

FOREST FIRE INSURANCE IN SUOMI

by

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The fact that forest fires are the most destructive agents of forests, or at least one of the most seriously damaging, is perhaps only too well known to those esteemed participants of this Congress who represent countries situated in the northern coniferous belt. Throughout the world, for instance, the immense forest fires annually occurring in the United States of America and in Canada, are known, which in the first mentioned country are reported to destroy on an average more than 4 million hectares and in the latter a little less than a million hectares each year. Since the problem of forest fires thus has a rather universal character in forestry, we shall present in the following certain particulars bearing closely on this subject, namely, the insuring of forests as it has been accomplished in Suomi. The insuring of forests does not, of course, protect the forest from this havoc; but it does protect the individual owners of forests from pecuniary losses caused by fire.

The idea of establishing an insurance company for insuring the private forests of the country was conceived in 1911 by the central organizations for the advancement of forestry. From this originated, after thorough preparations, the »Suomen Metsänomistajain Keskinäinen Metsäpaloapuyhdistys» (The Forest Owners' Mutual Forest Fire Insurance Company), which commenced business in 1916. In the meantime, in 1914, the »Keskinäinen Vakuutuslaitos Sampo» (The Sampo Mutual Insurance Company) that already has several departments for different branches of insurance, organized a forest fire department also. Thus in Suomi two companies, both mutual, have been operating in forest fire insurance, and since the beginning of 1920, in accordance with agreements made between them, they have maintained the same conditions, rates and principles for estimating losses.

The development of forest fire insurance in Suomi is illustrated in the statistical data given below.

The area of the insured forest property in thousands of hectares, and in percentage of the entire areas of the country's private forests (13.3 million ha) has been as follows during the different years:

	Sampo	Metsänomis- tajain Keskinäinen	Total	
			1,000 ha	ha
	1916.....	481.9	459.9	941.8
1917.....	623.4	773.9	1,397.3	10.5
1918.....	661.6	966.8	1,628.4	12.2
1919.....	700.0	1,073.2	1,773.2	13.3
1920.....	733.7	1,091.8	1,825.5	13.7
1921.....	817.6	1,182.6	2,000.2	15.0
1922.....	853.9	1,176.2	2,030.1	15.3
1923.....	900.5	1,177.2	2,077.7	15.6
1924.....	921.2	1,189.5	2,110.7	15.9
1925.....	937.7	1,245.0	2,182.7	16.4

It appears from the above figures that 16.4 % of the private forests of Suomi were insured in 1925. The share of »Sampo» in the insured forests at present is 43 %, and that of »Metsänomistajain Keskinäinen» 57 %.

The total insurance in force, in millions of Finmarks, and the average insurance value per hectare have been as follows during the different years:

	Sampo	Metsänomis- tajain Keskinäinen	Total	Average per ha
				Millions of Finmarks
	1916.....	95.6	65.5	161.1
1917.....	174.3	161.6	335.9	240 —
1918.....	204.1	233.1	437.2	268 —
1919.....	251.4	281.2	532.6	300 —
1920.....	367.0	395.8	762.8	418 —
1921.....	534.6	521.9	1,056.5	528 —
1922.....	644.2	555.9	1,200.1	591 —
1923.....	768.3	598.2	1,366.5	658 —
1924.....	796.5	647.6	1,444.1	684 —
1925.....	793.0	729.5	1,522.5	698 —

It will be seen from this table that private forests in Suomi were insured for more than 1,500 million Finmarks at the end of 1925. The average insurance per hectare has increased year by year, the main reason for which is found in the depreciation of Finnish currency (1 Fmk before the War = \$ 0.20, now \$ 0.0252), and also in the tendency to insure the forests closer to their actual value than heretofore. Nevertheless, in the adjustment of fire losses it has become apparent that the forests are constantly under-insured.

The figures of both tables indicate that forest fire insurance in Suomi is a vigorous and a rapidly developing branch of insurance.

The total number of forest fires and the burnt areas in hectares in the insured forests, as also the burnt parts in a ratio per thousand to the total insured territory have been as follows during the past ten years:

	Sampo		Metsänomistajain Keskinäinen		Total		
	Number of fires	Area in hectares	Number of fires	Area in hectares	Number of fires	Area in hectares	% ₀₀
1916	8	46.3	11	37.2	19	83.5	0.09
1917	94	582.9	119	1,025.0	213	1,607.9	1.15
1918	22	100.6	26	192.9	48	293.5	0.18
1919	20	197.4	25	103.4	45	300.8	0.17
1920	24	149.1	43	189.3	67	338.4	0.19
1921	58	428.5	81	477.3	139	905.8	0.45
1922	3	8.0	5	77.1	8	85.1	0.04
1923	12	18.9	7	11.1	19	30.0	0.01
1924	17	376.2	32	157.4	49	533.6	0.25
1925	67	1,902.7	79	1,041.9	146	2,944.6	1.35
Total	326	3,810.6	428	3,312.6	753	7,123.2	—
				General average.....			0.39

