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# The 31<sup>st</sup> International Congress, Rio De Janeiro, Brazil 2000

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*The 31<sup>st</sup> session of the International Geological Congress was held in Rio de Janeiro, Brazil, August 6-17, 2000, in consortium with other South American countries, under the sponsorship of the International Union of Geological Sciences, the Brazilian Ministries of Mines and Energy and Science and Technology, through their different agencies and Research Institutes, by the Brazilian Academy of Sciences, the Brazilian Geological Society and other Geo-Societies, in cooperation with many technical and scientific institutions, universities, industrial organizations and government bodies, and support of the Rio de Janeiro State Government and City Council. This large gathering of the IGC family in the 20<sup>th</sup> Century was the first IGC session ever held in South America since the first meeting in Paris 1878.*

*More than 4,000 earth scientists and students, 112 exhibitors as well as many accompanying members and guests from 110 countries, met at the Rio de Janeiro Convention Center, located 45 minutes from downtown and Copacabana beach. The daily transit to the Centre offered them the opportunity of seeing some of the most beautiful beaches and scenery in the world.*

*The Scientific Program focused on the Congress main theme: Geology and Sustainable Development: Challenges for the Third Millennium, including 9 Colloquia whose presentations were provided digitally, 4 Special Lectures, 72 Special Symposia, 159 General Symposia, over 2,800 Poster Presentations, 8 Short Courses and Workshops, with the participation of top scientists from over the world. 5750 abstracts were received and all were included and offered to the members present in a CD-ROM. 28 Field Trips were run before, during and after Congress, covering the main Brazilian geological sites and mineral deposits, some*

*extending to Bolivia, Argentina and Chile, with the participation of about 600 people.*

*The main publication, a review book on “Tectonic Evolution of South America”, with 25 chapters, ca. 70 authors and 800 pages was prepared and launched at the Congress. In addition a special issue of the Revista Brasileira de Geociências (now Brazilian Journal of Geology) was also distributed, with 134 full papers presented at the Congress.*

## Introduction

The first time Brazilian geologists considered presenting a proposal for Brazil to host the IGC occurred during Canada's Montreal venue in 1972. At that time, the Brazilian Delegation comprised 12 members headed by Prof. Fernando Flávio Marques de Almeida (recently deceased), one of the most important geoscientists in the country and well known outside Brazil, thanks to his work for the Commission on the Geological Map of the World (CGMW).

However, although Brazil was running a large geological project of mapping the country's territory at 1:250,000 scale in order to discover mineral deposits, the Brazilians considered that it was perhaps too soon to hold an event of the importance and size of the IGC. During the 28<sup>th</sup> International Geological Congress in Washington, D.C. in 1989, Prof. Umberto Cordani, who was at that time President of the IUGS, presented to the Steering Committee meeting the intention of a group of South American countries (Brazil, Bolivia, Peru and Argentina) to bring the 31<sup>st</sup> Session to South America in the year 2000. He pointed out that “it would be an unique opportunity to present to the world this fascinating continent and the advances made in understanding its geology and mineral deposits”.

## The Invitation and the Brazilian bid

During the following IGC, in Kyoto, Japan, in 1992, a formal proposal to host was made through an official letter of offer from the Brazilian Minister of Mines and Energy, delivered by the Director of the National Department of Mineral Production- DNPM, Elmer Prata Salomão. He recalled that Rio de Janeiro had just hosted the highly successful UN Conference of Environment and Development, the Rio '92, which had welcomed more than 20,000 participants. The idea

was received with enthusiasm by the participants of the 29<sup>th</sup> IGC.

In 1994, at a meeting of the Brazilian Committee of Geological Sciences in São Paulo, a Preparatory Committee, chaired by Prof. Hernani Chaves, was established with representatives of the Geological Survey of Brazil, as well as the academic, industrial and business communities, including oil and mining companies, with the mission to outline a work plan for the Congress and to reiterate to IUGS the Brazilian commitment to undertake the organization of the 31<sup>st</sup> IGC.

At the 30<sup>th</sup> IGC, in Beijing, China, the head of the Brazilian delegation, Carlos Oití Berbert, President of the Brazilian Geological Survey, reinforced the invitation based on two main reasons: (a) South America had never held an IGC, and (b) in 2000 Brazil would commemorate the 500th anniversary of the discovery of the country by the Portuguese. Brazil won the privilege to hold the 31<sup>st</sup> IGC in Rio de Janeiro, receiving 103 votes by the delegates present at the final Assembly of the IGC Commission out of the 122 votes collected.

