

1998-2004: Six Years of International Geothermal Association (IGA) Secretariat in Italy

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ABSTRACT

In the double term period 1998-2004, the International Geothermal Association (IGA) Secretariat was managed in Italy. In this paper the IGA milestones achieved during the Italian Secretariat are highlighted, as well as the organizational structure of the Enel-IGA team, aimed at a successful management of this particular task. Some hints for the future secretariat will be proposed. It was very important to operate in a small team of people in the same site (Enel Office in Pisa), and to have very close relationship with the Information Committee Chairperson (Dickson and Manzella, both at CNR - IIRG Pisa). Managing the secretariat means not only an engagement to perform a long series of activities, but also a unique opportunity to get first-hand information on geothermal worldwide.

The Secretariat activity was possible only with the strong commitment of Enel. The IGA expresses its warm thanks to Enel for its kind and in cash support.

1. INTRODUCTION

Two major achievements marked the beginning of the Italian experience of the IGA Secretariat as milestones:

1.1. UN-NGO

The IGA was granted "Special" consultative status with the United Nations - Social and Economic Council. This status gives the Association the right to make submissions and be represented at UN meetings dealing with energy development and related environmental matters. Efforts to foster working relations with the various UN Agencies dealing with such matters are being progressed. As major commitment, the necessity of preparing a three years report of IGA-UN activity for UN liaison office

1.2. EU Partnership

The IGA was accepted as a European Union Partner in the EU promotion, education and dissemination of renewable energy, under the framework of the campaign for Take Off (CTO) of Renewable Energies. The IGA efforts have been focussing on an action program entitled "Green Energy from the Heart of the Earth" (see figures 1 and 2).

2. EVENTS

In support of UN activities to promote a sustainable energy future for all peoples of the world, the International Geothermal Association made a submission to the Ninth Session of the Commission on Sustainable Development (CSD-9, New York, 2000). This statement outlines how geothermal energy can contribute to addressing some of the key issues identified by the Expert Group preparing documents for the CSD-9. In its submission the IGA

reaffirmed its commitment to working with other international bodies to promote technology exchange relating to the global promotion of renewable geothermal energy.

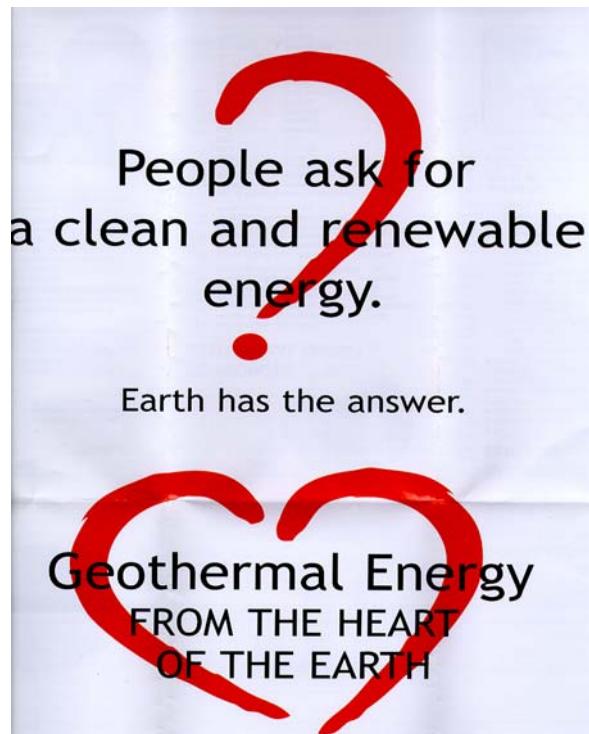


Figure 1: The base poster of the campaign "from the heart of the earth".

The United Nation Climate Change Conference (UNFCCC COP 6 in The Hague, Netherlands, 2000) asked to the IGA a contribution on geothermal energy: this job has been completed and forwarded to the UNFCCC office.

In 2001 the IGA participated in the World Energy Council activity focussed on the performances of renewable energies Power Plant. The Secretariat was involved as chair of the sub-group dedicated to geothermal energy. The final report has been submitted to the Buenos Aires WEC Conference October 2001 (see figure 3).

In 2002 the Executive Director has participated in a task supported by the EC for identifying policies and strategies suitable for accelerating the growth of the renewable energies market denominated REMAC.

