

ISTVÁN LÁNG

## Stockholm–Rio de Janeiro–Johannesburg

### Stockholm: the first world conference

At the end of the 60s of the twentieth century the United Nations Organization had been ever more frequently dealing with issues of environmental protection. In autumn 1970 UNESCO launched its international research programme entitled “Man and Biosphere” which studied the mutual effects of the ecosystems evolving in the various climatic regions and human activities.

In 1970 the UN General Assembly decided to organise the first world conference on environmental protection in 1972. Its official name was UN Conference on the Human Environment. Sweden accepted to host the Conference that was held between 5 and 16 June 1972 in Stockholm. Since that time 5 June has become the World Environment Day.

Initially the Soviet Union and its allies supported the idea of the Stockholm event. Preparations began in the so-called ‘East-European’ countries. In Hungary the government commissioned the Ministry of Construction and Urban Development to coordinate the related activities. An inter-ministerial committee was set up under the leadership of Deputy Minister Lajos Szilágyi for coordination tasks. I participated in that committee as Deputy Secretary-General of the Hungarian Academy of Sciences, representing it. The ‘team of Stockholm’ was being shaped (I was supposed to be a member of it) but ultimately the Hungarian delegation never went to the Stockholm Conference. In fact a diplomatic tangle emerged because the German Democratic Republic was not invited to the event as the GDR was not a member of the UN in those days. In protest the Soviet Union and several of its allies, including Hungary demonstrated by their absence. Later on it proved to have been a big mistake as countries keeping away got into a five-year delay at least in joining international programmes for the protection of the environment.

The attention and interest of domestic scientific circles turned towards the new type of environmental problems already from 1971 onwards. In 1971 the Hungarian Academy of Sciences elaborated a research task on the level of ministries, entitled “Man and the Protection of His Natural Environment”, called “Biosphere Programme” in brief. The research tasks were coordinated by the Botanical Research Institute of HAS (Vácrátót).

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Begegnungen

Schriftenreihe des Europa Institutes Budapest, Band 20:23–29.

In May 1972 (one month before the Stockholm Conference, when we were still sure to participate in that international event), Academician János Szentágothai gave the main talk to the General Assembly of the Academy on "Man and His Environment". (*Magyar Tudomány* 1972. No. 6. pp. 350-357.) The presenter discussed the most important environmental problems with extraordinary farsightedness, mentioning among others the impoverishment of the genetic treasure of organisms living on Earth, the greenhouse effect of carbon dioxide emission, and the importance of recycling wastes. He proposed a more modest and economical consumption and way of life at a time when the concept of sustainable development as such was unknown. János Szentágothai recognised the new challenges of the new trend in time.

I skipped through the June 1972 issues of the daily paper *Népszabadság*. The issue published on 1 June stated that the Hungarian delegation remained absent. According to the communiqué of the Ministry of Foreign Affairs the principle of universality was violated by hindering the GDR to participate and one of the developed and industrialised countries was discriminated against. In protest Hungary, similarly to the other socialist countries, would not send its delegation to the Stockholm Conference.

In its 5 June, Sunday issue *Népszabadság* published the most important details of János Szentágothai's presentation given at the General Assembly in a whole-page article. On 6 June it was reported in a brief news item that the UN Conference on environmental protection was opened in Stockholm. On 7 June a similar news item reported that the conference was in session and that the Swedish Prime Minister Olof Palme condemned the Americans bombing Vietnam in his speech.

Subsequently the paper did not deal with the event any more.

The Stockholm Conference primarily focused on environmental elements (atmosphere, water, soil, biosphere, landscape, settlements) but naturally the economic and social problems of developing countries also came to the foreground. Further on, the development of a set of institutions for environmental policy on national level was pressed for. In several countries the ministries and offices for environmental protection were set up in the 1970s.

In Hungary the Association of Engineering and Natural Sciences set up the Environmental Coordination Committee in the autumn of 1972 which coordinated technical and scientific activities.

The Patriotic People's Front established a Panel for the Protection of the Environment. In March 1973 a national conference on the protection of the environment was called to Vác, where I also participated. When I saw that the highest-ranking politician was the Vác District party secretary of the HSWP, it became clear to me that the significance of environmental protection had not yet been realised in domestic politics.