## The organization of the Congress: 1996 – 2000

The organization of the venue started immediately after the return of the Brazilian Delegation: (1) during an Ordinary General Assembly of the Iberian-American Association of Geological and Mining Surveys, in Salvador, Bahia, the Preparatory Committee promoted a special meeting of the South American countries to discuss dates, theme and organization of the 31<sup>st</sup> IGC; (2) during a gathering with geoscientists interested in participating directly on the venue, and a non-profit enterprise was established to be the general responsibility for conducting the financial matters of the Congress, and (3) a meeting of the Preparatory Committee was held to establish a preliminary structure for the Congress and to select appropriate persons to become chairs of the numerous committees. Prof. Umberto Cordani was invited to act as President of the Organizing Committee and Carlos Oití Berbert was appointed Secretary General. As Deputy Secretary-General Sabino Orlando Louguercio was selected. Prof. Hernani Chaves and Prof. Diogenes de Almeida Campos were appointed as Chairman and Vice-Chairman of the Scientific Program. Other eminent geoscientists and professionals composed the Fund-Raising, the Finance, the News and Publicity, the Field Trips, and the Operations Committees, the Advisory Board, and the Board of National Coordinators (for the South American countries). Honorary Members included Brazil's President and Vice-President, Fernando Henrique Cardoso and Marco Antônio de Oliveira Maciel respectively, as well as other high administration officers of the Federal, State and Municipal authorities.

In January 1997, the Scientific Program Committee focused its attention on the main theme of the 31<sup>st</sup> IGC: "*Geology and Sustainable Development: Challenges for the Next Millennium*" in order to organize the scientific Sessions, Colloquia, Posters, Conferences and other activities of the Congress. During that year meetings were held with the Secretary General and Deputy Secretary General of the Washington IGC, with the objective of collecting information on the positive aspects and problems faced with organizing a large Congress.

Later, in 1998, other details were discussed with other past-Secretaries-General of previous Congresses and since then the 31<sup>st</sup> IGC Organizing Committee met at regular intervals, until the event.

In the same year, a three day meeting of the IGC Steering Committee Meeting was held in Rio de Janeiro, in a place ceded by the Geological Survey of Brazil that began to be known as "Casa

Brasil" (Home of Brazil). That meeting was opened by its chairman, **Prof. Song Ruixang**, who reported on the post-30<sup>th</sup> IGC activities, including the editing and publication of the *General Proceedings*, and the book "*A Milestone in the Development of Geological Sciences*". The main topics of the agenda were related to advice on the organization of the 31<sup>st</sup> IGC, a discussion on possible modification of the IGC Statutes and the discussion on the existing proposals for a site for the 32<sup>nd</sup> IGC in 2004. At this, the heads of the Austrian and Italian Geological Committees put forward their intention to host the 32<sup>nd</sup> IGC Session. On the issue of ICS statutes, **Robin Brett** accepted the responsibility of conducting the discussions, but a consensus was not attained and the Committee decided to consult all members through correspondence until August 1999.

On August 5<sup>th</sup> 2000, just before the start of the Congress, the same IGC Steering Committee held a short meeting, with the main objectives of proposing agendas for the business meetings, opening and closing ceremonies and general assemblies to occur during the event, and also to indicate who could be designated as President and Secretary General for the Congress. For this last item, the names of **Umberto Cordani** and **Carlos Oití Berbert** were proposed and unanimously approved.

## First Council meeting of the 31<sup>st</sup> IGC

The meeting took place at the Rio Othon Hotel, in Copacabana, on August 6, 2000, and was coordinated by Umberto Cordani, and seven other members of the Steering Committee (Arnost Dudek, Attilio Boriani, Carlos Oití Berbert, Nikita Bogdanov, Robin Brett, Song Ruixang, and Zhang Hongren), plus 33 delegates from 18 countries.