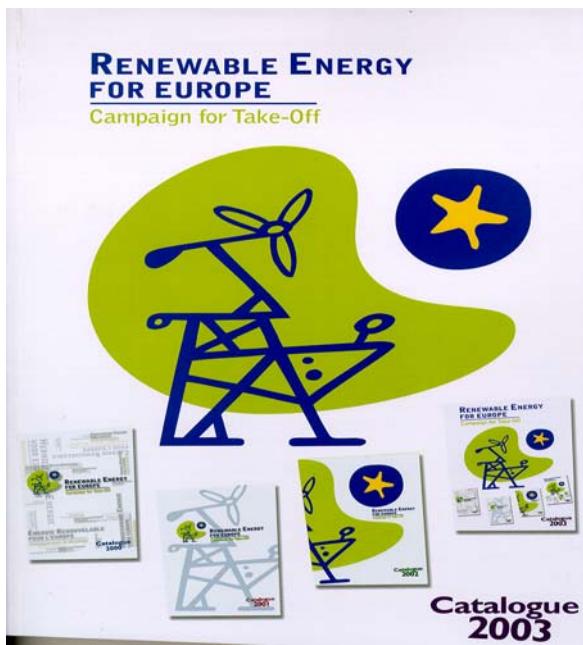


Figure 2: The EU- Campaign for Take Off Renewable Energies (CTO) Catalogue

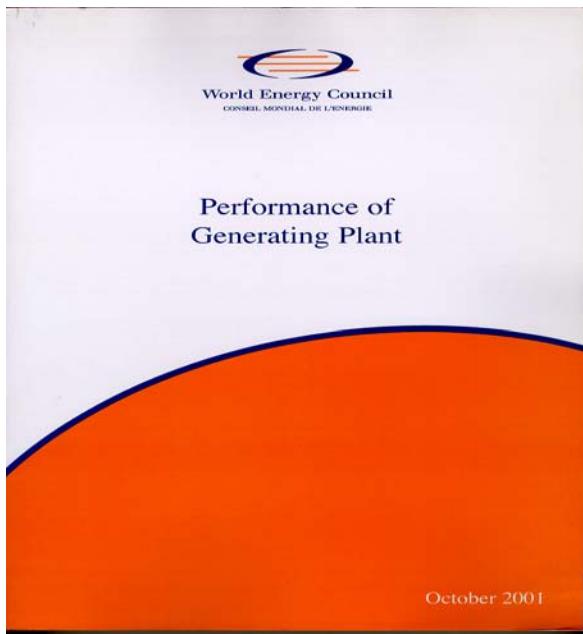


Figure 3: The WEC document on "Performance of Renewable Energy Power Plants".

Again in 2002, the IGA President participated in a workshop in Beijing for the launch of the Olympic village 2008 geothermal heating project, that met a great international consensus, and saw a direct involvement of Icelandic companies. The project, which involved 10 wells at 3000-m depth and 70°C, up to a 20 MW_{th} total, is strongly supported by the government. IGA must be officially involved in this project; it will have a very high visibility worldwide. The GCES (China Affiliated Organization) will be activated to follow the Olympic games geothermal heating project.

The IGA was officially present at the UN Johannesburg Conference, 2002, with a short note on geothermal energy at WEHAB session (Water Energy Health Agriculture Biodiversity – the five themes of the WSSD).

Also, the IGA appointed a representative to the IEEE 2002 Summer Power Meeting, Chicago. It was a big event, and there was a geothermal session, but with poor attendance: only 20/30 persons, most of them from the geothermal community.

A position paper on geothermal energy contribution for the agriculture in the developing countries has been submitted to UN under the UN-NGO-ECOSOC activity in 2003.

The IGA prepared a set of comments on the "Environmental Due Diligence (EDD) of Renewable Energy Technologies, UNEP/BASE Guidelines for Geothermal Energy Systems". The document has been submitted to the Basel office of BASE in November 2003.

In the framework of a working group of the International Energy Agency on the "Renewable Energy for Power Generation", the Secretariat was involved for editing the chapter dedicated to geothermal energy (see figure 4).

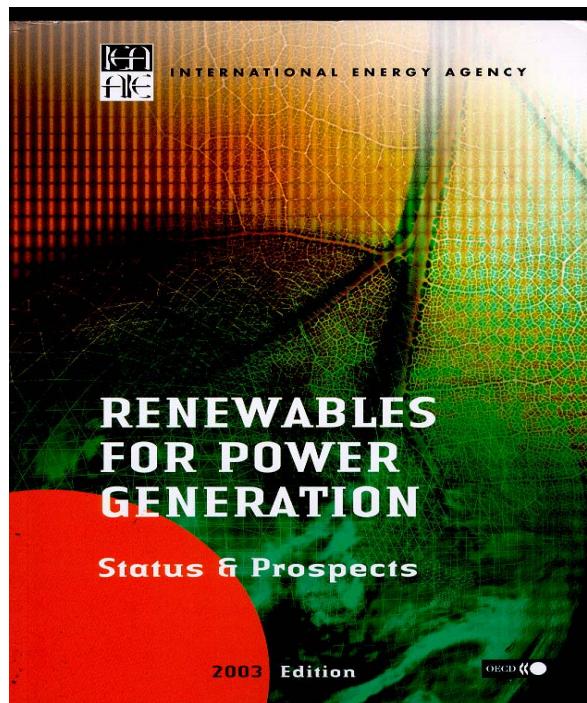


Figure 4: The WEC document on "Performance of Renewable Energy Power Plants".

On January 29-30, 2003 an International Conference on «Geothermal Energy and Territory» was held at Pomarance, Italy, at the Teatro Comunale dei Coraggiosi. This event was under the patronage of: the Italian Ministry of Environment and Territory, the United Nations Environment Program, International Energy Agency, the Province of Pisa, the Mountain Community of Val di Cecina, the Municipality of Castelnuovo di Val di Cecina.

