

Nations, based in the first instance on understanding between Great Britain, the United States and the U.S.S.R., a great opportunity has opened, and although the task will be heavy it can be achieved if we do not forget our lessons, and make co-operation in peace as true and effective as in the years of war.

Colonial Policy

VISCOUNT CRANBORNE, until recently Secretary of State for the Colonies, replied on behalf of the Government in a debate in the House of Lords on December 3 on Colonial affairs. The keynote of his speech was the diversity of the Colonial territories. He remarked that ever since the fall of Malaya there has been a stream of criticism against the administration of the Colonies. That disaster was due, according to some, to the fact that the local peoples had not been sufficiently associated with the government of their country. This explanation, however, cannot apply to Siam, an independent State, or to the excellent administrative system of the Dutch East Indies or of the Philippines. British policy gave Malaya a long period of internal peace, justice and prosperity. The proposal for a Colonial charter presupposes a uniformity which is unattainable and probably undesirable in the British Empire. The Empire consists of a diversity of countries and peoples in all stages of development, and its administration is characterized by great variety and flexibility. There is no cut and dried pattern; local systems have been adapted and adopted, and there has been gradual evolution in each territory of a form of government which seems best suited to promote the moral and material welfare of the people, with the ultimate aim of self-government.

A fundamental step in advancing to self-government is the provision of education. Surveying the position, Lord Cranborne said that, in the field of mass education, we have to meet first widespread illiteracy. Programmes for adult and community education are being prepared. Elementary education is spreading in Nigeria, the Gold Coast, Uganda, Mauritius and the West Indies, where Sir Frank Stockdale, comptroller for development and welfare, has been working for two years. Higher education is being developed at Achimota in West Africa, and at Makerere in East Africa; in Ceylon, the university college has been raised to the status of a university; in West Africa there is a scheme for an institute of arts, crafts and social sciences. Further, much consideration is being given to the education of women and girls. Medical schools are working in East and West Africa, in Ceylon, Malta and Fiji, and important investigations are being carried out by British organizations and by the Rockefeller Foundation. Social security rests, so far as the Colonial Empire is concerned, on economic security, and this in turn on agriculture; steps for the production of food for local use have been speeded up, and mixed farming has been promoted. Labour conditions have been improved, and Lord Cranborne referred to the Exchequer grant of £5,000,000 a year under the Colonial Development and Welfare Act for approved schemes advanced by Colonial Governments.

A Survey of World Resources

IN a report on "The Problem of Raw Materials" prepared by Prof. I. Högbom, of Stockholm, and issued by the League of Nations in 1937, there is a striking graph showing the world production of the

principal minerals and metals during the period 1860-1937. Sir Harold Hartley uses this graph as the text of an article, published in *The Times* of November 27, on the need for a survey of world resources. The graph is plotted on a logarithmic scale and demonstrates that production of aluminium, tin, copper, phosphates, petroleum, pig iron, coal and lignite had a steady rate of growth until 1914. Then the general rate decreases sharply, to be followed by violent oscillations during the past twenty-five years. The end of the period of steady increase marked the end of territorial expansion and exploitation, accompanied by failure to realize that world conditions had changed, and that a planned economy was required. Such a plan is implicit in the orderly economic collaboration of the United Nations envisaged in the Atlantic Charter. The goal is "greater stability of world conditions and increased well-being based on the better use of world resources, full employment and the development of backward areas". The foundation of any scheme directed towards this end is a world survey of production and consumption.

Sir Harold points out that the data for the pre-war years are mainly available, though they need bringing together, and the Allied Bureau under Sir Frederick Leith-Ross is dealing with the immediate post-war period. The preparation of estimates for a more stable form of society to succeed this period is a more difficult matter, in view of the fluctuations of the past twenty years. Such long-range estimates must be 'moving targets' subject to such factors as population trends, knowledge of basic needs and the development of backward countries. Estimates of consumption must precede estimates of production, to be followed by surveys of distribution. The data for these estimates, some of them already available through the activities of individual countries and industries, or committees set up by the United Nations, are at present unco-ordinated, with unknown gaps, and, in Sir Harold Hartley's opinion, a United Nations Economic Bureau should be appointed to deal with the matter.

Temperature of the Atmosphere

A FURTHER colloquium in the series arranged by the Manchester University Branch of the Association of Scientific Workers was addressed by Dr. T. G. Cowling on December 2, the title being "The Temperature of the Atmosphere". Dr. Cowling began by describing how the temperature of the lower part of the atmosphere is determined by radiation, convection, and advection (horizontal currents of air and water). The distribution of temperature over the earth's surface varies with the season, and in consequence sudden large fluctuations in temperature due to the passage of air masses are in the British Isles more probable during winter than summer. Turning to the variation of temperature with altitude, Dr. Cowling suggested a possible explanation for the fact that the temperature ceases to decrease at a height known as the tropopause. According to this theory, solar energy is absorbed by ozone in the stratosphere, and in the absence of any gas with strong emission bands in the infra-red, the temperature is increased. Water vapour has broad intense bands in the infra-red, and when it is present tends to keep the temperature low. In considering variations of the temperature in the stratosphere with season and latitude, account must be taken of any variations of the concentrations of