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The right to freedom of research under the Antarctic Treaty System

ABSTRACT: Freedom of research is one of the fundamental principles upon which the Antarctic Treaty System (ATS) was founded. Its scope is defined by the limitations imposed by relevant legal rules. They provide among other for prohibition of scientific investigation of military character and declare that no activities — including research — shall constitute a basis for territorial claims in Antarctica. Of particular importance are limitations imposed on freedom of research for the benefit of environmental protection. But, contrary to some views, most scholars consider that the freedom of research and the protection of the environment and ecosystems in Antarctica are equally important principles central to the whole ATS. They are inter-dependent and neither one should be attributed priority over the other. In the best interest of science, Antarctic research needs to be controlled to the necessary minimum of environmental impact and risk.

Key words: Antarctica, law and politics.

Introduction

Antarctica forms an immense natural scientific laboratory. No wonder, therefore, that a considerable part of the 1959 Antarctic Treaty provisions was dedicated to international cooperation in science. That, in turn, has provoked heated debates on the scope of freedom of scientific investigations in Antarctica, stipulated in the Treaty. The outcome of these debates took the final shape of provisions and rules on the right to freedom of research, incorporated into various legal instruments which form the framework of the ATS. A comparative study of these legal provisions is the contents of the present article.

Origin, scope and substance of the right to freedom of research

At the very outset it seems suitable to outline the notion of the right to freedom of research which is a relatively new and rather unknown legal

institution. Although the idea of freedom of research is deeply rooted in the remotest history of science, as legal phenomenon it is a by-product of contemporary revolution in science and technology. Its processes have promoted the scientist into a new position in the society and upgraded science into one of the basic productive forces. Since research is the main motive power of progress in science, the urgent need for transformation of the outdated forms of academic freedoms and intellectual liberties into modern, legally binding rights has arisen. To meet that need the right to freedom of research was formulated. At present, freedom of research appears in law in two forms: either as one of the human rights, or as a right of States.¹⁾

As human right, vested in individuals, (particular research workers), was the right to freedom of research formulated among other in art. 15 par. 3 of the 1966 International Covenant on Economic, Social and Cultural Rights, which commits the States Parties to the Covenant to „undertake to respect the freedom indispensable for scientific research and creative activity”. It also appears in numerous municipal laws as one of the civil rights and liberties, warranted in many constitutions.

Although the available comprehensive catalogues of rights and duties of States do not specify their right to freedom of research, it is stipulated in numerous multilateral conventions and bilateral agreements, thus legally binding the parties of these instruments, and in case of so called objective regimes, binding *erga omnes*. In the first instance, the right of States to freedom of research was granted in respect of so called „international” or „common spaces”, which were placed outside the sovereignty and jurisdiction of particular States. So far, the following areas and spaces have been subjected to such legal regime: in the law of the sea²⁾ — the high seas and the so called „Area”, comprising the sea-bed and ocean floor and subsoil thereof beyond the limits of national jurisdiction; in space law — the outer space including the celestial bodies therein, and finally Antarctica — under the 1959 Antarctic Treaty.

The greatest difficulty in practical application of the right to freedom of research constitute the various restrictions and limitations to it, imposed by law. In accordance with jurisprudence and general legal practice, the right to freedom of research is not an absolute right and its enjoyment is conditioned

¹⁾ For details see: Machowski J. 1979. The principle of freedom of research in the light of international law (in Polish) — *Studia Filozoficzne*. 7 (164): 151–165.; 1984, Freedom of Research: a legal and sociological approach — University of Jos (Nigeria) Postgraduate Open Lecture Series. Vol. I, No 8, pp. 3–38; 1989: Freedom of research as human right (in Polish) — *Życie Szkoły Wyższej*. 10: 23–39.

²⁾ Kwiatkowska-Czechowska B. 1979. Scientific research in the light of the Third Conference on the Law of the Sea (in Polish) — *Sprawy Międzynarodowe*. 6: 133–146; Symonides J.: 1981. Third Conference on the Law of the Sea and the investigation of the World Ocean (in Polish) — Sopot; Soons A. 1982. Marine Scientific research and the law of the sea — Denver.

by a number of duties and limitations. Consequently, the subjects — both individuals and States, as well as international organizations — enjoying respectively that right and freedom, are bound to accept also the burdens attached to it, because it is a two way street: any right is related to certain corresponding duties.

The most frequent limitations to the right of freedom of research which appear in various legal instruments are providing among other that scientific investigations ought to be conducted exclusively for peaceful purposes, with due regard to the rights and duties, as well as legitimate interests of other States, with appropriate scientific methods and means compatible with relevant legal provisions, with due regard to the protection and preservation of the environment, in conformity with international law and for the benefit of mankind as a whole and so on. On the other hand, according to the relevant rules, scientific investigation shall not unjustifiably interfere with other legitimate uses of and activities in the area where it is conducted, and research activities shall not constitute the legal basis for any territorial claims.

The above exemplary list of values protected by law against indiscriminate exercise and abusive enjoyment of the right to freedom of research is far from being exhaustive.