The IGA and the UGI collaborated on the organization of the event, together with the Municipality of Pomarance and ETA-Renewable Energies. ENEL gave its support too. The Conference was organized within the context of the celebration of the centenary of the first world experiment regarding the production of geothermal electrical energy (Larderello 1904-2004). The conference was a great success, with a highly qualified participation and was intended as a preparatory step to the International Conference on Renewable Energies to be held in Bonn on June 1-4, 2004.

The relevant presentation were on:

- *Geothermal energy and Sustainable Development*, with a special review on the Italian Case history: Larderello, after 100 years of exploitation, is still live and with margins for new explorations and additional development made by the IGA President Guido Cappetti.
- *Social Acceptance of geothermal energy and Integration models*
- *The geothermal energy in Tuscany and in Italy*
- *Environmental Indicators and Due Diligence Process*, with focus on the UNEP program for the definition of international guidelines, under the co-ordination of BASE (Basel Agency for Sustainable Energy)
- *World Bank investment program*, with the presentation of two out of four major World Bank areas of geothermal interest: Africa and East Europe/Asia.

A final round table on the future of geothermal energy was held. The opening and closing talks were given by Local and Regional authorities, with the participation of Tommaso Franci, Councilor for the Environment of the Tuscany Regional authority, and a message from Corrado Clini, General Director of the Italian Ministry for Environment and Territory

The IGA was present at the International Conference for Renewable Energies/Renewables Bonn 2004, through its affiliated organization. It was a very important event, a follow-up of the UN Johannesburg conference on application of the Kyoto protocol.

3. PUBLICATIONS

The Historical Volume “Stories from a Heated Earth-Our Geothermal Heritage” as been officially presented to the IGA (see figure 5) The Secretariat was involved in its dissemination activities.

The IGA Directory, the IGA card, a color brochure and the leaflet (“from the heart of the earth) have been printed and dispatched before and during WGC2000. A second 8-pages brochure has been prepared for EGC2003 (see figures 6,7, and 8).

In 2001, a Calendar has been prepared using the photo collected at the IGA photo contest in WGC2000. Some 3500 copies, some of which used as Christmas gift by the advertising companies have been printed and mailed. This experience has been repeated in 2002 (with archive photos) and 2004, utilizing the photo contest material of the EGC2003, Szeged, Hungary.

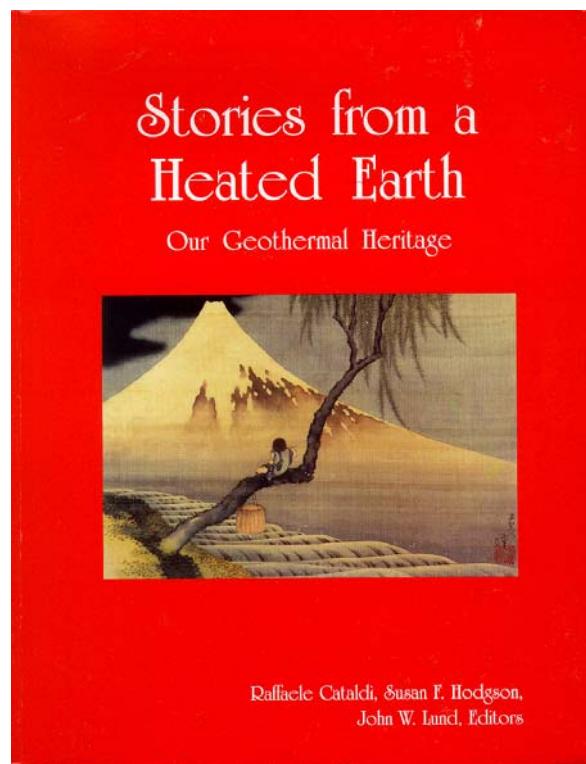


Figure 5: The IGA/GRC historical volume on geothermal energy.

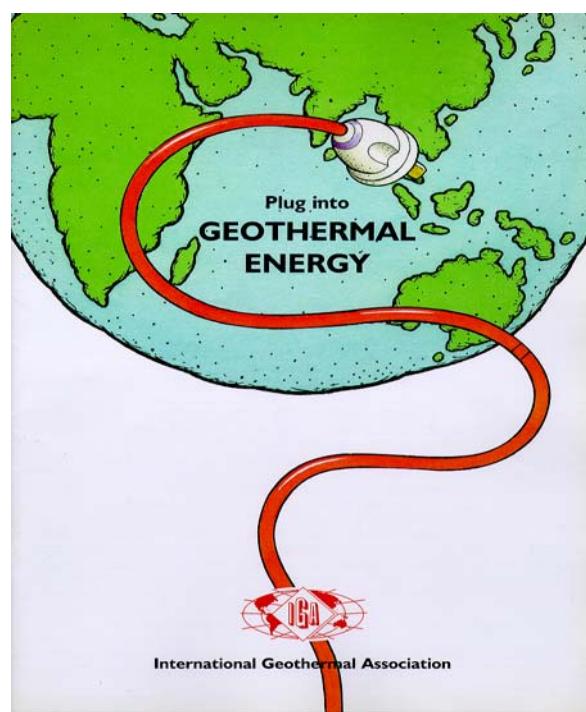


Figure 6: The “Plug-in” Brochure for WGC2000.

