Population and Social Pressures on the Land Base¹

K. F. S. King²

This meeting takes place at a time when the world is in economic and social disarray and turmoil. In almost every country in the industrialized North, there are higher rates of unemployment than have been experienced since the depression of nearly 60 years ago. Almost everywhere there are unacceptably high rates of inflation. In many of the major industrial countries of this world there are large and growing balance of payments deficits.

More reprehensible and more pernicious is the sense of impending doom which seems to pervade some areas. Where 20, or as recently as 10, years ago there was a confidence that mankind possessed all or most of the answers to the world's development problems, there is now uncertainty and hesitancy. Where a few short years ago the mood, in international developmental circles, was euphoric and buoyant, today gloom, and despondency, and pessimism appear to dominate. To the problems of the developing South have been added the difficulties of the industrialized developed North. And the problems of the South are not even being begun to be resolved. The world bank's latest annual report³ underlines the stark reality of the contemporary world. Whatever action is taken, whatever remotely credible growth rate is possible, there is no possibility that the poor countries of the world will achieve what passes at present for an adequate standard of living among the rich. Even the figures for the past decade provide no hope that the gap between the developing and industrialized worlds may be narrowing. "Even if the developing countries were to manage to double their *per capita* growth rate while the industrialized world but maintained its, it would take almost a century to close the absolute income gaps between them."

Although I do not share the prevailing pessimism, although I do not consider the general developmental problems of the world to be insurmountable, I do consider that the economic and social and physical conditions under which most of the world's populations live have deteriorated because we have failed properly to apply the *principles* of economics and science and technology to our tasks of development, especially in the developing world. I believe that they have deteriorated because, as I have said elsewhere, "we have not fully grasped the importance of adapting our knowledge to the specific socio-political stage of the evolutionary process of the particular country for which we purport to plan. We have tended to ignore the human dimension; we have, more often than not, forgotten the people"⁴.

I do not have the time, nor is this perhaps the place, to discuss the problems which have been created since the end of World War II because we have conceived and defined development in terms of the physical and material increment gained by countries, and not in terms of human values, human happiness. Perhaps this is not the forum to attempt to demonstrate that the uncritical transference of Northern values and technology, and the blind acceptance of these values and technology by the rulers and people of the South, have resulted, in many cases, in human misery and suffering. Perhaps this is not the type of meeting to sug-

gest that these values are not relevant even to the well-being of the industrialized North.

The mandate I have been given by the organizers of this meeting is to discuss the pressures that are exerted by societies on the land resource of their countries and, by implication, to examine these in relation to future land management options. I have drawn your attention to the social milieu in which we live, and to the contradictions which pervade the societies of both the North and the South, because I wish to emphasize that land-utilization policies cannot and should not be evolved in a vacuum; and to stress the importance of formulating forest land management programmes with a full awareness of the inter-actions and the relevance of national and international events.

Today, forestry cannot be regarded merely from a narrow, sectoral point of view. It must be looked at against a background of the international demand for forest products and the world's capacity to supply the wood raw material; it must be looked at within the context of general land-use policies, plans and practices; it must be looked at with a full appreciation of existing and future patterns of world trade; it must be looked at with a knowledge of the scientific and technological advances which are being made and which will probably be made, not only in the forestry and forest industries sector, but in all relevant aspects of economic activity. The gamut of economic, social, political, scientific and technological considerations must be taken into account.

The evils which result from improper land-use are well-known and well-documented. The archaeologists and historians tell us that agriculture, as we know it, began more than 7,000 years ago and was developed in Mesopotamia and in the Nile River Valley. On these alluvial plains, in an arid climate, crops were grown and civilizations evolved and prospered. Mesopotamia, for example, became a land of large populations and great cities.⁵ Today, the cities are in ruins, many covered by deep blankets of erosion debris, and all remain as evidence of this former empire are a few, poverty-stricken, scattered villages. The reasons for this cataclysmic decline were many, but it is generally agreed that failure of its agriculture had more to do with its disappearance than anything else.⁶ Erosion, which occurred as a result of the removal of the plant cover from the hills, aggravated the sediment problems in the rivers, silted the canals, and irretrievably damaged the irrigation system. Without water, and without an agriculture to provide food and fibre, the villages and cities declined.

