Britain and the United States. This conference led to the signing in 1875 of the Treaty of the Metre, a treaty under which an International Bureau of Weights and Measures was established. France ceded Le Pavillon de Breteuil, a former royal estate, to the bureau and declared the land, still the world centre of metrology, to be international territory. The treaty also established an international conference of a diplomatic nature with the designation General Conference on Weights and Measures which was to meet nominally every six years. Between meetings of the conference the general supervision of the International Bureau was to be in the hands of an international committee.

The first task of the International Bureau of Weights and Measures was the construction of new standards for the metre and kilogram. Standards were to be constructed for distribution to the nations supporting the bureau in addition to the national standards to be kept in France, and the task was a large one. At the first General Conference on Weights and Measures held in 1889, the work of the International Bureau in constructing and comparing the standards was approved, new definitions of the metre and kilogram in forms of the new standards were adopted and the distribution of international standards to the interested governments was authorized. The prototype of the metre was made of a platinum alloy with 10% iridium; the length of the metre bar when it was at 0°C was chosen as the international standard. Two things disturbed scientists, however, about using a prototype for a standard. One was that some unchangeable standard in nature was preferable and the other was that the prototype might be destroyed. A search was made for some unchangeable standard in nature which was exactly the same size as the metre prototype. In 1927, on advice from the Nobel prize-winning American physicist Albert Abraham Michelson, the metre was redefined as being a length equal to "1 553 164.13 wave lengths of red light emitted by a cadmium vapour lamp excited under certain specified conditions". This was a provisional definition and later the metre was redefined as "1 650 763.73 wave lengths of the orange-red line of krypton 86". This definition of the standard metre is the most precise so far, based on a fact of nature that will always be the same. It was adopted in 1960 at the eleventh meeting of the General Conference on Weights and Measures.

Recent movement to the metric system

The movement to adopt a standard metric system has become world-wide in scope. It is virtually universal, now encompassing over 99% of the world's population. Within the English-speaking world, Great Britain opted in May 1965 for a gradual adoption of metric units, spurred by the industrial sector of the economy. A target of 1975 was set for complete conversion, although that has since been postponed. Australia passed a Metric Conversion Act in June 1970, stating as its object the progressive introduction of the metric system of measurement of physical quantities with a target date for completion of 1979. New Zealand established a Metric Advisory Board in 1969 and in April 1970 the government announced approval in principle of conversion over a seven-year period, giving as a target date the end of 1976. Both states are now about 75% converted. South Africa commenced its program in 1966 and 10 years later it was substantially completed. Canada has benefited from the experience of these countries.

The fact that the United States officially adopted the metric system in December 1975 is a point of high interest to Canada in view of the massive two-way trade between the two countries. Two systems of weights and measures exist side by side in the US today with roughly equal but separate legislative sanction. Throughout US history the customary system (inherited from, but now different from, the British imperial system) has been customarily used. A plethora of federal and state legislation has given it standing, through implication, as the primary weights and measures system of the United States. However, the metric system is the only one that has ever received specific legislative sanction by Congress (known as the "Law of 1866"). Over the last 100 years the metric system has seen slow, steadily increasing use and today is of importance nearly equal to the customary system.