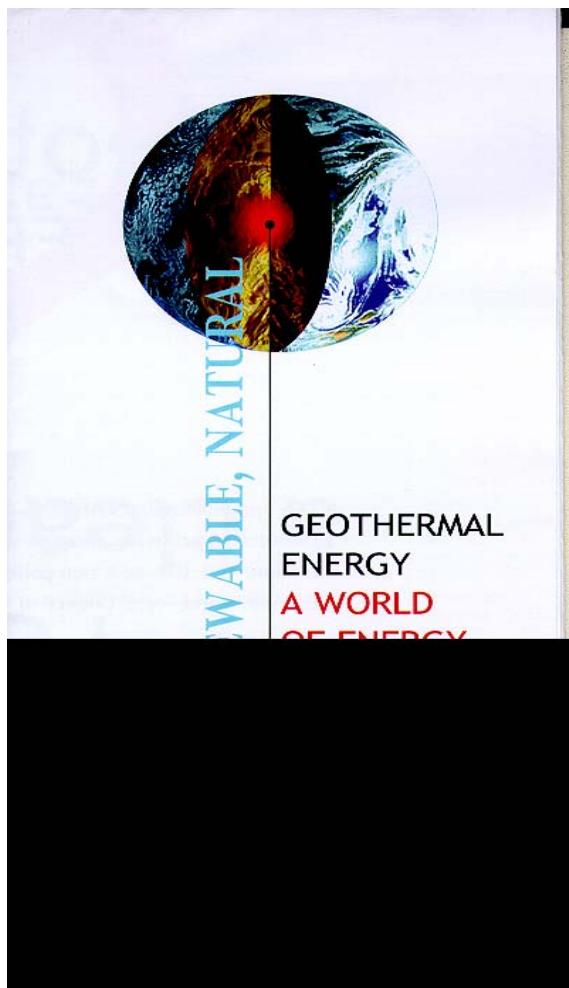


Figure 7: The “A World of Energy” basic leaflet.

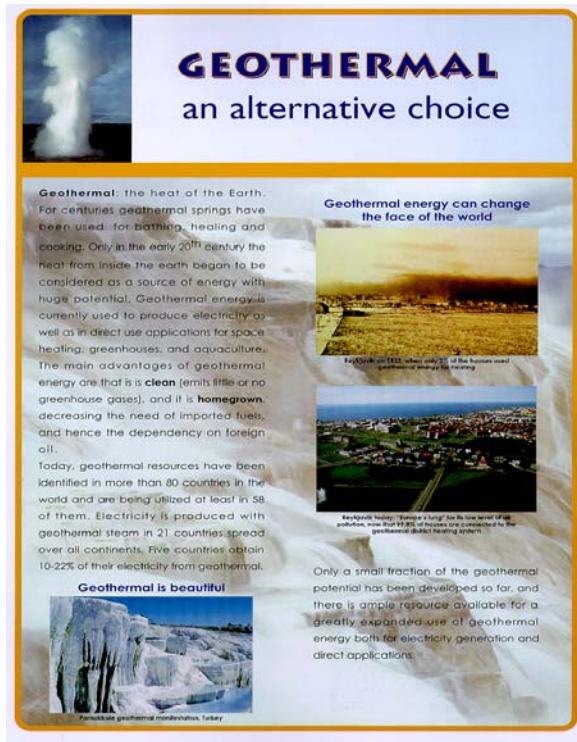


Figure 8: The “Alternative Choice” Brochure for EGC2003

The Secretariat and EuroBranch Forum, in co-operation with EGECA, collected data within the IGA European membership and edited the final results of a Questionnaire on Geothermal Energy status in Europe: future perspectives in 2000 (see figure 9).

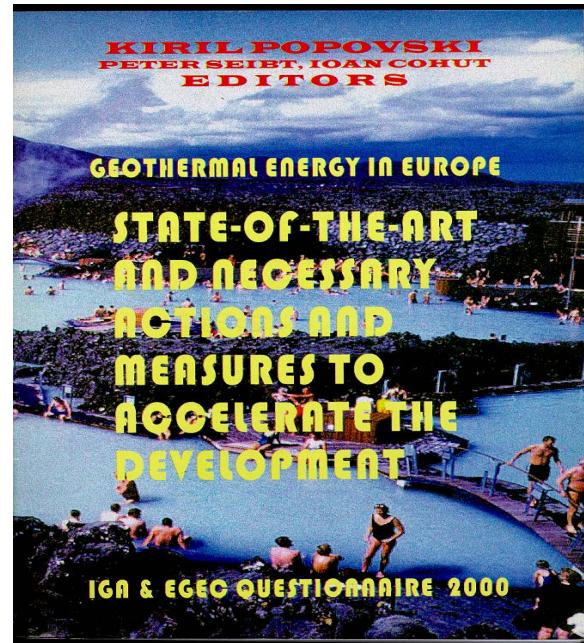


Figure 9: year 2000 questionnaire on status of geothermal energy in Europe.

4. WEBSITE

The new IGA Web-site on the CNR-IIRG internet server was completed and the IGA *News* and Conference Proceedings database searching engine is up and running, with all data on the Web-site.

www.geothermal-energy.org

A copy of the homepage is shown in figure 10.



Figure 10: IGA website home page.