After a brief presentation on the organization of the IGC by Carlos Oití Berbert, as well as some details on the preparation for the Opening Ceremony, Song Ruixang informed the delegates that during the meeting of August 5, Cordani had been suggested as President of the 31<sup>st</sup> IGC, and Carlos Oití as its Secretary General. These nominations were approved with acclamation by the members of the Council. Other matters included the agendas for the Second Council Meeting, as well for the General Assemblies, Opening and Closing ceremonies, were approved. Next, Cordani announced that Werner Janoscheck and Gian Battista Vai would present the bids of Austria and Italy to hold the 32<sup>nd</sup> Session of the IGC in 2004, but the final voting on this issue would occur later, at the occasion of the Second Council meeting, giving a few days to the delegates to discuss the issue.

## Opening Ceremony and First General Assembly

Brazil Vice-President, Marco Antonio Maciel opened the Ceremony at 5:00 p.m. on August 6, 2000, with the presence of about 4,000 people, in the auditorium of the RioCentro Convention Center, welcoming the participants of the IGC and saying how proud he was to have the International Geological Congress for the first time in Brazil and in South America, after 122 years since the Congress had been created. At the rostrum were the Brazilian authorities scheduled to address the Congress, the members of the Steering Committee and the 31<sup>st</sup> IGC Honorary Members.

Then, Rio de Janeiro's Mayor, Luiz Paulo Conde, and the Governor of the State of Rio de Janeiro, Anthony Garotinho, presented their remarks about the IGC being in the country, followed by the Minister of Mines and Energy, Rodolpho Tourinho Neto. They were



*Opening Ceremony of the IGC*

all enthusiastic about the participation of so many geoscientists from more than 110 countries, who would have the chance not only to discuss geology, mineral resources and related topics, but also get to know the beautiful landscapes of Rio and other places of Brazil and feel the warm reception given by the Brazilian people.

Subsequently, Song Ruixiang, President of the 30<sup>th</sup> IGC, was called to open the Congress' First General Assembly. He addressed his speech reminding the audience that *"The human society was marching into the new millennium"* and recalled *"the World Conference on Environment and Development, which had been held in the same city of Rio de Janeiro in 1992"*. According to him, *"Geoscience has an important role in guiding mankind to better adapt to nature and coordinate between social economic developments and resources and environment"*.

Next, following the decision of the IGC's Council, Song Ruixiang proposed to the assembly the names of Umberto Cordani and Carlos Oití Berbert to become President and Secretary General of the 31<sup>st</sup> IGC, and the proposal was approved by acclamation. Cordani thanked the assembly and reinforced the importance of the International Geological Congress and the main theme of the 31<sup>st</sup> IGC: *"Geology and Sustainable Development: Challenges for the Third Millennium"*. He stressed that *"Management of our planet is becoming more complex. Planning the right activities at the right time is vital to avoid irreparable harm. We are running into a geo-bio-physical conception of the Earth, where man is today the main agent for mass movements at the surface of the planet, because his actions by far surpass its natural dynamics"*.

Following Cordani, the President of the International Union of Geological Sciences Robin Brett expressed the importance of the IGC mainly because *"it permits people from everywhere in the world to get to know themselves and changing ideas"*. He also stressed the roles of the IUGS and IGC and continued saying that *"geology is more than an applied science, as basic science is very important for applied work"*.

In sequence, Carlos Oití Berbert expressed the honor to have people from all over the world in Rio de Janeiro and reminded them *"on the general theme of the Congress – Geology and Sustainable Development: Challenges for the Next Millennium – are included subjects such as advances in geological knowledge, the occupation*

*of physical space by man, the rational exploration of non-renewable resources, the usage of surface and groundwater, the Earth's past, future challenges, and climate changes. These will be undertaken in conferences and special lectures to be presented by the world's greatest specialists in their respective fields, and in addition there will be hundred of symposia, a few thousand poster presentations, field trips, workshops, short courses and the GEOEXPO"*.



**Inauguration of the GEOEXPO. - Vice-President of Brazil, Marco Maciel, Governor of the State of Rio de Janeiro, Anthony Garotinho, Mayor of the City of Rio de Janeiro, Luiz Paulo Conde, President of the 31<sup>st</sup> IGC, Prof. Umberto Cordani and Minister of Mines and Energy of Brazil, Rodolpho Tourinho Neto.**

Finally, the Vice-President of Brazil, Marco Antonio Maciel addressed all the participants of the 31<sup>st</sup> IGC, adding that *"I believe the event is taking place at an extremely important moment of the history of mankind: the entrance of a new millennium. This fact makes us meditate about the importance of scientific and technologic development in all Sciences, but especially in the geosciences, producing significant effects on mankind"*. He also reminded all of the conditions of Brazil *"getting rid of the perverse monetary inflation and making our currency stronger in the external markets, a fact that will indeed help us to surpass little by little the deep social differences still existing in the Brazilian society"*.



