

that protection is required for the preservation of the soil or water-supply, for protection against winds, for the benefit of public health, &c. ; that State forests are desirable to safeguard supply, and that State supervision is often very necessary even in the case of private forests. Of all parts of the Empire, the most important in a forest sense is the Dominion of Canada, where the area of woodland is given as 1,249,000 square miles, or 38 per cent. of the total area of Canada. In one year over 1,200,000,000 cubic feet, or 24,000,000 tons, of timber and firewood, amounting in value to about £10,000,000, were removed; and Dr. Schlich says, "It is of the utmost importance, not only for Canada, but for the Empire generally, that the Canadian forests should, at an early date, be taken under systematic management. The Governments of the several provinces should select and demarcate a sufficient proportion of the area as permanent State forests, and bring them under complete control and systematic management. There are large areas to choose from, so that no difficulties are likely to present themselves in selecting, out of the one and a quarter million square miles, about 150,000 square miles for reservation." In the early part of 1906 a Forest Convention met, under the presidency of the Governor-General, and with the support of Sir Wilfred Laurier, the Prime Minister, and resolutions were passed indicating the chief points to be attended to.

In another article Mr. Munro Ferguson, M.P., points out that the most obvious way to arrest rural depopulation in the United Kingdom is not only to make private woodlands remunerative, but to afforest several million acres of waste and rough pasture, thus giving employment to a great body of people through sylvicultural operations and the great subsidiary industries of which the raw material is timber.

In France especially the position of afforestation is exciting grave attention. A recent article in "The Revue des Eaux et Forêts" showed that the forests not placed under regular control are disappearing, especially in the mountains; and, on the other hand, rewooding goes on so slowly that it does not keep pace with the damage that meanwhile increases and extends. After forty-five years of effort and expense, and of scientific and zealous work, the total additions is stated to be less than 495,000 acres, scattered over the south, centre, and south-east of France. These facts are being discussed and commented on over the length and breadth of France, and pressure is being brought to bear on the Government to insure more rapid progress. As an example of what can be done, it may be mentioned that in 1803 the dunes of Gascony, then comprising vast areas of sandy wastes, locally known as "the Landes," were taken in hand and some 120,000 acres of shifting sands planted with maritime pine. The work was proceeded with cautiously, and completed in 1864. Formerly one of the most desolate and sterile regions in France, these tracts covered with maritime pine are now traversed by roads and railways, and dotted over with sawmills furnished with the latest machinery and appliances for converting logs into planks, parquet-boarding, panelling, &c., and have uplifted the whole region into a highly prosperous condition, with profitable industries firmly fixed on solid foundations. The regeneration of areas affected by sawmilling is most carefully studied and attended to, and the result is an object-lesson to other countries which contain waste areas of sandy soil, &c.

The following is a summary of a report on "The Penury of Russia" by Mr. E. J. F. Law, Commercial Attaché to H.M. Embassy at St. Petersburg, published in the *Edinburgh Review* of January, 1893: "Since the Emancipation, absenteeism has become general, and the incomes of the proprietors has diminished. When their funds were exhausted they began to cut down their woods. Russia had enormous forests which, in the less fertile regions, constituted the most valuable part of the landed property, though formerly the timber was of little avail to the proprietors owing to want of means of access. This want is now supplied by the railways, so the woods have been sold to speculators, who exported the timber, and the produce has been spent. The belts of wood attracted and held the moisture, which was slowly distributed for the benefit of agriculture; now in vast regions there is hardly a tree to be seen, and the consequence is that the underground rivulets which nourish the soil have disappeared. The forests also broke the force of the fierce east desert winds, which, piercingly cold in winter, and scorchingly hot in summer, burst with full fury on the great plains. In summer their blasts are capable of withering the corn in a few days, and with them come sandstorms, which turn fertile land into permanent deserts. The unfortunate experiences of Central Asia, which once was a garden of fertility, and now is a desert peopled with nomads only, are repeating themselves. In the Province of Astrachan an area of 800 square miles is covered with drift-sand; in that of Stawropol whole villages have disappeared, and in 1885 soldiers had to be summoned to clear the sand from the houses. In the Province of Tauris the sand now covers about 632 square miles. The same disastrous effects took place in the north, where, after the destruction of the forests in the Provinces of Samara, Woronesh, and Tchernigow, hundreds of sandhills arose, which gradually covered the fertile land. A further consequence is that the rivers became shallower. Innumerable instances of the evil effect of deforestation upon the Russian rivers can be given—as, for example, the Woronesh, Worskla, Oka, Dnieper, and the Volga."

In the January issue of this year, the editor of *Arboriculture*, an American magazine devoted to the interests of forestry and afforestation in the United States, urges that immediate action be taken by Congress to control the remaining forests, for these reasons: (1) The influence which forests exert on precipitation; (2) their influence upon water-storage; (3) effects of forests upon wind-movement; (4) disastrous effects of floods, and added costs of river embankments and groins caused by forest-destruction; (5) menace to river-navigation from droughts, caused by too rapid melting of snow because of removal of protecting woodlands; (6) the future supply of timber for the nation, which depends upon the conservation of the remaining forests; (7) necessity of importing from abroad the timber required after removal of the State forests. In support of the proposal the editor says, "With but a trifle of America's magnificent forests remaining, the duty of Congress is to withdraw every acre of timber land from public sale. This should be held as a sacred trust to be for ever retained, only removing such trees as can be spared, and those which have exceeded their allotted age, carefully reserving all young trees and those which will continue to grow into valuable timber. To this should be added a more efficient system of forest-planting by the Government, seeding the bare spots with trees suited