This story can be repeated with respect to other continents. In North China, the lines of cultivation in the Province of Sanshi was pushed up the slopes of the mountains as the forests were razed to the ground. Soils were exposed, accelerated erosions occurred on the hills, and run-off and erosion from cultivated lands were many times as great as when the forest covered the land. There was a collapse of agriculture which, in turn, led to a deterioration of life in the cities. The entire civilization in these areas was adversely affected, and it is perhaps not an over-exaggeration to state that China's turbulent history and the deprivation and exploitation of its peoples in the past, can be directly related to the recurrent floods and droughts, the repeated failure of crops, and the human suffering which were caused by unsound land-use practices.

In the New World, the Maya civilization which had

¹Prepared for the Seventy-First Annual Meeting of the Canadian Institute of Forestry, Jasper, Alberta, October 1-4, 1979.

² Director-General, International Council for Research in Agro-Forestry.

flourished for many centuries declined when its agriculture became inadequate for its needs. It declined, as the evidence suggests,⁷ when because of other pressures, mainly military in nature, it neglected to adapt its ancient agriculture practices to changing conditions.

This list of the rise and decline of civilizations because of bad land-use policies is by no means exhaustive. It is merely intended to draw attention to what Eckholm calls "the littered ruins and battered landscapes left by dozens of former civilizations".⁸ It is merely intended to remind us that humanity has been undermining its own welfare for thousands of years.

I venture to suggest, however, that never in the entire history of mankind has the environment been destroyed on so large a scale and so quickly as we have managed to do since the end of the Second World War, and are continuing to do. On the foothills of the Himalayas (in Nepal and in India, for example) on the hills of Java (particularly in the Water catchment), on the plains of Chad and the neighbouring countries of the African Schels, the protective nurturing vegetation is being destroyed out of sheer desperation to provide land for agriculture, and wood for fuel for cooking and heating to meet the most basic requirements of man: food. And these depredations are being repeated in many other parts of the world. As a result the deserts are spreading, mountain slopes are being cleared and laid bare, forests are being raped, and man's heritage is being depleted.

I do not want to give the impression that I blame the people who perpetrate these evils on the landscapes of the tropics. They perpetrate these malpractices not because they are ignorant but because they see no alternative. As I have stressed the dominant imperative, the categorical imperative, in their lives, is the provision of food. And not many of the experts who descend like locusts from the developed countries and the international Organization have provided them with viable alternative forms of land-use, for these brittle ecological zones of which I speak.

What are the facts? At the World Food Conference which was held in Rome in November, 1974, the Food and Agriculture Organization of the United Nations stated that of a world population of 3,700 million, at least 460 million were under-fed, and perhaps another 600 million were constantly on the edge of malnutrition. In other words, 1,060 million, or more than one out of every four persons in the world did not get acceptable and sufficient diets. This was in 1974. Recent utterances of the Director-General indicate that, if anything, the situation has worsened somewhat.

Moreover, again at that same conference, it was stated that in 34 developing countries (25% of all the countries in the world) food production between 1952 and 1972 had not kept pace with population growth.

Let me put it another way. Since the end of the Second World War, the world's population has grown by about 60%. As a result there have been, almost literally, fantastic increases in the demand for food, for fuel, and for industrial wood and wood products. Unfortunately, tropical food supplies have failed to keep pace with population growth. In addition, arable land formerly devoted to food crops has been transferred to the seemingly, more lucrative pursuit of the raising of perennial crops. The result is a combination of diminishing arable land and increasing population, which leads inevitably to human suffering.

Moreover, even before the price of fossil fuel was so drastically increased, the developing countries consumed vast amounts of fuelwood. Indeed, by volume this was the largest single entity of forest products utilized in these countries. Today, the bulk of the people in the poorer countries must rely, on wood as the main, if not the sole, source of energy for cooking and heating.

In addition to this growth in demand for a traditional wood product, there is a growing consumption in the developing

countries, of wood for use in the round, for wood-based panel products, and for paper.