Generally, the limitations on the right to freedom of research may be either of *spatial* character, with reference to the exclusive areas and spaces, of *material* character, referring them to specific objects, methods and activities and of *personal* character, referring to certain persons, or they may also be of mixed character, covering all these aspects. Some of the relevant provisions are making clear distinction between fundamental and applied research, particularly with the view of commercial uses or military purposes. Fundamental research is usually favoured and accordingly subjected to limitations of lesser extent.

The undefined border lines between the notions of scientific research and investigations and such related activities like prospecting, exploration and development or even exploitation, which appear jointly in many legal instruments, and lack of generally accepted definitions, render difficult to define precisely the scope of the right to freedom of research.

The Antarctic Treaty System

Before discussing the application of the right to freedom of research under the Antarctic Treaty System, it is necessary to present first that system itself, with reference to its provisions on international cooperation in science. Since 1959, when the Antarctic Treaty was signed, it has developed into an international system of interwoven legal instruments, differentiated in form and contents, of different binding force, but coordinated and consistent with each

other. That unique on historic and global scale system, has established an unusual political and legal regime over a whole part of our globe, including one entire continent. The Treaty area was excluded from sovereignty and jurisdiction of the States, transformed into a demilitarized and denuclearized zone and subjected to special rules of international cooperation, particularly in science, in the spirit of freedom of investigation.

At present, ATS embodies the 1959 Antarctic Treaty together with the Consultative Parties' recommendations provided for in its Art. IX, as well as three international conventions, negotiated outside the Treaty provisions, but linked with it by special provisions on coordination and consistency. The referred conventions are: the 1972 Convention for the Conservation of Antarctic Seals, the 1980 Convention on the Conservation of Antarctic Marine Living Resources and the 1988 Convention on the Regulation of Antarctic Mineral Resource Activities.

Art. II of the Antarctic Treaty which was signed in 1959 and entered into force in 1961, warrants for „freedom of scientific investigation in Antarctica and cooperation toward that end”. In the Preamble, the Treaty Parties have acknowledged „the substantial contributions to scientific knowledge resulting from international cooperation in scientific investigation in Antarctica” and expressed conviction „that the establishment of a firm foundation for the continuation and development of such cooperation on the basis of freedom of scientific investigation in Antarctica as applied during the International Geophysical Year accords with the interests of science and the progress of all mankind”. In order to promote international cooperation in scientific investigation in Antarctica, the Contracting Parties have agreed, to the greatest extent feasible and practicable, to exchange information regarding plans for scientific programs, scientific personnel between expeditions and stations in Antarctica and freely scientific observations and results from Antarctica (Art. III).

According to Art. VIII par. 1, scientific personnel exchanged and members of the staffs accompanying any such persons, shall be subject only to the jurisdiction of the Contracting Party of which they are nationals in respect of all acts or omissions occurring while they are in Antarctica for the purpose of exercising their functions.

It is evident from the Treaty provisions that international cooperation in science and research in Antarctica is one of its main objectives. Although scientific activities are relatively non controversial, it is widely recognized that Antarctica's unique dedication to science does not arise from its particular suitability for research, but rather from political necessity.³⁾

The terms scientific „research” and „investigation” are used in the Treaty (Preamble, Articles I–III, IX) alternately. From the context, however, these two

³⁾ Auburn F. M. 1982. *Antarctic Law and Politics* — London, Canberra, p. 99.

terms may be taken to have the same meaning, although the Treaty defines neither of them. According to some scholars, scientific exploration for economically exploitable resources is arguably not excluded because the Antarctic Treaty does not warrant the drawing of a line between pure and applied science.⁴⁾

Negotiating the Treaty, the Soviet Union had proposed an unqualified right to freedom of research throughout Antarctica. That, however was unacceptable to the remaining negotiating parties. In result the limitations and restrictions on that right provided for by the Treaty are intentional and substantial.⁵⁾ According to Art. II the right to freedom of research is subject to „the provisions of the present Treaty”. Thus, any limitations and restrictions to that right must be sought in the Treaty text.

Art. IX par. 1 provides that the Contracting Parties shall meet at suitable intervals and places, for the purpose of exchanging information, consulting together on matters of common interest pertaining to Antarctica, and formulating and considering, and recommending to their governments, measures in furtherance of the principles and objectives of the Treaty, including measures regarding facilitation of scientific research, and of international scientific cooperation, as well as preservation and conservation of living resources in Antarctica.

Following the above provisions, the Antarctic Treaty Parties have adopted since its first Consultative Meeting in 1961 about two hundred recommendations, the great majority of which entered into force and forms now integral part of ATS. Beginning with the first resolution adopted at the first Consultative Meeting in Canberra, a considerable part of these recommendations is referring directly or indirectly to the freedom of investigation stipulated in Art. II of the Treaty.