A sub-sector of the site is reserved for the IGA Board Members only and accessible by password. The original IGA website was launched in 1994, and was intended to act as a “collecting-house” for geothermal data sent in regularly by geothermal colleagues throughout the world, as well as information of a general nature on the Association. However, this objective was never fully attained, and the Information Committee had to take over the compilation and updating of the site. Its main contents are:

IGA -All About Us. containing documents on the IGA, its scope, mission and structure, and general information on geothermal energy and its benefits.

The *Interactive World Map*. Through this page visitors can view all the geothermal countries on a World Map and, clicking from continent to country, can access the geothermal information currently available for each one. Members of the geothermal community in each country are encouraged to send in updates for these pages.

Electricity Generation. This page lists the countries that use geothermal energy to produce electricity, and their installed generating capacity in the years 1990, 1995, and 2000, so as to give some idea of the evolution of geothermal production over the last decade. Again, by clicking on the countries listed on the left of the page, the visitor can access all the geothermal information available for each country, as in the case of the Interactive World Map.

Direct uses. This page lists the countries that utilize geothermal resources in direct applications, giving their installed power and energy production for the years 1995 and 2000. Again, by clicking on the countries listed in the column on the left, the visitor can access all the geothermal information available for each.

Geothermal Energy. This page contains articles describing the nature, distribution and utilization of geothermal energy, a sector with FAQ (Frequently Asked Questions), and a list of journals of geothermal interest.

Conferences, Congresses. Here the visitor can find all the events of geothermal interest scheduled to take place in various parts of the world. The first list refers to events organized by the IGA, followed by a more general one. These lists are interactive, so, by clicking on the various titles, the visitor can access the home page of the event or type a e-mail to the relevant contact person. The event list is updated on a regular basis.

IGA Newsletter. This page can be used to access current and recent issues of the IGA Newsletter in pdf format, and to search for specific articles in the IGA Newsletter archives.

Photo Gallery. The geothermal photographs on this page are provided by the IGA members or geothermal colleagues and organized by country. Again, inputs from geothermal colleagues are most welcome.

Various Geothermal Links. Through this page the visitor can access all the main web sites related in some way to geothermal energy and to renewable energies in general.

Forum. The minutes and other documentation related to the latest IGA Annual General Meetings can be accessed on this page. A separate section is reserved for members of the IGA Board of Directors only, and is accessible only through inserting a password.

Also from the homepage is possible to contact the IGA Secretariat for information and registration. A number of geothermal experts from all over the world have volunteered to serve in the IGA Discussion Group, which replies to queries on matters related to geothermal energy.

The website has been utilized also for the BoD election 2004, with an *ad-hoc* page and procedures for the vote validation and accounting.

5. EDUCATIONAL

1998: International Geothermal Days “Azores 1998”, organized by the International Summer School on Direct Application of Geothermal Energy. It was held under the auspices of UNESCO, Thermie, the Commission of the European Communities, and the IGA, and supported by, among others, the Institute De Inovação Tecnologica Dos Açores (INOVA), ORME Jeotermal AS, SOGEO Srl, in addition to the IGA. The course took place in Ponta Delgada, S. Miguel, Açores, Portugal, and covered the following items: “Heating Greenhouses with Geothermal Energy”, “Electricity Production from Geothermal Energy”, “Economy of Integrated Geothermal Projects”.

1999: International Summer School at the Oregon Institute of Technology’s Geo-Heat Center (100 geothermalists from over 30 countries), covering the following courses: “Direct Utilization of Geothermal Energy”, “Small Scale Electric Power Generation”, “Geothermal Heat Pumps”,

1999: European Geothermal Conference, Basel, Switzerland. It assembled nearly 200 participants from 24 countries, some of them from overseas, making the EGC’99 a fully international event. The participation of numerous geothermalists from Eastern European countries needs a special mention. Representatives of several national associations, affiliated with IGA, attended the Conference: GRC, GtV, HGA, LGA, PGA, RGA, SGA, SVG and TGA. The organization of EGC’99 was a joint venture of the Société Suisse pour la Géothermie (SVG), the Geothermische Vereinigung (GtV), the Agence de l’Environment et de la Maîtrise de l’Energie (ADEME) in France, the Unione Geotermica Italiana (UGI), and the Polish Geothermal Association (PGA). Financial support was provided by the Swiss Federal Office of Energy (BFE), the Amt für Umwelt und Energie (AUE)/Abt. Energie of Canton Basel City, by ADEME, by the GtV (through the Bundesministerium für Wirtschaft, BEO Forschungszentrum Jülich GmbH), and by the European Geothermal Energy Council (EGEC). As side event of the conference, in a preparatory workshop in Ferrara, Italy, the “Ferrara Declaration” established some ambitious targets for the near future European geothermal market.

2000: World Geothermal Congress in Japan, in two locations (Beppu/Morioka), with 1200 participants from 61 countries. Four Training courses were organized as side events of the major conference (“Long term monitoring of high and low enthalpy fields under exploitation”, “Environmental safety and health issues in geothermal development”, “Heating with geothermal energy: conventional and new schemes”, “Project management and financing”). WGC2000 has been a great success. It benefited from active participants, efficient organizers, and from a large number of participants representing 61 countries. There were 970 registered participants, 19 Training Course participants, 130 exhibitors, some 400 local staff including volunteers (the „green jackets“), 25 from the WGC2000 Secretariat including ICS/JTB staff, 205 participants at Kazuno Forum, 20 media people, which

makes a total of about 1800! 173 participants received full or partial fellowships.