Moreover, the developing countries have come to understand the significant role which the forests, forestry and forest industries can play in the attack on economic underdevelopment. They now know that the sector can help to save and earn foreign exchange; that it has high forward and backward linkage indices and that, therefore, the expansion of forestry and forest industries can act as a stimulating force for many other economic activities; that the practice of forestry and the establishment of forest industries can create significant employment opportunities, particularly in the depressed, often neglected, rural areas; and that there is certainly some type of forest industry suitable for establishment in almost any developing country. We have therefore a situation, in the developing economies, in which a resource — the forests — which is known to be capable of assisting greatly in economic development, is frequently destroyed. It is destroyed to provide land for the production of food without which many of the world's inhabitants would die or live a life of permanent malnourishment. This, I submit, is one of the main problems of development in the developing world. This apparent conflict is the demand for land by the farmers on the one hand, and by the foresters on the other. This sacrifice of a developmental resource, of an industrial base, of an ecosystem which reduces the incidence of erosion, regulates water supplies, and tempers the microclimate, for food which is the key basis of life, which provides the sustenance of physical and spiritual well-being.

So far I have concentrated my remarks on the developing countries. Let me now turn to the developed world.

In the developed regions per capita incomes have increased by more than 100% since 1945. This has led, not only to changing patterns of wood consumption, but also to a greater pressure on the forests for their services, for their non-wood values.

In the developed world the demand for the less sophisticated types of wood products has declined. However, the increase in consumption of wood-based panels and of pulp and paper has been more than compensatory. Over all, it has been estimated that by 1985 world demand for wood for industrial wood will be more than twice as high as it was as recently as 1970, and that most of the additional volume will be consumed in the developed countries.

At this moment the effect of the higher price of energy on the future consumption of wood and wood products in the developed countries cannot be accurately judged. It appears, however, to be reasonably certain that wood products can be, and will be, more competitive with those substitutes for wood and wood products which utilize petroleum as the raw material base, and which appeared, say, five years ago, to be capable of absorbing a significant proportion of the wood market. It can also be said that if the levels of economic activity in the industrialized world are to be maintained, the demand for wood and wood products will be sustained. Indeed, our work in the international agencies of the United Nations suggests that demand for wood will increase in the developed countries. The pressures on the forests of the developed world, for wood, will therefore be even greater than they have been in the past.

One consequence, in developed economies, of their rapid economic growth has been a growing awareness, by the general public, of the services which forests offer, and of the polluting effects of forest industries on the environment.

Rising incomes, better infrastructural facilities, improved mobility, more leisure time, and the severe emotional and mental stresses of industrial societies have combined to create not only an interest in the non-wood values of the forests, but also to increase demands for their recreative use. In addition, the effluent which emanates from pulp and paper mills, the pollution of the atmosphere which

sometimes results from the conversion of wood and wood products, the debris and waste which frequently accumulate from wood harvesting and wood conversion, and the impact of factories on the scenic beauty of the countryside, are all now fiercely condemned. As a result, in almost all of the developed countries, legislation has been enacted to control pollution, to conserve the aesthetic values of the forests, to zone the siting of factories, to prevent or control the felling of trees in certain areas, and so on.

Almost all restrict the maximisation of the production of wood from specific types of forests. All can, in the long run, affect the establishment and expansion of forest industries, the absorption of labour, the level of profits, the general growth of the economy, and the traditional system of practising forestry.

Therefore, it seems obvious that the problem of forest land-use in the developed countries is similar, in effect, to that of the developing world. In both cases, it seems inevitable that there will be a significant reduction of the productive forest estate. In the developing countries efforts must be made to meet the just and rational demands of the agriculturist as well as the forester. In the developed countries means must be found of accommodating the just and rational demands of the conservationist, the environmentalist, as well as the production forester and the forest industrialist.

It used to be strongly argued (and there is still some validity in the argument for some places and for some types of combination) that multiple-use forestry⁹ is the answer to the conflicting demands for forest land. It is now recognized, however, that although it is possible to optimize the production of various "packages" of forest goods and services, the maximization of all the individual, single, goods and services which emanate from a forest cannot be attained. There has to be a trade-off. Use priorities have to be established. In the multiple-use package, there has to be a dominant use.

Moreover, in many countries, the consumers are demanding, and the legislators are supporting their demands, that more forests be reserved for single-use, non-wood forestry usually for recreation, amenity, aesthetics. Indeed, these demands are not confined to the developed countries. In some parts of Latin America, for example, this is already a discernible trend. It is also not confined to recreation forestry. In the Guatope National Park, near Caracas in Venezuela, and in the Cantareira State Park near Sao Paulo in Brazil, the forests are managed solely for their water supplies.