Some of them, like recommendation XIII-6 (1985), are directly „reaffirming that freedom of scientific investigation as set out in Article II of the Antarctic Treaty is one of the fundamental principles of the Treaty”. Other recommendations do it indirectly, providing for specific actions and measures in furtherance of freedom of research.⁶⁾

⁴⁾ Ibid. and Hambro E. 1974. Some Notes on the Future of the Antarctic Treaty Collaboration. — In *American Journal of International Law*, 63: 217 at 222—3.

⁵⁾ Auburn, *op. cit.* pp. 99–100, Enrique Gajardo Villarroel: 1977, *Apuntes para un libro sobre la Historia Diplomática del Tratado Antártico y la participación chilena en su elaboración.* — In *Revista de Difusión INACH*, 10 : 40 p. 64; Scilingo A. 1963, *El Tratado Antártico*, p. 51.

⁶⁾ See Consultative Meetings Recommendations: I-I (1961) Exchange of Information on Scientific Programmes; I-II (1961) Exchange of Scientific Personnel I-III (1961), and II-I (1962) Exchange of Scientific Data; I-IV (1961) SCAR; VI-6 (1970) Coordination of Scientific Investigations involving Radio-isotopes; VI-12 (1970) Scientific Research Rockets; VI-3 (1972), VIII-3 (1975), X-6 (1979), XII-5 (1983), XIII-7 and 8 (1985), XIV-4 and 5 (1987) Sites of Special Scientific Interest; IX-2 (1977) Antarctic Marine Living Resources (I Scientific Research; X-4 (1979) Man's Impact on the Antarctic Environment: the collection of geological samples; XII-1 (1983) The

No less attention was paid to freedom of scientific investigation in the three mentioned *conventions*, being integral parts of the ATS.

The Convention for Conservation of Antarctic Seals (CCAS), which was signed in 1972 and came into force in 1978 and the Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR), which was signed in 1980 and came into effect in 1982, are somewhat complementary to the Agreed Measures for the Conservation of Antarctic Fauna and Flora⁷⁾ and replaced the earlier Interim Guide Lines for the Voluntary Regulation of Antarctic Pelagic Sealing.⁸⁾

Both these conventions contain prescriptions to allow sound management and scientific investigations of the Antarctic marine ecosystems, with the aim of prevention of decrease in the size of population, maintenance of the ecological relationship between harvested dependant and related populations and restoration of depleted populations. The attainment of these goals depends largely on effective scientific research.

Accordingly, in the Preamble to the CCAS the Contracting Parties have recognized „that in order to improve scientific knowledge and so place exploitation on a rational basis, every efforts should be made both to encourage biological and other research on Antarctic seal populations and to gain information from such research and from the statistics of future sealing operations, so that further suitable regulations may be formulated”.

To attain that goal a system of exchange of information and scientific advice was established by Art. 5 of the CCAS, providing among other for exchange of scientific data and information, as well as recommendation of programmes for scientific research. Further, Art. 6 provides for the establishment of a Scientific Advisory Committee and the carrying out of scientific programmes with the participation of the Contracting Parties.

Also in the Preamble to the CCAMLR the Contracting Parties have acknowledged „that it is essential to increase knowledge of the Antarctic marine ecosystem and its components so as to be able to base decisions on harvesting on sound scientific information”.

The Scientific Committee for the Conservation of Antarctic Marine Living Resources, established by Art. XIV of CCAMLR, provides a forum for consultation and cooperation concerning the collection, study and exchange of

Collection and Distribution of Antarctic Meteorological Data; XII-6 (1985) Facilitation of Scientific Research: Siting of stations; XIV-3 (1987) and XV-17 (1989); Human Impact on the Antarctic Environment: safeguards for scientific drilling; XIV-6 (1987) Marine Sites of Special Scientific Interest; XV-14 and 15 (1989) Promotion of international scientific cooperation; XV-16 and 17 (1989) Facilitation of scientific research: Comparability and accessibility of Antarctic Scientific Data/Siting of stations.

⁷⁾ Agreed Measures for the Conservation of Antarctic Fauna and Flora, annexed to Rec. III-VIII (1964) (hereinafter: Agreed Measures).

⁸⁾ Rec. IV-21 (1966)

information with respect to the marine living resources, encourages and promotes cooperation in the field of scientific research in order to extend knowledge of the marine living resources of the Antarctic marine ecosystem.

While recognizing the importance of freedom of scientific research stipulated in the Antarctic Treaty, both mentioned conventions, due to their conservation character, are favouring preservation and protection of Antarctic living resources, thus giving them preference before any other of the principles, including freedom of investigation. Accordingly, these conventions, are imposing a number of limitations on the right to freedom of research which will be discussed below.