For the host Japanese participants this event was a great opportunity to meet the international community and demonstrate the high standard of geothermal technology in their country, underlined by the impressive exhibitions of Japanese companies and by power plant visits. The participants from abroad brought along and presented many new results and were also able to experience the magnificent and unique Japanese culture, tradition and hospitality. In addition, the smooth transfer between the two Conference sites, Beppu and Morioka (and the side trip to the Kazuno Forum, for those who opted for it), unveiled manifold scenic beauties of Japan. Numerous excellent social events (parties, dinners, and receptions) gave ample opportunity for personal and business contacts. The Japanese Organizing Committee is to be thanked and congratulated for generous organization.

The Congress vividly demonstrated the status and perspectives of geothermal energy as an environmentally friendly technology, well sustainable into the 21st Century, as summarized in the "WGC2000 Declaration".

2001: INAGA pre-conference lectures, Yogyakarta, Indonesia, with over 50 attendance.

2001: The European Summer School on Geothermal Energy Application in Romania; the total number of participant was 60.

2001: International Geothermal Days in Bad Urach Germany, with about 100 participants. The offered courses were "Geothermal Energy Application for Balneology and Water Tourist Centers", and "Geothermal Heat Pumps", "Hot Dry Technology".

2002: Short course on "Geothermal Energy for Developing countries" in Mar del Plata, Argentina, in connection with the XXXII Congress of the International Association for Hydrogeologists;

2002: International Geothermal Days Greece 2002, in Thessaloniki, Greece, organized by the Aristotle University of Thessaloniki and the International Summer School on Direct Applications of Geothermal Energy. "Geothermal Energy Application for Balneology and Water", "District Heating, Agricultural and Agroindustrial Uses of Geothermal Energy", "Possibilities of Geothermal Development of Aegean Islands".

2002: Course on "The Earth's Thermal Regime and Related Research Methods", Moscow.

2003: European Geothermal Conference, Szeged, Hungary. Organized by the Hungarian Geothermal Association, the European Geothermal Conference EGC 2003 has been realized in Szeged (Hungary) in 2003. More than 160 participants from all over the world actively contributed to a very interesting program consisting presentations of current geothermal activities in Europe and visits to very interesting Hungarian geothermal projects. Also an interesting exhibition of producers of geothermal equipment and consulting firms has been organized and the annual workshop of EGEC.

2003: International Summer School on Geothermal Geochemistry, with additional contributions on: New Geothermal Approaches, Geothermal District Heating, and Geothermal Reservoir Engineering, in Izmir, Turkey,

organized by the Dokuz Eylul University of Izmir and the Turkish Geothermal Association.

2003: Sustainability of Geothermal Energy and Strategies for its Development in the East African Rift, in Nairobi, Kenya, organized by the Kenya Electricity Generating Company LTD (KenGen), in collaboration with other institutions (UNEP, GEF, and Business Council for Sustainable Energy).

2003: International Course on Sustainable Use and Operating Policy for Geothermal Resources, in Reykjavik, Iceland, organized by the International Summer School on Direct Application of Geothermal Energy and the Geothermal Association of Iceland before the International Geothermal Conference 2003.

2004: International Geothermal Workshop – IGW-2003, in Sochi, Russia, on October 6-10, 2003, organized by the Geothermal Energy Society.

2004: The International Course on Low-Enthalpy Geothermal Resources – Exploitation and Development, 13-17 September 2004 in Zakopane, Poland, organized by the International Summer School on Direct Application of Geothermal Energy.

Unfortunately, in 2003 the Government of New Zealand has decided to drop its support of scholarships for the Geothermal Diploma Course given by the Geothermal Institute at the University of Auckland. An official IGA statement to the NZ government, to be published also on newspapers was then prepared.

5.1. WGC2005

Three training Courses will be held before and after the Congress, presented by internationally recognized experts.

POWER GENERATION (a 2-day Pre-conference Course)

This Course covers the characteristics of geothermal resources, field development (well characteristics, deviated holes etc.), decision on power plant design (types of cycles etc.), corrosion and scaling, and operating geothermal power plants in competitive environment. It will be held in Kizildere and Antalya.

INTEGRATED USE OF GEOTHERMAL ENERGY (2-day Pre-conference course)

This Course covers the possibilities and limitations of direct application of geothermal energy, its situation in the world, and its use for district heating. It will also cover greenhouse heating, industrial use, balneological applications, heat pumps and augmenting the demand. Economic comparison with other energy sources.

ENVIRONMENTAL ADVANTAGES OF GEOTHERMAL ENERGY (a 1-day Post Conference Course)

This Course covers: "Why do we have to protect the environment?", sustainable development, Kyoto Protocol, Carbon emissions, comparison with other energy sources, advantage of geothermal resources, comparison to other sources, probable negative effects, subsidence, air pollution,

thermal pollution, H2S, remedies, reinjection, public awareness.

6. MEMBERSHIP

During the six years of the Italian Secretariat, there was a substantial increasing in the IGA membership: 50% in members and 40% in affiliated organizations.

