



Creation and implementation of the forest plantations fire risk SAFOR certification system, to improve insurability of small and medium companies (SMEs)

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MAIN QUESTIONS OR ISSUES THAT YOU ADDRESSED

Chilean forest plantations are relevant in the forest activity since they supply 98% of the timber used by the industry. There exists an important concentration of forest ownership in two big companies that hold over 50% of forest plantations. Fire statistics show a burned area between 1990 and 2013 of 1.2 million hectares, with more than 137,000 fires and losses on forest assets worth more than \$50 billion a year market value, without quantifying other losses that have been estimated in 8-10 times that amount. Forest fires are caused mainly by human activities. The annual area affected by fires reaches 49,000 ha, and the fire forest insurance market US\$ 9.1 million.

The insurance Chilean market offers two products for forest plantations, the initial insurance of new plantations when subsidized, and the fire policies and agricultural weather risks policies. Nevertheless, forest SMEs can barely get fire insurance policies for forest plantations; the insurance market has few specialized agents in forest plantations and due to the poor quality of the information about SMEs, by default it assigns a high risk qualification that difficult hiring policies, increasing its cost because of the uncertainty. So there are serious barriers for forest SMEs due to the lack of standardized information, which affects over 19.000 owners and more than 810.000 hectares of plantations, with important socio economic implications.

How can these barriers –with important socio economic effects- be overcome?

LOCATION AND ECOSYSTEM INVESTIGATED

Consequently, a project intended to solve the problem of market asymmetry that affects forest SMEs was implemented, funded by the Chilean Foundation for Agriculture Innovation (FIA), along with Government institutions, forest companies, insurance companies, insurance adjusters and insurance brokers, and executed by the Chilean Forest Institute (INFOR), with a total budget of US\$ 410.000, allocated in three years (2013 to 2016). The project operated with an advisory council formed by representatives of each associated member, FIA and INFOR, contributing and validating results and decisions.

KEY FINDINGS OF YOUR RESEARCH

We found possible to describe and quantify the fire risk and hazard in forest plantations. Given the objectivity of this evaluation, the resulting information is now being used by insurance and forest companies.

It is an important tool in a climate change horizon that will bring higher average temperature and lower rainfall in the area in which forest plantations are concentrated.

HOW DID YOU ANSWER THE MAIN QUESTIONS OR INFORM THE ISSUES?

We developed a certification system of fire risk classification for forest plantations (SAFOR) between 2013 and 2016 and implemented it in 2016/17 on. SAFOR is based on the N°Ch3380 official standard, especially developed with this purpose- that objectively describes how to evaluate the risk, and on the certification system that transfers into the market the compliance with the norm based on a field inspection.

HOW MIGHT/WILL IT INFLUENCE FIRE MANAGEMENT DECISIONS OR PRACTICES?

The main effect deals with the improvement of self-protective management in order to get a lower risk qualification, which should drive to more controllable fires.

WHO IS THE MAIN END-USER OF YOUR RESEARCH?

Nowadays, the insurance market has adopted SAFOR as source of information to quantify policies fire risk, and the clients pay the certification to break the entrance barriers by evaluating the risk. As a consequence, policies price have decreased and an increment in the total transaction volume has been registered.

After 1 year of implementation as a pilot, 5,960 hectares have been certified, with an average insured patrimony of US \$3,094 per hectare, and an average final policy price of US \$19.5 per hectare. Its usefulness was demonstrated following the mega fires of summer 2017, in which 25% of beneficiaries were burnt.

In this way, small and medium owners (SMOs) and enterprises (SMEs) with uninsured forest resources can hire fire policies based on an objective evaluation, improving their access to capital and competitiveness, having best options given that policies price have decreased.

The country has been benefited since the insurance market has adopted SAFOR as source of information to quantify policies fire risk, and the clients pay the certification to break the entrance barriers by evaluating the risk; the plantations established with government subsidy will be protected, covering this investment; and most importantly, in case of a fire, SMOs/SMEs will remain in the forest activity.

The society will be benefited by the potential reduction of fire quantity and the lower burnt area given the better self-protection, with important social and environmental benefits for the country.

Finally, the insurance market will increment the total transaction, increasing the forested area covered by insurance in Chile.

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Case Studies & Lessons Learned