After his speech the General Assembly ended and all the participants were invited to participate in a cocktail with a “samba show”, performed by dancers that brought out a very happy welcome party.

## Second Council Meeting

The Second IGC Council meeting occurred on August 11, at the auditorium of the Rio Centro Convention Center, chaired again by Umberto Cordani, with the presence of the Steering Committee Members plus 106 delegates from 44 countries. At first, he gave the floor to Dr. E. Galimov, entrusted by the Russian Academy of Sciences to present the Spendiarov Prize to the most distinguished young scientist elected by the Geological Society of the host country of the IGC. He presented the Spendiarov Prize to geologist Marcio Pimentel, who thanked all for the honor of receiving the prize. Immediately after, Dr. Galimov said that the Russian National Committee of Geologists had recently created the Spendiarov Medal to be conferred to a prominent geoscientist with outstanding contributions to international cooperation. Umberto G. Cordani was chosen to receive the Medal, receiving a unanimous applause from the Council.

On the next item of the agenda, about the next venue of the IGC, Cordani mentioned that all pertinent discussions were already done during the First Council Meeting, and the matter was prepared to be put to secret voting. The result of it was: Italy 96 vs Austria 57, and thus Italy was recognized as the host for the 32<sup>nd</sup> IGC, a decision to be ratified by the Second General Assembly. Next, Cordani referred to the 2008 Session of the IGC and invited the delegates from U.K., Egypt and Norway to briefly speak on behalf of their respective bid, which was done. The final item was a discussion on the IGC's Statutes.

## Second General Assembly and Closing Ceremony

The Second General Assembly was held on August 17, 2000, at the auditorium of the Rio Centro Convention Center and was chaired by Umberto Cordani. At the table were Carlos Oití Berbert, Zhang Hongren, Sunsho Ishihara, Nikita Bogdanov and Arnost Dudekas members of the Steering Committee. In addition, Wolfgang Eder, UNESCO Director of the Earth Sciences Division, Umberto Costa, President of CPRM – The Geological Survey of Brazil, and Alvaro Albuquerque Junior, the Rio de Janeiro Secretary of Economy.

The 31<sup>st</sup> IGC President started his address thanking the participants and reporting a few important actions that happened during the Congress. He first mentioned the modifications of the IUGS officers with the election of Eduard de Mulder as President of the Union, Werner Janoscheck as Treasurer, and the re-election of Attilio Boriani for a second term as Secretary General. Cordani then presented a few decisions of the IGC Council that must be ratified by this General Assembly among which was the proposal for minor amendments to the IGC's Statutes. Then he announced the final decision of the Council in voting Italy to hold the 32<sup>nd</sup> IGC and the reception of three proposals for the 2008 IGC venue: UK, Egypt and Norway. The General Assembly unanimously approved the choice of Italy as the site for the 32<sup>nd</sup> IGC, as well as the ratification on the IGC Statutes as proposed by the IGC Council.

Next, Cordani asked Attilio Boriani to read the document forwarded by the newly elected IUGS President, Eduard De Mulder, who had to leave the session earlier. In its document, Ed de Mulder

reminded all of the importance of the World Summit held in Rio just eight years ago “*where most nations of this planet agreed to revise this problem of ever deteriorating environmental condition for our children and ourselves. It was here that an action plan to implement such changes, Agenda 21, was adopted. This event and its successive actions have impacted the geological sciences as well*”. He promised to make IUGS more visible to the geoscientific community and to be involved in other new scientific programs at the interfaces of Geosciences and other disciplines as Life Sciences and the Humanities.

Then Wolfgang Eder, UNESCO Director of the Earth Sciences Division, presented his remarks on the importance of the organization not only for its activities in education and culture, as “*the only UN Agency having a mandate for earth sciences and therefore as an intergovernmental survey, serving the society and the geosciences*”.

The head of the Italian Delegation, Gian Battista Vai thanked all for the choice of his country to hold the 32<sup>nd</sup> IGC “*after more than hundred and twenty years*”, and announced some planned modifications for the Florence IGC, such as “*shortening the duration by two days at least, lower prices and expenses, concentrate sessions, reducing applications, open the Congress to the public and politicians, and more participation of young scientists from all countries*”.