Therefore, I repeat that if the non-wood services of the forests are to be supplied to the populace of the various countries, and if the need for more agricultural produce is to be met, then production forests will have to be confined to a smaller area than they now occupy. It follows from this, that if the increasing demands for wood and wood products are also to be fulfilled, there must be increased wood and wood fibre productivity. There must be more efficient wood harvesting and conversion methods and a more rational utilization of the forests and the wood resources which flow from them.

You will forgive me, I hope, if I say that the practice of forestry and forest industries in both the developed and developing countries is, in general, inefficient, though at varying levels of inefficiency.

Let us consider first, briefly, the condition of forestry in the developing, tropical countries. We do not know exactly what species are in the moist tropical high forests; what quantities, what distribution, what growth rates. We do not know how the forests as a whole, or the individual species in various types of forests, would react to different types of silvicultural and management systems. We do not know how best to regenerate naturally those species for which there is commercial demand. We do not know the utilizable qualities

of many of those species we are aware exist in the forests. We cannot say with confidence whether mixed tropical hardwoods, from any region in the world, can be converted into pulp for paper. We do not know the effect of forest plantations on tropical soils, and whether those soils are capable of sustaining more than one rotation. We are certainly not utilizing the best seed sources for tropical plantations; the best genotypes.

Our harvesting methods are primitive, costly, and wasteful. So also are the systems we employ to convert the wood into primary products. In many countries, species that are known to be marketable, and that are in great supply are either not utilized, or are burnt as weeds, because, for example, the silica content of the wood is high.

This list of the woes of tropical forestry is not exhaustive. However, it illustrates not merely our lack of knowledge, but our failure even to adapt what knowledge is available to the prevailing conditions.

The position with regard to forestry in developed countries varies only in degree. When I allege that forestry in the developed world is inefficient I mean the allegation to be understood in relation to the advances made in comparable fields. Accordingly, rather than list the deficiencies that are inherent in the practice of forestry in the developed countries, examples will be given of the possibilities for research and for improving practices, in order to increase forest yields. Most of what will be said in this regard will be applicable to both the developed and the developing countries.

Although much work has been done on tree improvement in recent years, more emphasis needs to be placed on the breeding of genotypes that will be suitable for growth on difficult sites. In addition there is a considerable lack of knowledge, throughout the profession, concerning the predictable interactions of site, genotype and cultural treatment, and their combined effect on yield. Another area of allied research, which might prove profitable, is related to the possibility of breeding for different characteristics at different developmental stages of the crop.

More research should also be pursued on the vegetative propagation of those species that are now normally propagated by seed. The point is easily appreciated if the advantages enjoyed by poplars in the easy rooting of cuttings are compared with the disadvantages of seed orchards. Indeed, there appears to be an inverse correlation between the seed production of individual genotypes and their potential for producing large quantities of high quality wood. The cheap and easy use of cuttings in establishing plantations would enable foresters to eschew the compromise between seed production and wood production and use exclusively sterile elites.

We have not yet begun to examine the full potential of forest fertilization and the results of the influence of the faster growth, which is attendant on fertilization, on spacing and tending practices. The same is true of our knowledge of the optimum combination of cultural techniques in the nursery. In the last 20 years we have not succeeded (if the practice of forestry is taken as a whole and isolated examples ignored) in significantly reducing the period spent by seedlings in the nursery, and of improving, again significantly, the survival and early growth of plants in the field. We have not taken full advantage of the use of auxins, for example, as a means of increasing the efficiency of seedling production, although much progress has been made by the horticulturists in this area. The application of greenhouse techniques to forest seedling production had also not been seriously and fully explored.

Our work on all aspects of improving wood productivity in the developed countries has been too diffuse. It is not that the problems have not been appreciated. It is not even that the methodologies and techniques for solving them are unknown. It is that the approach has been haphazard and unplanned. Our activity in these areas of forest production

has been extensive and desultory. Foresters in developing countries practice forestry as the early tribes gathered their food — as a nomadic, selective, slow, nit-picking exercise. Foresters in developed countries practice forestry as the very early agriculturists must have done just after they had ceased to be wanderers and hunters, as they must have operated in the early days of the domestication of crops and animals.

