and regional scale in specific developing country partners, there is a rich Swedish “smorgasboard” of competencies and a readiness for cooperation.

However, forest landscape restoration, with its broad spectrum of objectives, is a complex challenge. There are different baselines regarding ecology, culture, poverty, infrastructure, etc., which are dependent on the local context. This means that interventions need a multidisciplinary approach. To have the necessary impact, and to ensure a broad inclusion of stakeholders as well as national legitimacy, dialogue needs to have active participation at the highest national level. Academia, government agencies, extension services, civil society organisations, the private sector and smallholders need to participate from both Sweden and developing country partners. Visionary leadership is needed from the Swedish government.

The Swedish National Forest Programme, which is to be developed during 2015/2016, and the revival of the Swedish Policy for Global Development are important potential platforms. Both could facilitate enhanced Swedish participation in, and contribution to, restoration of global forest landscapes and integration of water resource management. If Swedish experience and knowledge, in governance and integrating water resources in sustainable forest management, can be shared in on-going global processes and activities such as the Bonn Challenge, the New York Declaration on Forests, the Governors Climate and Forest Task Force, the FAO Forests and Water Action Plan as well in private sector initiatives, this would constitute a significant contribution from Sweden towards meeting the UN Sustainable Development Goals (SDGs).

Key Messages

- Forests play a crucial role in the hydrological cycle, influence the amount of water available, regulate surface and ground-water flows and maintain high water quality. Climate change adds to pressures on forests and risks leading to critical transitions in ecosystems.
- Forest landscape restoration could be instrumental in significantly reducing poverty in rural areas, provided there are clear incentives for the rural poor to manage land sustainably.
- Sweden’s massive forest restoration project, which started

more than a century ago, has built a thriving natural resource base from largely depleted forests. The EU Water Framework Directive has catalysed several initiatives to secure water resources in forest landscapes.

- An enabling institutional and policy environment, and involvement of stakeholders, have been important features for the successful restoration of the Swedish forest landscape. Lately, forest policies and management integrate relevant values more systematically e.g. climate change mitigation and adaptation, biodiversity, social aspects and water resource management.
- The Swedish forest resource base has valuable experience and knowledge in sustainable forest management and restoration. Sharing Swedish competence in on-going global processes and activities such as the Bonn Challenge, the New York Declaration on Forests, the FAO Forests and Water Action Plan as well in private sector initiatives would be a significant Swedish contribution towards the SDGs.
- There are still areas in need of improvement in Swedish forestry and water resource management. An exchange of experiences between Swedish and forest stakeholders in other parts of the world would therefore be of mutual benefit.
- The formation of the Swedish National forest programme as well as the revival of the Swedish Policy for Global Development provide opportunities to develop a Swedish policy for enhanced and coordinated participation in, and contribution to, the urgent restoration of global forest landscapes, and integration of water resource management.