After six years of difficult negotiations, on 25th November, 1988 in Wellington (New Zealand), the controversial Convention on the Regulation of Antarctic Mineral Resource Activities (CRAMRA) was opened for signature, but did not enter into force yet. Linking it formally with the other components of the ATS (Art.10), the States Parties to this Convention, have expressed in its Preamble their conviction „that the Antarctic Treaty system has proved effective (...) in promoting freedom of scientific research in Antarctica”. Acknowledging the importance of scientific investigation for mineral resource activities in Antarctica and for its protection from their harmful effects, the States Parties have provided for the establishment of the necessary international machinery to cope with these matters. Following the pattern of the two precedent conventions, the authors of CRAMRA have stipulated in its Art. 23 for the establishment of the Scientific, Technical and Environmental Advisory Committee to „provide a forum for consultation and cooperation concerning the collection, exchange and evaluation of information related to the scientific, technical and environmental aspects to Antarctic mineral resource activities” (Art. 26). In Art. 15, CRAMRA emphasizes the need for respect for other uses of Antarctica, including „scientific investigation in Antarctica and cooperation therein”, while Art. 13 par. 1 provides that „Antarctic mineral resource activities shall be prohibited in any areas designated as a Specially Protected Area or a Site of Special Scientific Interest under Article IX (1) of the Antarctic Treaty”. The Commission shall also prohibit or restrict Antarctic mineral resource activities in any area which for scientific or other reasons, it has designated as a protected area.

CRAMRA attempts to fill the vacuum created by the absence of comprehensive and generally accepted definitions of certain interrelated activities essential for the real enjoyment of the right to freedom of research. Controversies caused by that shortcoming have already reached political proportions. According to definitions contained in Art. 1 par. 7, „Antarctic mineral resource activities means prospecting, exploration or development, but does not include scientific research activities within the meaning of Article III of the Antarctic Treaty”. In the subsequent paragraphs of Art. 1 the notions of „prospecting”, „exploration” and „development” have been defined for the purpose of the

Convention. Prospecting, exploration and development are subject of CRAM-RA's chapters III, IV and V respectively.

Finally, Art. 35 containing financial provisions, stipulates in par. 7(a) that the Commission in determining the disposition of accruing to it which are surplus to the requirements for financing the budget, shall „promote scientific research in Antarctica, particularly that related to the Antarctic environment and Antarctic resources, and a wide spread of participation in such research by all Parties, in particular developing country Parties”.

The above comparative study of the relevant legal provision proves that freedom of scientific investigations is one of the fundamental principles of the ATS, while all its components contain relevant provisions stipulating for the right to freedom of research and enriching its notion by important legal and political elements.

Limitations on the right to freedom of research

The modern concept of freedom of research is a by-product of the revolution in science and technology. So are the limitations on that freedom, which are considered as preventive measures aimed at the liquidation of growing discrepancies between scientific and technological progress on the one hand and the intellectual, spiritual, cultural and moral advancement of humanity on the other. They are embarked in an atmosphere of deep and radical changes in the attitude towards science and scientists in general. Science, which during the three decades following the devastating Second World War was highly praised as the leading motive power in rebuilding and development, as the source of all economic successes and as a remedy against all troubles, is recently often branded as the evil force responsible for most failures. But the only chance for the finding of effective panacea against these failures, is the intensification of research and development of science. That purpose serves among other the promotion of the right to freedom of scientific research, properly balanced by a set of adequate limitations on it.

As stated above, the limitations on the right to freedom of scientific investigation stipulated in Art. II of the Antarctic Treaty, must be sought in the first instance in the Treaty itself. That international instrument is based on a number of fundamental principles and values which ought to be observed and safeguarded. One of them is freedom of scientific investigation. Although, in principle, they are equal, consistent with each other and interrelated, in the everyday application there always exists a danger of contradictions and a risk of conflicts. That raises a number of practical questions, such as: whether all these principles and values are really equal and of the same importance? or, perhaps preference should be given to some of them? or maybe they should be discriminated against other?

The rationale behind the formulation of the right to freedom of research was to safeguard science against manipulation by external forces, often adverse to its fundamental principles and objectives. Thus, in each case involving the application and enjoyment of that right, a borderline must be drawn between a legitimate limitation and justified restriction on the one hand and unfounded manipulation and abusive exercise on the other.

The 1959 Treaty provides that „Antarctica shall be used for peaceful purposes only” (Preamble and Art.1 par. 1). Accordingly, scientific investigation of military nature, such as the testing there of any type of weapons or alike, would be contrary to that principle. But, that limitation on the right to freedom of scientific investigation does „not prevent the use of military personnel or equipment for scientific research or for any other peaceful purpose”. (Art. 1 par. 2).

According to Art. IV par. 2, no acts or activities — including scientific research — taking place while the Antarctic Treaty is in force shall constitute a basis for asserting, supporting or denying a claim to territorial sovereignty in Antarctica or create any rights of sovereignty in Antarctica. On the other hand, research activities might be the source of certain rights and privileges, stipulated by Art. IX par. 2, which provides among other that each Contracting Party to the Treaty which „demonstrates its interest in Antarctica by conducting substantial scientific research activity there, such as the establishment of a scientific station or the despatch of a scientific expedition”, shall be entitled to participate in the Consultative Meetings.