What I have said about wood production can be applied also to wood harvesting and wood conversion. In the developed countries, on average, about 40% of the wood available in a cut-over forest is not utilized. In the developing countries the proportion wasted is even higher. Much has been written about this. The subject is well documented. The technology and practices to reduce waste are known. The time is not too far distant, as I hope that I have demonstrated, when the knowledge which exists must be applied. The implementation of the environmental laws, and the pressures on the forests from other land-users, will permit nothing less. The conservationists will force the production foresters and the forest industries experts to be as efficient as they can.

One last group of research activities, that is relevant to our times, is worthy of our consideration. Let us first consider the forests as a source of chemicals, polymers and liquid fuels, as a source of those supplies now obtainable mainly from fossils. It is said by some that we are at the beginning of the end of the petroleum era. Be that as it may, it is my conviction that the time is ripe for us to re-evaluate the possibilities of producing chemicals or even oils from wood residues. Research in this field was interrupted after the Second World War because it was difficult to compete with the petro-chemical industry. However, the situation is now somewhat changed and a great number of chemicals, now manufactured by the petro-chemical industry, might with profit be produced from wood through further development of the existing technology. The generation of energy from wood residues, either as such, or after pyrolysis to produce liquid fuel, is another possibility.

A few commercial plants for the utilization of part of the carbohydrates in wood residues for the manufacture of wood sugar (zlitol) or furfural are in operation. A further development could be the utilization of the residue of these processes (which amounts to about 70% of the wood material) to manufacture phenols and liquid fuel.

These are but a few of the areas of research which appear to me to offer opportunities for increasing the biological productivity of our forests; for increasing the volume of the wood which we extract from those forests, and for utilizing that wood in a most efficient way.

You will recall the central thesis of this paper. In the future, in both the developed and the developing countries, the pressures on forest land will be so great that the areas to be devoted to productive forestry will be reduced. The allocation of land to productivity forestry, indeed to any form of land-use, should, of course, be based on land capacity surveys and on an assessment of the social, economic and political effects of other competing uses. It is reasonable to assume, however, that no matter how rational the approach the productive forest estate will diminish. In order to meet the growing demand for wood and wood products we must therefore increase our productivity. We can do this, but much effort in research and development will have to be made.

Within these productive forests activity will be intense and yields will be achieved that bear no comparison with those obtained today. The industries based on these productive forests will be more varied in type, very much less wasteful, very much more efficient.

You will forgive me, I hope, if I spend a few minutes in discussing some aspects of research in which I am currently interested. I wish to talk about this, not because I am

working on the subject, but because I consider it to be of extreme relevance to the land-use problems we have described in the developing world.

You will recall that I said earlier that, because of the sheer necessity to live, people in developing countries were felling forests and practicing farming systems in areas that were inherently unsuitable for sustained agriculture. The conventional scientific wisdom would prescribe forestry as the best type of land-use for these areas. The foresters and the conservationist would recommend that these areas be kept, or put, under permanent forests so that erosion might be minimized, run-off reduced, soil fertility restored or maintained, and the ecosystem generally improved.

Unfortunately, the people who live in these areas for which the conventional wisdom prescribes that protection forests be established, find it difficult to subsist on the forests alone. In addition to their need for wood for cooking and heating, they require food. Indeed, as I have stressed, the demand for food is often the dominant imperative in these societies.

It therefore seems necessary to attempt to devise and perfect a system of land management which eschews the false dichotomy of agriculture and forestry, which conserves the ecosystem, and which at one and the same time provides food and wood. We have called such a system: agro-forestry.

Agro-forestry has been defined as a sustainable land management system which increases the yield of the land, combines the production of crops (including tree crops) and forest plants and/or animals simultaneously or sequentially on the same unit of land, and applies management practices that are compatible with the culture practices of the local population.¹⁰

Agro-forestry is basically a land management system in which forest trees in plantations, are intercropped with food crops, or grasses, or shrubs for fodder. The idea is to have a system which will provide wood for fuel and shelter, food for human consumption or for the consumption of domestic animals, and at the same time, permit the ecosystem to enjoy the protective and conservationist effects of the forests.

There is some evidence that systems such as I have just described can be perfected. The intercropping of forest crops in the early stage of a forest plantation life has been practiced in the tropics for more than a hundred years. Current research is directed to identifying agriculture and forestry species that complement each other in mixture, that are compatible; to attempting to grow the agricultural crops for as long a time as possible between the rows of forest trees, through the exploring of suitable management systems; and to selecting tree species which possess attributes which improve the nutrient status of soils. It is a low-input system which is designed for poor people who live in harsh and difficult ecological conditions and who cannot afford the costly paraphernalia of so-called modern agriculture in great quantities: fertilizers, irrigation systems, and the like.