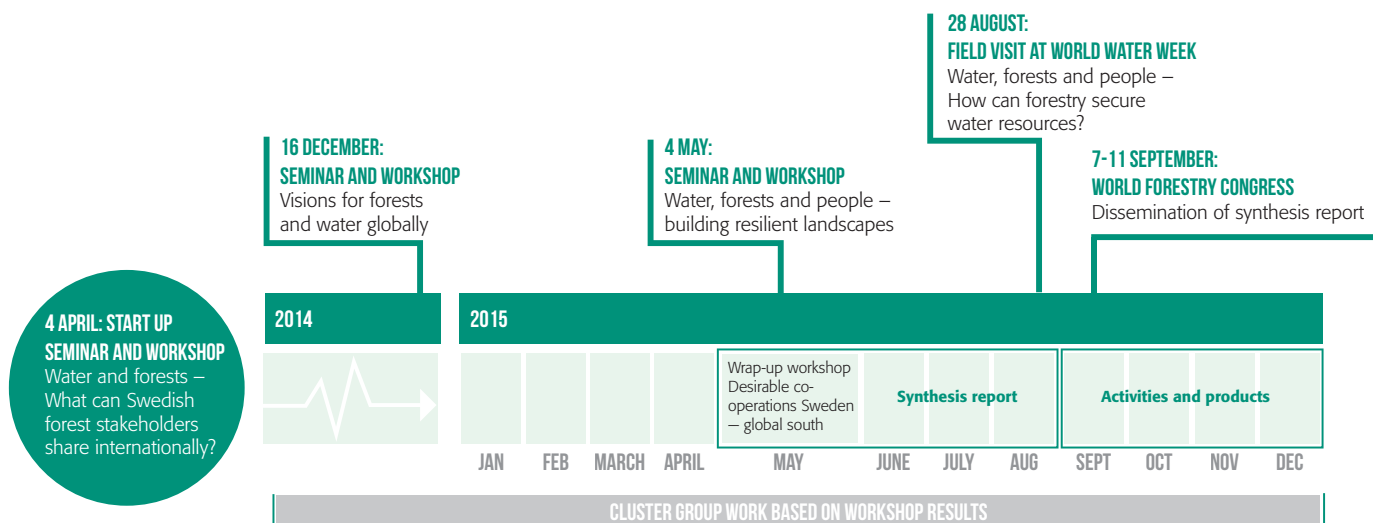
Participating institutions in seminars and workshops

CDP (Carbon Disclosure Project)	Rainforest Alliance
Forest, Climate and Livelihood Research Network at Chalmers University of Technology	Sense Group AB
Centre for International Forestry Research (CIFOR)	Swedish International Development Cooperation Agency (SIDA)
Ekebo Forest Management AB	Secretariat for International Forestry Issues (SIFI)
Food and Agriculture Organization of the United Nations (FAO)	Stockholm International Water Institute (SIWI)
Forest Trends	Skogforsk (the Forestry Research Institute of Sweden)
Forest Stewardship Council (FSC) Sweden	Swedish Forest Industries Federation
Gothenburg University	Swedish Forest Agency
Hamra Gård Consultancy	Swedish University of Agricultural Sciences (SLU), Global Programme
IVL Swedish Environmental Research Institute	Swedish Meteorological and Hydrological Institute (SMHI)
KTH Royal Institute of Technology	SSC Forestry
Linköping University	Stockholm Environment Institute (SEI)
LRF Forestry (The Federation of Swedish Family Forest Owners)	Stockholm Resilience Centre (SRC)
Ministry of the Environment and Energy	StoraEnso AB
Swedish Museum of Natural History	Sveaskog AB
Swedish Society for Nature Conservation	Church of Sweden
Swedish Environmental Protection Agency	Södra (Sodra)
NIRAS	TetraPak AB
Nkoola Agencies International Ltd	Vi Agroforestry
Ministry of Enterprise and Innovation	World Resources Institute
Programme for the Endorsement of Forest Certification (PEFC)	World Wide Fund for Nature (WWF) International
	WWF Sweden

About the SIWI Swedish Water House Water and Forest Cluster Group

SIWI Swedish Water House has brought together Swedish experts and stakeholders in forest-related water management. The aim has been to establish key knowledge and experience

within Swedish forest sector, which could benefit global water resource management. The group operates according to the activity plan below:



More than 100 people from 43 academic institutions, public and private sector organisations and non-governmental organisations participated in seminars and workshops (Box). They discussed key components for successful management of water resources in relation to forest management in Sweden, as well as how these experiences can contribute to international development, with respect to water and forest management. The outcome of the discussions forms the basis for the key messages in this brief, but they are the responsibility of the members of the Cluster Group alone.

This brief is based on the report “Water, Forests, People – Building Resilient Landscapes” which can be downloaded on the Swedish Water House Cluster Group webpage; www.swedishwaterhouse.se/en/cluster-groups/water-forests

All presentations and reports from the seminars are also available at the same site.

Members of the Cluster Group

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