Then, according to Art. VII par. 3 „all areas of Antarctica, including all stations, instalations and equipment within those areas and all ships and aircraft at points of discharging or embarking cargoes or personnel in Antarctica, shall be open at all times to inspection by any observers” designated in accordance with the Antarctic Treaty. In order to facilitate the exercise of inspections under the Treaty, the Contracting Parties are obliged to notify in advance all expeditions and stations. Obviously, scientific personnel, equipment and activities are not exempted from the obligation of such inspections.

But, apart from the limitations and restrictions on the right to freedom of research imposed by the Antarctic Treaty itself, real difficulties in its practical application have arisen, when the Contracting Parties became confronted with the necessity to compromise that right with the requirements of *the conservation of the natural environment and the protection of its ecosystems and resources*. A dramatic question has arisen: how far should scientific and support efforts be pursued at an environmental cost no matter how insignificant?

Antarctica forms not only an immense natural scientific laboratory, but represents also a unique in global scale ecosystem, based on a very fragile balance, the shaking and disruption of which, might have unpredictable consequences for our whole planet. No wonder, therefore, that both its polar regions are defined to-day as „world’s scientific zero-areas”. But, the unprece-

dented intensification of human activities — including the scientific — created for Antarctica's environment imminent threats, demanding adequate conservation measures and a comprehensive legal protection.

The authors of the 1959 Antarctic Treaty did not take up that subject comprehensively, because at the time of its drafting, the problem of the protection of environment was rather marginal and in distant Antarctica practically non-existent. Nonetheless, the Treaty text contains a number of provisions, referring to that matter indirectly and aimed at the protection of the Antarctic environment against harmful effects of some activities, including certain tests and experiments. For instance, any measures of a military nature, such as the establishment of military bases and fortifications, the carrying out of military manoeuvres, as well as the testing of any type of weapons are by the Treaty prohibited (Art. I, par.1). Nuclear explosions and the disposal of radioactive waste material are in Antarctica also forbidden (Art. V, par. 1).

In spite of the absence in the Treaty of a comprehensive fundamental regulation on the conservation and protection of the environment, the Consultative Parties were preoccupied with this problem since their first meeting in 1961, when three recommendations on that issue were adopted.⁹⁾ But, these resolutions were only a prelude to the adoption of a long series of Consultative Meetings' recommendations, aimed at the conservation of the Antarctic environment which together with the three conventions, provide for a set of meaningful restrictions and limitations on the right to freedom of research applied under the ATS. These provisions have provoked a heated debate on the antagonistic nature of the rules governing the freedom of scientific research and the protection of the Antarctic environment.¹⁰⁾

But, there exists not only an evident conflict of interests between freedom of research and conservation in Antarctica. There are also conflicting interests of conservation. For example, on South Georgia strict protection of seals results in massive destruction of the tussock grass vegetation. And at this juncture, the importance of research for conservation and improvement of the environment arises. But the question of priority: research or conservation, still remains feasible.

According to the International Union for Conservation of Nature and Natural Resources (IUCN) „parties should ensure that research and conservation action is coordinated and that, as a priority, the programmes to protect Antarctic ecosystems”¹¹⁾ while „the Treaty nations appear to be moving

⁹⁾ Recommendations I–VIII (1961) on Conservation of Fauna and Flora; I–IX (1961) on Historic Sites; I–XIII (1961) on Exchange of information on nuclear equipment and techniques.

¹⁰⁾ Wong F. and Newman F. 1986. Restrictions to Freedom of Scientific Research through Environmental Protection. — *In: Antarctic Challenge II*, ed. Wolfrum R., Berlin, 103–109 pp. (hereinafter : *Antarctic Challenge II*).

¹¹⁾ IUCN, 1984 (Madrid), Resolutions on Antarctica, 16th Session of the General Assembly of IUCN, Resolution 4.

towards regulations which require an Environmental Assessment for every major construction or scientific project in the Antarctic"¹²⁾

Contrary to these views, most scholars consider that the freedom of scientific research and the protection of the Antarctic environment and ecosystems are equally important concepts. They are both embodied and central to the whole ATS and the relative importance of the one vis-a-vis the other, is nowhere prescribed in the Treaty. Thus, they must be regarded as inter-dependent and neither one should there be or can there be attributed any absolute priority over the other.¹³⁾

On that conflict of interests, Professor Ludger Kappen from Kiel University has reached following conclusions: „Impact of natural scientists to Antarctic nature is yet limited and insignificant. Concomitant or separate activities with large groups of people or heavy technology are more dangerous. At the moment natural scientists may be subjected to pressure from several sides: Conservation strategies and management may cause troubles by extending evaluation processes, whether a scientific project is acceptable or not. As a member of an expedition of a foreign state the scientist is subjected to specific foreign jurisdiction which includes implementation of potentially conflicting conservation regulations and other unreasonable restrictions. I hereby vote for a free and independent, but coordinated research under internationally equal conditions in the spirit of the Antarctic Treaty.¹⁴⁾

Apart of international limitations, many states have unilaterally and voluntarily imposed on their scientific personnel in Antarctica certain restrictions on the enjoyment of their right to freedom of research¹⁵⁾

Some scholars fear that the growing discrepancies between domestic legislation and international regulations on conservation and research may threaten the freedom of Antarctic investigation, and call for internationally uniform regulations in the spirit of the Antarctic Treaty. Now, the rules on domestic jurisdiction and national versions of conservation raise problems for international scientific cooperation and may even counteract Art. III of the Antarctic Treaty. That threat to freedom of research is imminent, because „state authority applies to stations and expeditions irrespective to the nationalities of cooperating scientists. It cannot be disregarded that a govern-

¹²⁾ IUCN, 1984 (New York), Conservation and development of Antarctic ecosystems. Paper submitted to the UN Political Affairs Division for consideration at the UN General Assembly's Antarctica Debate, p. 24.