Included in our concept of agro-forestry is the multi-purpose tree. In multi-purpose forest tree production systems the forest tree species are regenerated and managed for their ability to produce not only wood but also leaves and/or fruit that are suitable for food and/or fodder. It seems to me that foresters have become so obsessed and mesmerized by the wood production systems which they have been engaged in for such a long time that they tend to forget the other products which can be gleaned from trees. In agro-forestry systems, these agricultural and nutritive products are to agro-foresters as important, and often more important, than the traditional wood products.

I think that it is apt that I am speaking to an audience mainly of Canadians. For the modern interest in agro-forestry is due to Canadians' initiative, and much of the financial support for the International Council for Research

in Agro-Forestry comes from Canadian Governmental Agencies: the International Developmental Research Centre (IDRC) and the Canadian International Development Agency (CIDA). In 1974, IDRC commenced a survey of the research problems of tropical forestry and came to the conclusion that the pressing issue was the rape of the forests and that a possible solution was in devising systems which would, at one and the same time, produce food and wood. They recognized the need for research, however, and got together with other developed countries to establish ICRAF.

I think the people of Canada should be proud of possessing an agency such as IDRC, with the imagination to conceive and establish an organization such as ICRAF. I hasten to state that I say this not as a member of the ICRAF staff, but as a member of that vast body of people who are from the developing countries, and to whom poverty and malnutrition and deprivation are not mere statistics in the reports of the United Nations Organization and its Agencies, but are part and parcel of our daily experience. I thank the Canadian people for the general assistance they give the developing world through CIDA and IDRC, and in particular for the help they are giving in agro-forestry.

I want to leave you with this thought. We have seen that most of the people of the developing countries are forced to devote most of their time and energy to scratching an existence from the harsh ecosystems which they occupy. This

debilitates them both physically and emotionally. To my mind what is equally, if not more, horrifying is that it stultifies their cultural creativity. There is little time to do anything other than produce food. There is little time to develop arts, science, statecraft, and the means of expressing the aspirations of the human spirit. This is the most unkindest cut of all.

I hope that in your deliberations at this meeting you will be able to evolve systems which will permit, in some small way, the liberation of the human spirit.

Footnotes

- 3 See: Guardian, Tuesday, September 25, 1979.
- 4 King, K. F. S. 1978. Some Aspects of Land-Use Planning Pop. pres. 8th World Forests Congress, Indonesia.
- 5 King, K. F. S. 1975. Perspectives in World Forestry — 6th Annual Forests Congress, Washington.
- 6 Stallings, J. H. 1957. Soil Conservation — Prentice-Hall, Inc.
- 7 Coe, M. 1977. The Maya. Pelican.
- 8 Eckholm, E. T. 1976. Losing Ground. Norton.
- 9 Def. "The conscious and deliberate use of forest land for the concurrent production of more than one good or service." Gregory, G. R. 1955. Forest Science 1 (1).
- 10 King, K. F. S., and N. T. Chandler. 1978. The Wasted Lands. ICRAF Nairobi.

Avant d'échanger vos vœux du Nouvel An, voyez où vous en êtes

Que s'est-il passé en 1979? Se serait-il produit un événement ayant affecté votre situation et augmenté votre besoin d'assurance-vie?

Peut-être que vous vous êtes marié, vous avez eu un fils ou une fille, vous avez contracté une hypothèque, vous venez de vous joindre à l'IFC.

Voilà des raisons importantes pour réviser votre programme d'assurance-vie et, en tant que membre de l'IFC, pour profiter d'une assurance à prix modique.

L'Institut Forestier du Canada aura le plaisir de vous faire parvenir de plus amples renseignements au sujet de ce régime d'assurance-vie IFC, qui est administré par L'Impériale, Compagnie d'Assurance-Vie. Vous n'avez qu'à vous adresser par écrit à: Institut Forestier du Canada, C.P. 5000, Collège Macdonald, (Québec) H9X 1C0.

L'une des compagnies du Groupe La Laurentienne

L'IMPÉRIALE