

## Forest woodchips supply chain in Southern Italy

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### OBJECTIVES

In Calabria, Southern Italy, in the last fifth years some wood biomass power plants larger than 10 MWe have been installed. Organizing wood fuel supply is a main question: wood chips fuel is supplied through both terrestrial and marine routes.

This research focuses on the forest supply chain of three wood biomass plants (for a total of 70 MWe). The yearly wood chips consumption is close to 1 million of green tons. The primary goal of this study is to analyze the local forest wood supply chain. Therefore, field surveys have been done in order to classify the management and the characteristics of the wood chips supply chain (wood sub-product availability, forest enterprises, working systems, forest woodchips quality).

### MATERIALS AND METHODS

On first, general figures about supplied woodchips or wood were collected for each wood biomass power plant. Above all the amount of woodchips from local area was analyzed. Therefore forest woodchips supply chains were approximately identified. Thus time studies were sorted for chipping operations in order to evaluate chipping systems with stationary chippers and mobile chippers. Different productivities and costs were analyzed by stop-watch study. Therefore working system productivities were related to machine types and power, feeding systems, wood raw material characteristics and woodchips quality (size, net heat value, moisture content).

### CONCLUSIONS

In Calabria, the woodchip demand for energy use is high and it can be covered partially by local forest enterprises. The current supply chains is nearly to be cost-efficient relating to the oversea importation of woodchips.