¹³⁾ Panel Discussion: L. A. Kimball, J. N. Barnes (USA), L. Kappen (Federal Republic of Germany), J. D. Viall (South Africa), F. Seyersted (Norway) — *In: Antarctic Challenge II*, pp. 110–130.

¹⁴⁾ *Antarctic Challenge II*, p. 123.

¹⁵⁾ Antarctic Conservation Act of 1978 (Public Law 95-541); Regulations Federal Register, June 7, 1979, reprinted in: *Antarctic Journal of the United States* 14 (June 1979), 3. On New Zealand's restrictions see: Wong and Newman *op. cit.* pp. 107–108.

ment is able to purpose its own prestige and claims on the success of the involved scientists and perhaps to use their results for its own profit. How can good scientific projects be protected against decisions in favour of activities for presence and prestige".¹⁶

Although most international legal rules governing the application of the right to freedom of research in Antarctica are derived primarily from the basic provisions of the 1959 Antarctic Treaty in this respect, there is a number of global, hemispheric, regional and bilateral agreements, which apply to Antarctica as well. In the consideration of the right to freedom of research, these extra-ATS legal instruments can not be ignored, especially when they contain important limitations to that right¹⁷⁾

Whereas historically man's industrial activities (fishing, whaling, sealing) brought about significant changes in the Antarctic marine ecosystem, human activities on the Antarctic continent have remained relatively limited, and the main environmental impact has been produced by scientific investigation and exploration and the accompanying logistic support. Although human activity there is confined to very narrow areas around the currently or previously used research bases and scientific stations, the very fact that man's basic requirements for life are the same as those for fauna and flora, that is an ice free area, must have resulted in localized disruption of fragile Antarctic ecosystems.¹⁸⁾

The list of scientific activities with harmful effect on the Antarctic environment, appearing in numerous Consultative Parties' recommendations is long and still far from being complete, thus requiring continuous supplement. Benninghoff and Bonner have compiled a list of eleven basic categories of scientific activities that might reasonably be expected to have „a significant impact” on the Antarctic environment.¹⁹⁾

¹⁶⁾ Kappen L., Panel Discussion — *In: Antarctic Challenge II*, p. 122; also Wiewiórska K. (1982). Legal implications of the exploration and exploitation of Antarctica — *In Polish Polar Research*, 3, pp. 105—106.

¹⁷⁾ See their listing in: Bush W. M. (1982) *Antarctica and International Law: A Collection of Inter-State and National Documents*, New York, vol. 1, pp. 162–168. Convention for the Regulation of Whaling, Sep. 24, 1931; International Convention for the Regulation of Whaling, Dec. 2, 1946. Whales are specifically excluded from the operation of the Agreed Measures (Art. II (a)). Apart from those regulating whaling see: 1972 UNESCO Convention for the Protection of the World Cultural and Natural Heritage; 1973 Convention on International Trade in Endangered Species of Wild Fauna and Flora; 1950 International Convention for the Protection of Birds; 1979 Convention on the Conservation of Migratory Species of Wild Animals and 1940 Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere.

¹⁸⁾ Boczek B. A. (1986) Specially Protected Areas as an Instrument for the Conservation of the Antarctic Nature. — *In: Antarctic Challenge II*, pp. 65–101.

¹⁹⁾ These scientific activities are: (1) Interference with or modification of endangered or unique systems, communities or populations, (2) Operations which might adversely affect SPAs or SSSIs, (3) Introduction of alien biota with the potential to multiply or disperse, (4) Any operation affecting areas valued mainly for their sterile or pristine nature, *e. g.*, dry valleys, remote ice cap areas, (5) Application of biologically active substances which have the potential to spread so as to cause

To prevent these devastating processes, the Consultative Parties have established in Antarctica following categories of specially protected areas and sites, with defined conservation regimes, providing for limitations of the freedom of investigation:

- 1 – Specially Protected Areas (SPA);
- 2 – Special Conservation Areas (SCA);²⁰⁾
- 3 – Sites of Special Scientific Interest (SSSI);²¹⁾
- 4 – Marine Sites of Special Scientific Interest (MSSSI);²²⁾
- 5 – Areas of Special Tourist Interest (ASTI);²³⁾
- 6 – Historic Sites (HS);
- 7 – Historic Monuments (HM);²⁴⁾
- 8 – Multiple-Use Planning Areas (MPA).²⁵⁾

Although one of the major objectives behind the decisions on the establishment of the specially protected areas was the desire to preserve them for scientific study, conservation rules prevailing therein provide for significant limitations on freedom of research there. On the other hand, the same rules, acknowledging the needs of science, provide for important exemptions of scientists and their activities from some of the restrictive conservation measures. They may serve as an example, how the requirements of the two basic ATS principles: freedom of investigation and protection of environment, can successfully be compromised.

