

It will be asked why Switzerland, with good forest laws for the protection of her mountain forests, still has devastating floods in the rivers from time to time. The answer is that the percentage of wooded land in the mountains is comparatively small, because a large part of the catchment basins lie above the limit of the growth of forests.

The Rhine district in Graubunden is only eighteen per cent. wooded and forty-three per cent. of the area lies above the forest limit. The whole of the Engadin down to the Swiss frontier is only thirteen per cent. wooded and seventy per cent. of the district lies so high that no forests can grow there. The catchment basins of the Reuss up to the Vierwaldstattersee has only nine per cent. forest and sixty-six per cent. of the area lies above the forest limit. The Swiss Rhone valley as far as the Lake of Geneva has sixteen per cent. forest, and fifty-four per cent. of the district is so high that it could never be wooded.

In the last fifty years Switzerland has newly afforested 16,956 hectares of land in dangerous catchment areas, which, however, amounts only to about 0.4 per cent. of the land area. It is evident that with 0.4 per cent. of new forest not all floods can be prevented. It has also to be taken into consideration that Switzerland produces only one-quarter to one-third of her food provisions herself, and it is therefore difficult to withdraw large tracts of cultivated land for afforestation.

But the Swiss nation has realised the importance of protecting its forests. A law, adopted by popular vote, demands that the wooded areas of Switzerland never be diminished. In the protection forests of the Alps even the private proprietor cannot fell a tree without the permission of the forest superintendent. As a compensation for this reduction in the rights of possession the States subscribes large sums to the building of roads and to afforestation in the protection forest districts.

Just because, for economic and climatic reasons, the wooded area of Switzerland cannot be much increased, it is absolutely necessary that we protect and care for our present forests. We must see to it that they regenerate properly and that the young plants are not destroyed by grazing animals. We must also take care that the forest floor does not become hard and must therefore never allow cattle in the protection forest except in time of real necessity.

Only a vigorous and well kept forest, made up of the proper species of tree, can lessen the fear of flood and only a well kept forest can ensure keeping the earth in a correct condition to conduct large volumes of quickly sinking water to the underground reservoirs which feed our rivers in time of drought or frost, work the mills, the sawmills, the factories and the electric power plants.