The table I below is a “snapshot” of the year 1999 situation concerning the Membership Database, according to the standard IGA classification: In 2004 the final membership is as shown in table II: And the 2004 list of Affiliated Organizations is shown in table III.

Table I: IGA membership in 1999.

CATEGORY	NUMBER
AFFILIATED	1596
CORPORATE	23
INDIVIDUAL	267
INSTITUTE	6
STUDENT	13
SUSTAINING	6
TOTAL	1911
Affiliated Organizations	14

Table II: IGA membership in 2004.

CATEGORY	NUMBER
AFFILIATED	2482
CORPORATE	21
INDIVIDUAL	331
INSTITUTE	5
STUDENT	8
SUSTAINING	7
TOTAL	2854
Affiliated Organizations	20

Table III: IGA Affiliated Organization in 2004.

Affiliation	Country
CGEA	Canada
GAI	Iceland
GCES	China
GGA	Georgia
GRC	USA
GtV	Germany
HGA	Hungary
API/INAGA	Indonesia
LGA	Lithuania
MAGA	Macedonia
MGA	Mexico
NGAP	Philippines
NZGA	New Zealand
PGA	Poland
RGA	Romanian
RUGA-GES	Russia
SGA	Slovakia
SVG-SSG	Switzerland
TGA	Turkey
UGI	Italy

7. BOARD OF DIRECTORS

The organization of BoD meeting(s), usually twice per year, and of the Annual General Meeting is one of the most demanding task for the Secretariat, either in the preparation phases, and for writing down the official minutes.

The 36th, the 37th BoD meetings and the 15th AGM will be organized in October 2004, Antalya, Turkey, in the framework of WGC2005 preparation.

7.1. BoD meetings

The 22nd and 23rd meeting of the IGA Board of Directors were held at the ENEL Auditorium, Pisa, Italy on 5 November 1998.

The 24th IGA Board meeting was held on 2-3 March 1999, at the PNOC center, Manila Philippines.

The 25th Meeting of the IGA Board of Directors was held in the Reno Hilton Conference facility, Reno, Nevada on Thursday 21 and Friday 22 October 1999 in connection with the GRC Annual Meeting.

The 26th IGA Board meeting was held on 6-7 March 2000, in Antalya, Turkey.

The 27th Meeting of the IGA Board of Directors was held in the Erga (later Enel GreenPower) Auditorium, Pisa, Italy, on 12-13 October 2000

The 28th Meeting of the IGA Board of Directors was held in the Jayakarta Hotel meeting Room, Yogyakarta Indonesia on 8-9 March 2001 after the INAGA Conference.

The 29th and 30th Meeting of the IGA Board of Directors were held in the Izmir Hilton Hotel meeting room, Izmir, Turkey on 4-5 October 2001 after the “First International Aegean Days Symposium”.

The 31st Meeting of the IGA Board of Directors was held at the Stanford University- Geothermal department meeting room, Stanford, USA on 31 January 2002, after the Stanford Workshop.

The 32nd Meeting of the IGA Board of Directors was held at the Taupo Yatch Club, Taupo, New Zealand on 11-12 November 2002, before the Auckland workshop.

The 33rd Meeting of the IGA Board of Directors was held at the Budapest Tourism Office- Conference Room, Budapest, Hungary on 23 and 24 May 2003, before the European Geothermal Conference EGC2003.

The 34th Meeting of the IGA Board of Directors was held at the Svartsengi Office- Conference Room, Eldborg, Iceland on 12 and 13 September 2003.

The 35th Meeting of the IGA Board of Directors was held at the Enel - Centro Dimostrativo- Conference Room, Castelnuovo Val di Cecina, Italy, on 7 and 8 May 2004, for the celebration of 100 years of geothermal electricity.

7.2. AGM

The 9th Annual General Meeting of the IGA was held at the ENEL Auditorium, Pisa, Italy, on 5 November 1998. Approximately 50 people participated in it.

The 10th Annual General Meeting of the IGA was held at the Reno Hilton Hotel Auditorium, Reno, Nevada, USA on 19 October 1999. Approximately 50 people attended.

A general member meeting was held at the venue of the WGC2000 on Tuesday, 6 June 2000. This meeting was not designed to take the place of the annual member meeting, but rather to provide a forum of interaction between the IGA officers and directors on one hand, and attending IGA members on the other hand. This meeting was a very worthwhile meeting as for the interaction among members.

The 11th Annual General Meeting of the IGA was held at the Erga Auditorium, Pisa, Italy on 13 October 2000. There were some 20 participants.

The 12th Annual General Meeting of the IGA was held at the Izmir Hilton Hotel Auditorium, Turkey on 5 October 2001. Approximately 30 people were present.

The 13th Annual General Meeting of the IGA was held at the Auckland University, during the New Zealand Geothermal Workshop Auckland, New Zealand, on 13 November 2002. Approximately, 70 people participated in it.

The 14th Annual General Meeting of the IGA was held at the Szeged, during the European Geothermal Conference 2003, EGC2003 Hungary, on 28 April 2003. Approximately 120 people attended it.