The Agreed Measures,²⁶⁾ adopted in 1964 by the Consultative Parties, have transformed the whole Treaty Area into a Special Conservation Area and have

perceptible effects outside their area of application, (6) Operations which might perceptibly impede the recovery of any endangered, threatened or depleted populations, (7) Experiments deliberately designed to create adverse changes in populations or communities (perturbation experiments) which extend over areas of more than 100 m² or, possibly even less, particularly if unique systems are involved, (8) Operations which will adversely affect populations for which long time-series of data have been (or are being) collected to establish the status of the population, (9) Introduction of radionuclides into the environment where their subsequent recovery and removal cannot reasonably be assured, (10) Drilling operations involving the use of drilling fluids other water and/or possible escape or vertical movement of subterranean fluids, (11) Marine seismic surveys involving the use of explosive charges. Benninghoff W. S. and Bonner W. N. (1985) *Man's Impact on the Antarctic Environment: A Procedure for Evaluating Impacts from Scientific and Logistics Activities* (Response by SCAR to Rec. XII-3 of the Twelfth Antarctic Treaty Consultative Meeting) and in UN General Assembly, Question of Antarctica, Study Requested under General Assembly Resolution 38/77. Report of the Secretary — General, UN Doc. A/38/583 (Part. I), 31 October 1984, p. 46.

²⁰⁾ Rec. III–VIII (1964).

²¹⁾ Rec. VII–3 (1972).

²²⁾ Rec. XIV–6 (1987).

²³⁾ Rec. VIII–9 (1975).

²⁴⁾ Rec. I–9 (1961), Rec. V–4 (1968) and VI–14 (1970).

²⁵⁾ Rec. XV–11 (1989).

²⁶⁾ Agreed Measures (note7).

established therein Specially Protected Areas,²⁷⁾ as areas of outstanding scientific interest which are accorded special protection in order to preserve their unique natural ecological system. In addition to the general prohibitions and protection measures, the SPAS regulations provide for special permits issued according to the rules governing the protections of native fauna, given to collect native plants or issued for some other compelling scientific purpose (Agreed Measures, Art. VIII). In all cases any permit has effect within an SPA only if it was issued for a compelling scientific purpose which cannot be served elsewhere and if the actions permitted will not jeopardize the natural ecological system in the particular SPA.²⁸⁾ What is meant by the „compelling scientific purpose” is decided by the authority of the State issuing the permit.²⁹⁾ Any differences in the national practice of issuing permits should be harmonized to preserve the spirit and purpose of the Agreed Measures. To allay concerns of some claimant countries that the issuance of permits might be used for political reasons in a way prejudicing their claims, in 1964 the Agreed Measures were amended by adding a stipulation that the functions of an authorized person issuing permits must be carried out within the framework of the Antarctic Treaty exclusively in accordance with scientific principles and with the sole purpose of the effective protection of the Antarctic fauna and flora according to the Agreed Measures.³⁰⁾

To satisfy, at least partially, the demands for the re-designation of the whole Antarctic Treaty area from the SCA into the more rigorous SPA status, in 1972 the SSSI were introduced as a compromise solution.³¹⁾ They are designated in order to protect scientific investigations against jeopardy arising from accidental or willful interference.³²⁾ SSSI's essentially designate a prevalent scientific usage in a particular area and restrict the rights of those — including scientists — who wish to enter these areas for different purposes. In principle, SSSI are strictly off limits to scientific personnel except where entry has been expressly provided by permit. The detailed descriptions of each SSSI contain regulations defining precisely the limits of the right to freedom of scientific investigations therein in each case.

In 1987 MSSSIs were established in order „to protect marine scientific investigations which might suffer from willful or accidental interference”, and are governed by rules similar to SSSI's regulations.

²⁷⁾ Boczek B. A. *op. cit.* (note 18).

²⁸⁾ Agreed Measures (note 7) Art. VIII, as amended by Rec. VIII-5 (1975 which in turn terminated Rec. VI-8 (1970).

²⁹⁾ The meaning of the term „compelling scientific purpose” was a subject of parliamentary discussion in the British House of Lords, held on the Antarctic Treaty Bill. See statement of the Bishop of Norwich of 24 July 1967, reprinted in: Bush W. M. *op. cit.* (note 17) p. 198.

³⁰⁾ Rec. V-6 (1968), amending Agreed Measures, (note 7) Art. II (d); also Boczek B. A. *op. cit.* (note 18) pp. 90-92.