Finally, Carlos Oití Berbert presented a summary of the Congress main activities, reminding all that “*the 31<sup>st</sup> IGC was the first IGC totally conducted in the internet era, reaching more than 53,000 visitors to our home page where, besides a variety of basic information, 6,139 abstracts can be accessed. During the eleven days more than 4,400 participants followed 9 Colloquia, 4 Special Lectures, 72 Special Symposia, 159 General Symposia, over 2,800 Poster Presentations, 8 Short Courses and Workshops and 1,072 oral presentations workshops, 8 short courses and workshops. A total of 600 participants were involved in 28 field trips in Brazil, Bolivia and Chile, without any problem. About 70 scientific commissions and societies had their business meetings and the GEOHOST Program subsidized 140 young scientists from various developing countries. 112 exhibitors participated in the GEOEXPO 2000 with about 7,500 visitors*”. Ending his speech, he mentioned the important release of the book “*Tectonic Evolution of South America*” (Ref. 1) and a special issue of the Brazilian Geosciences Journal (Ref. 2) containing several papers, as well as the presentation by CGMW of the new Geological Maps of the World, South America, Africa, and other parts of the planet.

To conclude, President Cordani declared the 31<sup>st</sup> IGC successfully closed, conveying participants to meet again in Italy, in 2004, and inviting those present at the General Assembly to a farewell party at the Rio Centro main Hall.

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## Highlights of the Scientific Sessions

The main theme of the Congress was: “*Geology and Sustainable Development: Challenges for the Third Millennium*” and a comprehensive and multidisciplinary program was organized along this line stressing the importance of the geological sciences to human society.

Nine Colloquia summarized the relation of geology with society along a few main themes: water, soil, climate, mineral exploration, energy resources and new technologies. The presentations were made by Brian J. Skinner (USA), Umberto G. Cordani (Brazil), whose text was published in Episodes (Ref. 3), Daniel Nahon (France), Andras Szollosi-Nagy (UNESCO), Pedro L. Silva Dias (Brazil), David

G. Roberts (UK), Eric Odada (Kenya) and Michel Hermelin (Colombia), and the full presentations were included in a CD-ROM (Ref.4). In addition, four key-note addresses were also given as lectures on the main focus of the Congress, and were given by Robin Brett, President of IUGS, Luciano de Freitas Borges, Secretary of Mines of Brazil, Claude Allegre, Former Minister of Education, Science and Technology of France and Tian Fengshan, Minister of Land and Resources of China.

72 Special Symposia were organized by distinguished conveners, covering major fields, in order to give an overview of most challenging aspects of the Earth Sciences. Participation was by invitation only, and 347 qualified speakers delivered their oral presentations on subjects such as "Origin and evolution of the Earth", "Global changes and future environment", "Structure of the lithosphere and deep processes", "Metallogenesis", and "Basin analysis" among others.

In addition, General Symposia were designed to cover as much as possible the wide spectrum of the Earth Sciences. 159 sessions were organized, grouped into 28 main topics. For each Symposium, a Poster Session was set up each afternoon in order to attract spontaneous contributions and exchange scientific results. In addition a few of the members were chosen in advance by the conveners, as key-note speakers, for oral presentations in the next morning. For the General Symposia, 5,750 abstracts with 250 words were received and all were included in a CD-ROM (Ref.5).

## Field Trips

A large number of field trips were proposed in the first circular of the 31<sup>st</sup> IGC, but only 28 were undertaken, 6 of them before, 8 during the congress and 14 after the congress. About 600 geoscientists participated.

The Pre-Congress excursions covered important aspects of Brazilian geology, such as the Parana Basin, and some of the Precambrian main geotectonic units. One of the excursions was in Bolivia, to observe the Western Gondwana active margin.

The one-day 'During Congress' field trips were organized in the vicinity of Rio de Janeiro, in order to examine the tectonics of the Neoproterozoic Ribeira fold belt, the environmental setting of some recent sedimentary environments and to be informed about the natural hazards within the region.

