

Acceptance Speech by Erik Næsset at the Marcus Wallenberg Prize Ceremony, Monday 3 October 2011

Your Majesties, Your Excellencies, Ladies and Gentlemen,

As we just heard, Marcus Wallenberg emphasized the vital role of the forests for the wellbeing of our planet. Let me take you back in time – back to ancient Greece and Rome, 2000-3000 years ago.

In an article published 30 years ago, Dr. Donald Hughes – an American historian, stated that there is a strong connection between ruined land and ruined centers of ancient cultures. Through his research on the environmental impact of forest management in former days, Dr. Hughes has presented clear evidence of the ultimate consequences of uncontrolled exploitation of the forest resources.

The growing awareness throughout the centuries that man was capable of depleting the resource that his life depended on, lead to a more active management. The need for information on the status of the forests was evident.

During the 14th and 15th century, the first forest inventories were conducted in Central Europe in mining areas where the mining activity had depleted the forests severely. The same rationale triggered the establishment of the Nordic national forest inventory and monitoring programs around 1920. There was a sense that forest resources had been overexploited in many areas throughout the Nordic countries. The Finnish, Norwegian, and Swedish national forest inventory programs were pioneers.

Now, 600 years after the first inventories were conducted, the motivation for our research is still the same: we should always strive for better information for management of the resources. Better information is normally economically profitable and it is essential for sustainability.

While many developed countries went through a period of severe depletion of their forest resources a hundred years ago or more, many developing countries are facing the same lack of sustainability and threat to their natural environment today. One alarming aspect of the ongoing deforestation and loss of forests – in particular in the tropical part of the world, is the huge amount of carbon dioxide going into the atmosphere when the forest is cleared. As we heard Marcus Wallenberg mention, as much as 20 % of all human-induced carbon emissions may stem from loss of forests in the tropics. Monitoring of the tropical forest is seen as a cornerstone in the fight against deforestation.

Therefore, this year's Marcus Wallenberg Prize is indeed timely. It emphasizes the importance of collecting accurate information about our own resources and how technology can assist us. The Prize also highlights and promotes the use of scientifically sound methods to help us address some of the largest global challenges of our time.

Nordic scientists were among the first to recognize the great potential of lasers for practical applications in forestry. Thus, I consider the Prize a great recognition to the entire Nordic scientific community. In all of our countries we have kept an eye on the practical utility of our research.

But I should add that the Swedes lead the way. They were using lasers experimentally in forests a few years before the Finns and the Norwegians really understood what lasers could provide.

Isn't it always like that – the Swedes are always this little step ahead of us.

My father, who is 83 these days, came to Sweden and Stockholm just after the War. In 1950, he was one among five Norwegian students who each year were given admission to Handelshögskolan in Stockholm – Stockholm School of Economics. That was the opportunity of his life. The fact that he was the only child of his generation in our family remaining in Norway – all the others had emigrated to Canada and the United States at the beginning of the century – mirrors a rather general pattern, namely how the history of a nation is reflected in ordinary people's life. Norway was among the poorest nations in Europe far into the twentieth century, and my father's period in Stockholm changed entirely his social position and his opportunities. He came back to Norway to leading roles in industry and banking, but he always remained a great admirer of everything with the stamp: "Made in Sweden". He always told us, the kids: "Look to Sweden. They are always 10 years ahead of us. They are ahead of us in industrial development. They are ahead of us in social reforms. And they never fail". So I'm indeed used to be a little bit behind the Swedes. That is how I was brought up.

The vitality of the scientific community and the dialog between scientists are important success criteria in research. Especially my Finnish and Swedish colleagues should be acknowledged for their great efforts to create a joint scientific community spanning globally.

One of the first global conferences in this new and emerging field of science was held in Umeå in 2003, and it was hosted by my friend and colleague, Professor Håkan Olsson at the Swedish University of Agricultural Sciences. However, we had even higher aspirations for the conference than just bringing scientists together. At that time, the use of airborne lasers for forest inventory was already a commercial activity in Norway, and we wanted to take the opportunity to invite leading representatives from the Finnish and Swedish forest industry to Umeå to hear about the opportunities with this new technology. We therefore planned for a workshop for representatives from the forest industry with demonstrations highlighting the benefits of the new methods. We were confident that this would lead to a breakthrough also in Finland and Sweden.

In the conference room and among the audience I could recognize many of my scientific colleagues from Europe and America. But only one single representative from the Nordic forest industry was present. And I wondered: what has gone wrong. -Where are all these industry people? What I was not aware of, was that the conference was held in the first week of – älgjakten – the moose hunting season. So I had obviously little insight into what really matters in peoples' lives. Business doesn't always come first.

The starting point of my research in this field was quite unusual and not at all a planned action. It started by a coincidence. A summer day in 1995, I was simply given a collection of laser measurements from an aircraft over a forest area by a true entrepreneur, Mr. Øivind Aase, the managing director of a surveying company in Norway. At that time I was not even aware that the laser technology existed. It didn't take many days to realize the potential. But it took several years to raise funding for testing the technology on an operational scale and to provide a first proof-of-concept. In the following years when time and effort were spent on promoting the technology in the commercial market, the collaboration with private companies was of

vital importance for the success. The fruitful collaboration between science and private interests was indeed a stimulating experience which few scientists are privileged to enjoy.

I do indeed believe that the process we went through and the practical results we achieved are well in line with the fundamental ideas underpinning the Marcus Wallenberg Prize. Thus, I wish to express my sincere gratitude to the Board of the Marcus Wallenberg Foundation and to the Chairman of the Board, Marcus Wallenberg, for being awarded the Prize. It is with great honor I accept the Prize.

Erik Næsset
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