³¹⁾ IUCN 1984 (Madrid) (note 11), Resolution 8, 2 also Antarctic Challenge II pp. 120-121.

³²⁾ Rec. VII-2 (1972), VIII-3 (1975) and VIII-4 (1975).

In order to preserve the freedom of scientific research guaranteed by the Antarctic Treaty, in 1989 MPAs were established „to ensure that ongoing and planned human activities in Antarctica, through their combined or cumulative effects, do not result in mutual interference or in adverse impacts upon the Antarctic environment”.³³⁾

As one means to this end, states designate, where appropriate, MPAs to assist in coordinating human activities in those areas where they are posing identified risks or mutual interference or cumulative environmental impacts.

Contrary to fears and doubts expressed by some scientists that the institution of specially protected areas is limiting considerably their freedom of research in Antarctica and opens the door to external manipulations of science, these areas and in particular the SSSIs, MSSSIs and MPAs, are well serving both the protection of environment and promotion of scientific investigation there.

Within the relatively modest territorial scope, the system of SPAs has, in general, made a positive contribution not only to the conservation of Antarctic environment and its ecosystems, but also to the observation of freedom of research therein. Apart from the fact that the construction of scientific stations destroys the habitat and disturbs the ecology of the site, the closeness of SPAs to these stations and their activities, have in some cases adversely affected the implementation of the conservation rules. The Agreed Measures are silent on the question of the siting of scientific stations, which became the subject of special Consultative Parties recommendations.³⁴⁾ Their close location to SPAs had, however, in other cases a positive effect on the implementation of the rules prohibiting the entry into SPAs by visitors except special permission. Occasionally, however, it has been difficult for the relatively small staff of scientific stations to protect SPAs from harmful interference with fauna and flora by undisciplined tourist groups which normally land in the close vicinity of stations.³⁵⁾

The system of SPAs established by the Consultative Parties does not exhaust the scope of direct and indirect limitations on the right to freedom of research under ATS, which are scattered throughout the numerous Consultative Parties' recommendations. The two conservation conventions, which by their very nature are restrictive to that right, require among other special permits to kill or capture protected and unprotected species to provide for scientific research, stipulate regulatory measures with respect to the conservation and scientific study of Antarctic marine living resources, prescribing inter alia special procedures for facilitating the review and assessment of

³³⁾ Rec. XV-11 (1989).

³⁴⁾ Rec. XIV-3 (1987) and XV-17 (1989).

³⁵⁾ Boczek B. A. op. cit. (note 18) pp. 88-90; Auburn F. M. (note 3) pp. 277-283. The siting of stations was set up by Rec. XIII-6 (1985) and XV-17 (1989), which reaffirmed among other the fundamental importance of the freedom of scientific investigation.

scientific information, including an effective system of inspection, the designation of the opening and closing of areas, regions and sub-regions for purposes of scientific study or conservation, including special areas for protection and scientific study.

Similarly, the third convention, namely the 1988 Convention on mineral resource activities, contains alongside to provisions promoting international cooperation in scientific investigation, also rules on limitation of the right to freedom of research. As, earlier stated, the 1988 Convention is positively conservation minded, thus all considerations above on the conflict of interest between environment and science refer also to it. On the other hand, Art. 13 for instance, is prohibiting mineral resource activities in SPAs and SSSIs, with reference to specific restrictions imposed by their systems.

In conclusion, it may be assumed, that in the best interest of science, research in Antarctica needs to be controlled to the extent where it can be said with reasonable confidence that there will be a minimum of environmental impact. In that direction is evolving at present the application of the right to freedom of research under ATS, which has so far stand test in this respect.

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Streszczenie

Wolność badań jest jedną z podstawowych zasad wszystkich instrumentów prawnych składających się na system Układu Antarktycznego. O jej zakresie decydują ograniczenia zawarte w tych aktach prawnych. Stanowią one m. in., iż antarktyczne badania naukowe nie mogą mieć charakteru wojskowego, ani służyć za podstawę roszczeń terytorialnych. Zasadnicze znaczenie mają postanowienia wynikające z potrzeb ochrony środowiska, przewidujące na obszarach chronionych m. in. takie ograniczenia wolności badań, jak zakazy zbierania roślin i minerałów oraz odłowu zwierząt dla celów badawczych, zakazy wstępu bez specjalnych zezwoleń, przeprowadzania niektórych eksperymentów i stosowania metod badawczych szczególnie szkodliwych dla ekosystemów, ograniczenia w lokalizacji stacji naukowych, nakazy wyposażenia ich w urządzenia zmniejszające szkodliwość oddziaływania na środowisko itp.

Wbrew rozpowszechnionym opiniom, większość uczonych uważa, iż wolność badań i ochrona środowiska są w Układzie Antarktycznym zasadami równorzędnymi i żadnej z nich nie można przypisywać pierwszeństwa. W najlepszym interesie nauki, badania w Antarktyce powinny podlegać kontroli w takim zakresie, aby w minimalnym stopniu oddziaływały na jej środowisko i ekosystemy.

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