Two of the 14 Post-Congress excursions were made outside Brazil, to observe the major ore deposits of NW Argentina and to make a geological profile across the highest Andes, between Mendoza, Argentina, and Viña del Mar, Chile, 6 trips related to many aspects of the Brazilian economic geology, such as the Carajás mineral province, gold mineral deposits in Minas Gerais and Bahia States, occurrences of diamond and gemstones in Minas Gerais and the Jacupiranga Carbonatite Complex in São Paulo State. The other Post-Congress excursions dealt with crustal evolution of a two areas of Bahia and Rio Grande do Sul, biostratigraphy of part of the Parana Basin, coastal ecosystems of eastern Brazil and the geology of the Araguinha astrobleme, in Tocantins State.

For all the field trips a high quality guidebook was prepared by the excursion leaders, and a complete CD-ROM (Ref.6) with all geologic excursions was offered to the geological community.

## Social Activities

The geologist and journalist Luiz Antonio Gravatá Galvão was



**Inauguration of the commemorative plaque at the Pão de Açúcar. President Cordani and Secretary-General Berbert are together with Deputy Secretary-General Sabino Loguercio, and the Italian delegates Gian Battista Vai and Ernesto Abbate and wife, just after Italy was awarded the responsibility to hold the 32<sup>nd</sup> IGC.**

responsible as the Webmaster and head of Public Relations of the Congress. He organized the welcome and farewell parties and also the visits to many spots of touristic interest in the city of Rio de Janeiro for the participants and accompanying members of the Congress.

Two of the entertainment activities were outstanding. The first was the ceremony of the inauguration of the commemorative plaque of the 31<sup>st</sup> IGC at the top of Pão de Açúcar (Sugar Loaf), with the description of the rocks of the mountain. The second was a dinner offered by the City Mayor for 500 participants at the City Hall auditorium, with a presentation of a remarkable *bossa nova* show with some of the best singers of that musical style that influenced music all around the world.

## Business Meetings

The IUGS business meetings were described with some detail earlier in this document. In addition, as during all previous IGCs, many of the IUGS affiliated bodies, as well as other national or international scientific organizations, took the opportunity of this large gathering to run their scientific or administrative gatherings.

Among many other business meetings, seven of the IUGS affiliates: AGID, CGMW, IAEG, IAGC, IAGOD, IAMG, SGA, ran their General Assemblies. Moreover, there was a relevant participation of members of the UNESCO-IUGS IGCP Programme. In this respect, 22 of the active IGCP projects decided to run their annual scientific meetings at the 31<sup>st</sup> IGC.

Finally, a few Brazilian or Latin American institutions also had meetings of various types, like the Brazilian Geological Society and the Brazilian Geophysical Society, which had their General Assemblies during the IGC.

## Geohost

As in previous IGCs, the Geohost Program was set up to help

individual scientists from developing countries to attend the congress, and priority was given to young scientists with strong academic qualifications.

700 applications from 50 countries were received. A selection committee with participation of IUGS, UNESCO and AGID members was set up and 140 candidates from 41 countries were selected for some kind of award. All the awardees received waiver of the registration fee; about 100 received free lodging in Rio de Janeiro; and 31 were awarded partial travel grants for the international air fare from their country of origin to Rio de Janeiro. Russia, India, Argentina, China, Chile and Iran.

## Finances

As mentioned elsewhere, in order to control the cash flow and expenditures of the Congress activities, a non-profit enterprise named IGC Brazil 2000 S/C was created. The main revenues transferred to this enterprise came from institutions linked to the Brazilian Ministry of Mines and Energy, the Geological Survey of Brazil – CPRM and PETROBRAS, the Brazilian oil company. Some additional resources came from the Brazilian Ministry of Science and Technology, and some other from private companies of mining and oil sectors.

To run the whole Congress, expenditures were of the order of BR\$ 5 million, which would roughly correspond to US\$ 3 million. The major difficulty in making this estimate was the change in the conversion regime of the Brazilian currency to US *dollars* after January 1999, when the exchange rate started to fluctuate according to market laws which resulted in a gradual rise of the *dollar* value, affecting the budget of the IGC. Therefore the 31<sup>st</sup> IGC ended with a small financial loss.

## Outcome of the Congress

The venue of the 31<sup>st</sup> International Geological Congress, for the first time in South America, left a permanent legacy to this continent in terms of a clear progress in the geological activities, and of an increase of awareness of the importance of Geology within society.