## Rio de Janeiro: social movements

Twenty years after the first world conference the UN organised the Conference on Environment and Development in Brazil in 1992. Tremendous development had taken place in the area of environmental protection from Stockholm to Rio. It was included in the action programmes of governments in every country of the world, and social movements also became stronger. There was a growing interest in environment-friendly technologies in the economic and business spheres as well. The concept of sustainable development appeared that wished to give an opportunity for all to satisfy basic needs and wanted to guard similar demands of the future generations as well.

Meanwhile the political conditions changed in the Soviet Union and in the East European region. Parliamentary democracies were established, market economy was being built, and the exercise of human rights was assured. The condition of the Cold War was terminated.

Unfortunately the economic and technological gap further widened between the developed and developing countries, and the environmental condition of the world was being further degraded in global dimensions. On regional and local levels however, a number of good examples could be listed and welcomed.

The report of the World Commission on Environment and Development (the so-called Brundtland-Commission), entitled "Our Common Future" offered great help to the preparation of the Conference documents.

In Rio luckily the official delegation of Hungary was also present under the leadership of the Minister of the Environment Sándor Keresztes K. Our country was represented by President Árpád Göncz at the Earth Summit held as the closing part of the Conference, and he signed the legally binding agreements.

The major documents of the Rio Conference are as follows:

- Rio Declaration on the Environment and Development,
- Agenda 21,
- Framework Convention on Climate Change,
- Agreement on Biological Diversity,
- Global Forest Principles.

One of the interesting features of the work of the Rio Conference was that the major social interest groups participating in it got actively involved. Further on they will be discussed, with special regard to the role of scientific communities.

The Agenda 21 is actually a bulky collection of recommendations that are legally not binding, thus every government or organisation may use as much of it as it wishes. The document can be divided into four major units:

Social conditions • Protection of environmental elements • Social groups • Means of implementation.

The following belong to the groups of social interest representation:

- Women,
- Young people,
- Indigenous peoples,
- Non-governmental organisations (the green movements in this case)
- Local governments,
- Trade unions,
- Business and industry,
- Scientists and the engineering community,
- Agricultural workers.

Each of these social groups discussed the documents of the Conference. A large part of their comments was included in the final versions. In another respect this method of work also means that there is and will be a need for eliciting the opinion of the various social groups on national as well as regional levels and for asserting it whenever possible.

The Agenda 21 stressed that there was a far more open and flexible participation of the members of scientific and engineering communities in decision-making processes related to the environment and development. Further on, it is also important that the decision-makers as well as the public should get acquainted with and should understand far more profoundly the role of science and technology in human relations. An opportunity should be offered to the public to mediate their emotions. An improvement of communications and cooperation between the scientific and technical community and the decision-makers would make a broader utilisation of scientific and technical knowledge and information possible in the implementation of concrete programmes.

According to the Agenda 21 one of the most important aims is to acquire more and deeper knowledge about the relationship between human and natural environmental systems, to develop the means of analysis and forecasting, by which the environmental effects of the variants of development can be better understood. The aims of sustainable development should be defined with concepts that are based on scientific knowledge together with a scientific survey of the present condition and future of the systems on Earth.

Great promises and offers were made at the Rio conference. One such commitment was that the developed countries would transfer 0.7% of the GNP to developing countries for the acquisition of environment-friendly technologies. Unfortunately it was not implemented. Ten years later it was stated that 0.35% was earmarked for this purpose at the most. Wrangling related to the Convention on Climate Change also caused disappointment. In 1992 the Convention was signed, but it expressed only good will without specific commitments and deadlines. In 1997 such an accord could be elaborated in Kyoto that set the extent of the reduction of carbon dioxide emission. It is

commonly known that later on the US did not ratify the Kyoto Protocol. The Kyoto Protocol only entered into force in late 2002. Thus the process of implementation is very slow.

There was a celebration with stormy applause at the end of the Rio Conference. At that time we thought that we had succeeded in putting the world on a new track of development. Ten years later we had to realise that it has again been postponed for some indefinite time in future.