The most interesting figures in the above table are the figures showing the calculated ratio per thousand of the burnt areas to the total insured property (last column). We note first that the different years vary in Suomi greatly with regard to forest fires, the extreme figures being 0.01 ‰ and 1.35 ‰, the latter being 135 times the first. There are years, when no forest fires worth mentioning occurred (1922 and 1923); other years, which in our conditions must be classed as real fire years (1917 and 1925). We have, therefore, had two of the latter kind during the past decade. The same average

values have been noted in the State forests, for which statistics over a longer period of time are available. Another fact to be noted is the small frequency of forest fires in Suomi (on the average, 0.39 ‰), compared for instance with the United States of America, where the same figure for 1916—1922 was 15.4 ‰.

The object of insurance in Suomi is either small forest (the trees not measuring more than 18 cm at 1.3 metres from the ground) and large forest, or forest in general. Insurance is also covered on timber felled from insured forests and remaining there. Insurance is permitted up to the full value of the property. Without separate insuring, forest insurance includes: (1), the stump value of the timber felled and lying in the forest up to 25 % of the volume in the area under cutting (timber exceeding this amount, as well as lumbering expenses, must be insured separately); (2) the forest soil-strata up to 50 % of the value of the land, for such cases in which the production efficiency of the soil has actually been damaged by fire. Generally, the insurance must comprise the entire forest area of the estate. An agreement for the insurance of the forest in question must be made and the insured must become a member of the company, with its additional liability peculiar to mutual companies, for a period of at least five years; the insurance premiums are paid annually, however, and not all at one time. The justification for such a procedure is found in the above statistics which show how greatly the occurrence of forest fires varies during different years in Suomi from this cause the total risks carried by the companies might change very disastrously during different years, if the insurance were concluded for yearly periods only, and these changes would result in much higher premiums having to be instituted. Perpetual insurance is also issued in which case the premium is paid at once, or during the first five or ten years, after which no premiums are collected and the forest is insured for ever.

The insurance payments are: (1) membership fee (which is paid only once, totalling 0.50 ‰); (2) annual premium (for annual insurance); (3) possible assessments, which cannot exceed the annual premium threefold. It never has been necessary, however, for the companies to collect the last mentioned item, and as they have accumulated funds of many millions of Finmarks, it does not seem probable that they will have to resort to assessments even in the future.

The annual premium is calculated according to the risk district, of which there are two in Suomi. Leaving out certain exceptions, the lowest risk district is composed of the south-west provinces, and the highest rated one is formed by the north-east provinces. The basic annual premium for »forest in general» for the first mentioned district is 1.25 ‰ of the insured amount, for »small forest» 1.50 ‰, and for »large forest» 0.80 ‰. In the other district the corresponding payments are 1.50 ‰, 1.75 ‰, and 1.10 ‰. In calculating these rates the general observation has been taken into consideration that seedlings and small forest suffer the most heavily, while large forest is damaged comparatively little, and also the results of experience in the different districts. Rebates are then allowed from these basic rates for various reasons, of which we may mention: if the community has installed special, efficient regulations for preventing forest fires and methods for extinguishing them (rebate 10 ‰); if the forest is professionally managed or belongs to the sphere of forestry associations with their employed professional foresters (5—10 ‰); the predominance of broad-leaved trees (5—15 ‰); and also, rebates of various extent for fire-lines, fire equipage, extra guarding during dry season, fire towers with guards, etc. The rebates can amount to 30 ‰. Additional rebates are allowed for insurance of large areas by the same owner, and for own-risk. The basic rate is also increased for special hazards, such as heaths, railways, inflammable constructions or stocks in the forest.

Inasmuch as the purpose and other general principles of forest fire insurance are the same as those of other branches of insurance, the principles of indemnity are also alike. The indemnity is proportioned to the damage as the insurance is to the actual value before burning. In disputed cases the assessment of damages is left to competent, neutral arbitrators.

The activities of the forest fire insurance organizations in Suomi have a more general significance for the reason that they aspire to advance and develop forest fire prevention methods and forest credits, for which purpose they are accumulating special funds.

Suomenkielinen selostus.

Metsäpalovakuutus Suomessa.