The general proceedings of the congress (Ref.7) were published by the Brazilian National Research Council (CNPq) in 2002. The large participation of Brazilian geoscientists enhanced the visibility of the country in the geological community of the world. 1,487 members, corresponding to ca. 40% of the attendance to the Congress were Brazilians, compared with 332 from Russia, 316 from the USA, 183 from China, 126 from Germany, 136 from Japan, and so on. In previous IGCs, not more than 20-40 Brazilian geologists were present. However, looking at the subsequent IGCs, Firenze 2004, Oslo 2008 and Brisbane 2012, the Brazilian presence was much higher by a factor of 4-5. Moreover, for the Brazilian community, after the 31<sup>st</sup> IGC in 2000, there was a significant increase of specialized publications by Brazilian geoscientists in international journals, improving the status of the country in Geology.

The 31<sup>st</sup> IGC, at the dawn of the third millennium, showed that Geology is alive and well. As stated by the motto of the Congress, *Geology and Sustainable Development: Challenges for the Third Millennium*, and considering all the activities carried out at Rio de Janeiro, it was clear that geology was becoming gradually more visible, more important, more active and more recognized by society. Themes like water, soils, climate, energy, geological hazards became more explored by scientists and professionals. Most Geological Surveys in

the world had already revised their programs in order to focus more on society. In addition, the 31<sup>st</sup> IGC brought the embryo of a major activity that took place during 2008-2010: the United Nations – International Year of the Planet Earth. The 31<sup>st</sup> IGC contributed to a new structure for the IUGS and organization of the IYPE.

Fifteen years have elapsed since the 31<sup>st</sup> IGC. For the two authors of this report and all the geoscientists who contributed to or participated in the 31<sup>st</sup> IGC what remains in our memories are the honor, the enjoyment and the satisfaction of having been able to hold that remarkable Congress in our country. We are surely proud of the outcomes of the event, as well as its contribution to the world geology, and very especially for Brazil and South America.

## In Memoriam

This article/report is dedicated to those members of the Organizing Committee who subsequently passed away since the Congress, especially to: **Yvan Barretto de Carvalho**, **Aécio Gomes da Silva**, **Fernando Marques de Almeida** and **José Raymundo de Andrade Ramos**, members of the Advisory Committee, and **Sabino Orlando Loguércio**, the Deputy Secretary-General, who made an admirable work of dedication to the 31<sup>st</sup> International Geological Congress.

## References

- 1 Cordani, U.G., Milani, E.J., Thomaz Filho, A. and Campos, D.A. (Eds.) – 2000 - Tectonic Evolution of South America. – 31<sup>st</sup> IGC, Rio de Janeiro, Brazil. 854 p.
- 2 Brazilian Contributions to the 31<sup>st</sup> IGC. – 2000 - Revista Brasileira de Geociências, v.30, nos. 1, 2 and 3 (also in CD-ROM) - Sociedade Brasileira de Geologia, São Paulo.
- 3 Cordani, U.G., 2000, The role of the Earth sciences in a sustainable world. Episodes, v. 23, no. 3, pp. 155-162.
- 4 Colloquia - 31<sup>st</sup> IGC, Rio de Janeiro, 2000, (CD-ROM).
- 5 Abstracts Volume - 31<sup>st</sup> IGC, Rio de Janeiro. 2000 – (CD-ROM).
- 6 Field Trips - 31<sup>st</sup> IGC, Rio de Janeiro, 2000, (CD-ROM).
- 7 Berbert, C.O. and Loguércio, S.O., 2002, General Proceedings - 31<sup>st</sup> International Geological Congress - Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq) - Rio de Janeiro, Brazil - 208 p.



**Carlos Oití Berbert**, Geologist graduated from the University of São Paulo and was former President of CPRM – Geological Survey of Brazil and Coordinator – General of the Research Institutes of the Brazilian Ministry of Sciences, Technology and Innovation. He was one of the founders of the Brazilian Antarctic Program, Vice-President of the Commission of the Geological Map of the World (CGMW) for South America and Brazilian Coordinator for the IYPE and Secretary-General for the 31<sup>st</sup> IGC.



**Umberto G. Cordani**, Geologist, graduated from the University of São Paulo (USP). He was Director of the Institute of Geosciences of the same University. His main interest has been to apply geochronology to geotectonic problems. He was President of the IUGS served as member of the Executive Board of the International Council for Science (ICSU).