### Johannesburg: economic and social policy

Ten years after the Rio, and thirty years after the Stockholm Conference the third world conference was held between 26 August and 4 September 2002 in Johannesburg, in the South African Republic. The official name of the event was UN World Summit on Sustainable Development (in Hungarian we rather refer to it as the UN World Conference on Sustainable Development). Changes in the name of world conferences (Rio–Stockholm–Johannesburg) well reflect the trend that the former concept of the protection of the environment later on was intertwined with the economic sectors and subsequently with social issues. Sustainable development has three supporting pillars, or in other words three dimensions: environmental, economic and social. Naturally they are manifest only in interrelationships, supplementing each other.

It is the primary merit of Johannesburg that it made governments, the business and economic spheres and civil society conscious that one should think and act in keeping with the concept of sustainable development. A change in the outlook can already be noted since the relatively short time after the event. The protection of the environment does not figure alone, but in consideration of economic growth and the related societal and social consequences. Surely it is not accidental that the European Union, obviously under the influence of preparations for the Johannesburg Summit, elaborated its own strategy for the realisation of sustainable development in 2001.

At the Johannesburg World Summit the Hungarian delegation was headed by Environment Minister Mária Kóródi, and Katalin Szili, Speaker of Parliament represented Hungary at the summit of the heads of state and government that was organised as the closing phase of the conference.

Johannesburg did not produce resounding new results. Essentially it confirmed the principles and commitments of Rio. Naturally some new aims also appeared in the approved documents that are being presented by the other authors of the issue.

- Two documents were passed by the Johannesburg World Summit:
- Johannesburg Declaration on Sustainable Development,
  - Plan of Implementation.

In the following I would exclusively focus on the role of science.

The Plan of Implementation, summarised in 153 Items, mentions the importance of the participation of science and research in 13 occasions. These recommendations primarily pertain to natural resources (freshwater, seas, climate, soil, biodiversity) and to their sustainable development. In addition reference is made to the significance of the participation of science at passages on energetics and environmental health care. Scientific research is also needed for the installation of monitoring systems. The document stressed that the scientific capacity of developing countries should be enlarged.

Nevertheless, it is a fact that science had a bigger place in the documents of the Rio conference than in the Plan of Implementation of the Johannesburg World Summit.

The International Council of Scientific Unions (ICSU) was commissioned by the UN to prepare an analysis for the Johannesburg Summit on how scientific and engineering communities may promote the realisation of sustainable development. The report was prepared by ICSU and the World Federation of Engineering Organisations (WFEO), in cooperation with the International Academic Panel (IAP), with the International Social Science Council (ISSC) and the Third World Academy of Science (TWAS). The report listed the most important research programmes of the past decades on the survey of natural resources. The paper referred also to the standpoints of the World Conference of Science held in Budapest in 1999.

The conclusions of the paper can be summarised as follows:

- Scientific and engineering communities, when they rely on the results of traditional disciplines, or researches driven by curiosity, should pay greater attention to the solution of problems deriving from social demand.
- The proportion of investments into science and technology should be increased in the world. Such investments are the economically most advantageous ones and their social return is far bigger than in the case of other investments. In the developed countries 2-3% of the GDP is spent on the R&D sphere, whereas in several developing countries this proportion is much lower than 1%. Global spending on R&D should be more than that, and the proportion of research and technological development serving sustainable development should reach 20 to 25% within it.
- The scientific and engineering communities should be committed to ethical norms and customs. They should pursue their activities in coordination, transparently, in a balanced way and honestly. They should present their results to the society and should win over its support.
- The scientific communities should assist the decision-makers by presenting them the possible alternative answers to strategic issues, they should explore new trends in proper time and should indicate the predictable mutual effects and their consequences.

- Scientists and engineers should have regular dialogues with politicians, they should actively participate in the work of such committees and bodies that study sustainable development; they should accept advisory functions for governmental bodies, in the leading organs of enterprises and in the respective committees of international organisations.

The Johannesburg Summit awoke new hopes in several countries. Their realisation greatly depends on what kind of incentives those thoughts will receive in which everybody agrees in general, but nothing is done for their realisation in the majority of cases.