

**Welcome and Introductory Speech by Marcus Wallenberg at the
Marcus Wallenberg Prize Ceremony, Monday 3 October 2011**

Your Majesties, Your Excellencies, Most Honoured Laureate, Distinguished Guests, Ladies and Gentlemen,

On behalf of the Board of the Marcus Wallenberg Foundation it is a great pleasure to welcome you all to this year's Marcus Wallenberg Prize awarding ceremony.

In particular I express the gratitude we feel to their Majesties, the King and Queen, for honouring us with their presence today. Every year since 1983 we have enjoyed royal presence at this ceremony, thus lending the highest dignity possible to the Prize. Your Majesty's continued interest in the Prize and its purpose is of the utmost value for enhancing the intended stimulating impact of the Marcus Wallenberg Prize on scientific research and technical development in the forest and forest products industries.

I also want to extend a special and heartily felt welcome to our Norwegian guests here today. Many of us have strong personal ties with colleagues and friends in Norway and have followed with great sympathy the reporting of the horrible events this summer. On behalf of all of us, I want to express our continued sympathy and support as you are going forward from this tragic experience.

Today the Prize will be awarded for the 28th time, after being instituted in 1980 by the shareholders of Stora Kopparbergs Bergslags AB.

The Foundation relies on a great number of universities, academies, research organizations and affiliated persons all over the world to nominate candidates for the Prize. The Foundation is grateful to all those involved.

A key to the prestige of the Prize is the selection process, for which the Prize depends on a most distinguished Prize Selection Committee, assisted by a number of Senior Advisors and a few appointed Prize Ambassadors.

For this, I want to express my gratitude to all involved, including our Secretariat.

In March, at the Norwegian University of Life Sciences in Aas, Norway, we were pleased to announce the result of this year's selection process, and I want to quote from our citation:

“The 2011 Marcus Wallenberg Prize is awarded to Professor Erik Næsset, Norwegian University of Life Sciences, for his path breaking research that incorporates the airborne laser scanning method as an integral part of forest inventory.”

I want to offer just a few comments on the scientific achievement and its relevance.

Society increasingly recognizes the vital role of the world's forests and the need for wise management of this resource. This is for many reasons. Forests are seen as renewable resources for supplies of wood and fibre products, chemical feedstocks and biofuels, as habitats for the maintenance of biodiversity, as important carbon sinks and as sites of high recreational value and other ecosystem services. More than half of the world's forests are

located in developing countries, where unsustainable logging practices, forest fragmentation and other types of forest degradation can endanger sustainable land use. It is estimated that 20 % of all worldwide carbon emissions stem from forest degradation and reduction of forest cover.

Sustainable forest management is based on good information about the resource and its biological and social environment, collected through various survey and inventory methods.

Prof. Næsset has created a tool to portray spatially the forest inventory parameters of interest. He invented a straightforward and practical method for utilizing airborne laser scanning in combination with forest field data which automatically produces stand-wise forest data with high accuracy. The area based method of airborne laser scanning that he has developed has become a reference against which new inventory methods are compared.

As I am saying this, I want to share what I recently picked up about the start of all this. In the 1970s, a team of NASA scientists had been on a flight mission over the Atlantic. Their objective was to test airborne lasers for experimental measurements in oceanographic studies. On their way home to the air base, they decided to leave the laser instrument on as they came off the water on to land. To their big surprise, they could see the profile of the trees and got the idea that perhaps they could measure trees with lasers.

The road from there to where we are today is certainly a result of truly systematic efforts, culminating in the work of Professor Næsset.

Laser scanning is now a commercially used practice, making a considerable difference in how forests are inventoried throughout the world. The airborne laser scanning technique is also useful in the assessment of many other forest ecosystem services. For example, it has been used in carbon accounting based on estimated forest biomass and in the detection and valuation of habitats of key species for maintenance of biodiversity.

Along with his scientific achievements, Prof. Næsset has actively participated in the demonstration of the airborne laser scanning method to practitioners, offered workshops and tested the method in diverse case studies. Prof. Næsset stands out as the most important person for making airborne laser scanning an operational method for forest inventory.

This year has been declared by The United Nations to be the International Year of Forests to raise awareness of sustainable management, conservation and sustainable development of forests. The Prize Selection Committee and the Board have not been unduly influenced by this declaration in selecting this year's Prize Winner but the Foundation is proud to award an achievement with such relevance at this time.

Let me also express my delight over giving the award this year for the first time to a Norwegian scientist.

Prof. Næsset, please let me congratulate you for your outstanding scientific achievements.

Marcus Wallenberg
3 October 2011