Kysymys vakuutuslaitoksen perustamisesta maan yksityismetsien palovakuuttamista varten herätettiin Suomessa maa- ja metsätalouden edistämisestä huolehtivien keskusjärjestöjen taholta (v. 1911). Tästä aloitteesta syntyi,

perusteellisten valmistelujen jälkeen, v. 1916 toimintansa alottanut »Suomen Metsänomistajain Keskinäinen Metsäpaloapuyhdistys». Tällä välin, v. 1914, perusti »Keskinäinen Vakuutuslaitos Sampo», jolla ennestään oli useampia osastoja muita vakuutusaloja varten, myös metsäpalovakuutusosaston. Suomessa on näin ollen metsäpalovakuutuksen alalla toiminnassa kaksi laitosta, molemmat keskinäisiä, ja on niillä kummallakin v. 1920 alusta lukien, laitosten välisen sopimuksen perusteella, yhtäpitävät vakuutusehdot, tariffit ja vahingonarvioimisperusteet.

Metsäpalovakuutuksen kehitystä Suomessa koskevia tietoja annetaan kirjoituksessa kolmessa eri taulukossa, joista ensimmäisessä on esitetty vakuutetun metsämaan pinta-ala 1,000 hehtaareissa ja %:eissa maan yksityismetsien koko pinta-alasta (13.3 milj. ha), toisessa vakuutuskannan kehitys milj:issa S.-markoissa ja kolmannessa metsäpalojen lukumäärä ja palanut ala hehtaareissa vakuutetuissa metsissä sekä paloalojen osuus $\frac{0}{100}$ vakuutetusta pinta-alasta; kaikki tiedot erikseen kummassakin vakuutuslaitoksessa sekä yhteensä vuosilta 1916—1925.

Suomessa on palovakuutuksen esineenä joko pieni metsä (mittarajana 18 cm 1.3 metrin korkeudelta maasta), suuri metsä tai metsä yleensä. Lisäksi myönnetään vakuutuksia vakuutetusta metsästä kaadetulle, siellä vielä olevalle puutavaralle. Vakuutus myönnetään omaisuuden täyteen arvoon. Metsää koskevaan vakuutukseen sisältyy ilman eri vakuutusta 1) kantoarvo metsästä kaadetulle ja siellä vielä olevalle puutavaralle aina 25 %:iin hakkuu- alan puumäärästä (yli tämän määrän nouseva puutavara samoinkuin hakkuukustannukset ovat erikseen vakuutettavat); 2) metsämaan multakerros aina 50 %:iin maan arvosta siinä tapauksessa, milloin kulon kautta maan tuotantokyky todella on huonontunut. Vakuutuksen tulee yleensä käsittää saman tilan koko metsäalue. Sopimus metsää koskevasta vakuutuksesta on tehtävä ja vakuutuksenottajan sitouduttava vakuutuslaitoksen osakkaaksi, keskinäiselle laitokselle ominaisella lisämaksuvelvollisuudella, vähintään viiden vuoden pituiseksi vakuutuskaudeksi kerrallaan, jolloin vakuutusmaksut kuitenkin suoritetaan vuosittain, eikä kerrallaan. Vakuutuksia myönnetään myös ainaiseksi ajaksi, jolloin vakuutusmaksu suoritetaan joko kerta kaikkiaan, viitenä ensimmäisenä vuonna tai kymmenenä ensimmäisenä vuonna, minkä jälkeen sitä ei koskaan enää kanneta, ja metsä on ainaiseksi ajaksi vakuutettu.

Vakuutusmaksuja on: 1) pääsymaksu, jota suoritetaan vain kerran kaikkiaan 0.50 $\frac{0}{100}$; 2) vuosimaksu (vuotuisvakuutuksissa) ja 3) mahdollinen lisämaksu, joka ei saa nousta vuosimaksun kolminkertaista määrää suuremmaksi.

Vuosimaksun suuruus on määrätty vastuualueittain, joita Suomessa pääasiassa on kaksi. Halvempaan vastuualueeseen kuuluvat länsi-eteläiset läänit ja kalliimpaan itä-pohjoiset läänit, poikkeuksia lukuunottamatta. Ensimmäisessä vastuualueessa on pohjatariffivuosismaksu »metsälle yleensä» 1.25 $\frac{0}{100}$ vakuutussummasta, »pienelle metsälle» 1.50 ja »suurelle metsälle» 0.80. Toisessa alueessa ovat vastaavat maksut 1.50, 1.75 ja 1.10 $\frac{0}{100}$. Näistä pohjatariffimaksuista myönnetään sitten alennusta monista syistä ja pohjatariffia korotetaan erikosen palovaarallisuuden vuoksi.

Metsäpalovakuutuslaitosten toiminnalla Suomessa on myös yleisempi merkitys sen kautta, että niiden pyrintönä on metsäpalojen torjumistoimenpiteiden ja metsäluoton edistäminen ja kehittäminen yleensä maassa, ja sitä varten kartuttavat erikoisia rahastoja.