8. OTHER

8.1. IGA News

The preparation of IGA *News* (four issues per year) is the second major task of the secretariat. During the six years in Italy, in co-operation with Information Committee Chairpersons (respectively Marnell Dickson for the first mandate, and Adele Manzella in the second one), issues from #34 to #57 have been edited, printed, mailed. Copies were sent to GRC for the insertion into the GRC Bulletin, in bulk to the other Affiliated Organizations, and distributed to individual members.

A Database of IGA *News* has been prepared, and it is accessible on the IGA WebPage. Some statistics are reported herewith.

The total number of articles, published in 55 IGA *News* issues, is 804. 174 of them are related to IGA activity and 75 to Affiliated Organizations events: the IGA *News* is a vital, active medium for the dissemination of information among members and to the complimentary list (about 300 VIP and Policy/Opinion makers worldwide). 175 articles are announcements of meetings, or short resume of the main meeting's items and goals.

A great portion of articles (15%) is related to Country Update data, covering all the geothermal countries.

The geographical distribution of the articles is given in figure 11.

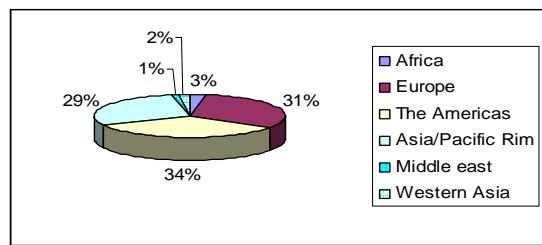


Figure 11: IGA *News* article distributions among the continents.

8.2. Finance

One of the major responsibilities of the Secretariat is the bookkeeping of the IGA and the preparation of the financial statements (four per year). The final one, each year, must be audited by an external financial consultant and by the IGA Audit Committee.

A summary of the IGA Financial performances is given in Table IV. In Figure 12 the IGA End of the Year Balance is shown.

Table IV: IGA Financial Performances from 1999 to 2004.

	1999	2000	2001	2002	2003	2004 expected
1 Jan	35,591	54,121	47,774	51,359	43,596	41,067
31 Dec	54,121	47,774	51,359	43,596	41,067	29,293
Income /Losses	16,531	2,775	3,585	-7,763	-2,529	-4,287

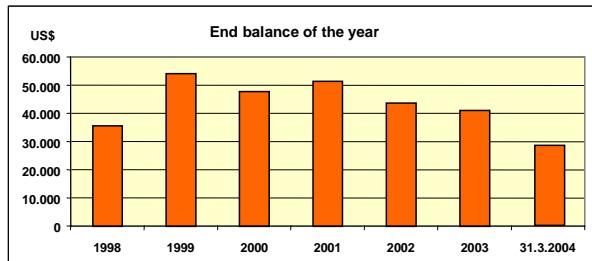


Figure 12: IGA End of Year Balance.

8.3. MoU negotiations

The official MoU with TGA for WGC2005 has been signed: this negotiation was another key task of the present IGA term.

The MoU with Samorka for the transfer of the Secretariat in Iceland has been also finalized.

8.4. Bylaws Revision

The new version of the Bylaws has been presented to the IGA members and formally approved in April 2004.

The relevant change on the AGM date will be reflected in a change in the "Rules of Incorporation". This modification has been approved during a Special IGA meeting in Stanford (USA) on 31st January 2002.

8.5. Centenary

Another task was the celebration of 2004 geothermal anniversary of the first electric production in Larderello. The UGI organized a series of manifestations for the celebration of this unique event. This is the brief history of the experiment: it covered several days, from 2 to 15 July 1904; on July 4th the five lamps were lighted. The famous photo of prince Ginori-Conti was taken few months later with the original equipment.



Figure 13: First Geothermal Electricity experiment.

8.6. Elections

Two election polls have been organized and successfully completed according to the approved schedule, in 2001 and 2003. The nomination procedure was revised in 2003. The candidate slate will be then composed as follows: 40 candidates nominated by the affiliated organizations, 20 from the Nominating Committee, and an unlimited number of candidate by petition. The Nominating Committee will revise the distribution of candidates among the different organizations. For 2004 election, the following distribution has been approved (see table V).

Table V: Affiliated Organization Nomination for 2004 election.

Country	Affiliate Members	Max no. of endorsed nominees
Canada	10	1
China	38	1
Georgia	60	1
Germany	41	1
Hungary	61	1
Iceland	109	2
Indonesia	~100	2
Italy	48	1
Lithuania	23	1
Macedonia	15	1
Mexico	32	1
New Zealand	100	2
Poland	66	1
Philippines	151	2
Romania	37	1
Russia	46	1
Slovakia	30	1
Switzerland	60	1
Turkey	77	1
USA-GRC	551	6
Japan	TBD	1

2. CONCLUSION

The Italian Team (Guido Cappetti, as Secretary for the first term and President for the second one, Ruggero Bertani as Executive Director and Iris Perticone who actively cooperates in all the activities) has managed the IGA Secretariat.

They were related to:

- Procedure administration,
- Finances,
- Other routinely businesses of the Association.

All such functions have to be carried out according to the Board of Directors requirements. These functions included:

- Co-ordination of all the Association's activities, correspondence and meetings, including editing of minutes; this is a very demanding and time-consuming task, with two BoD meetings and one AGM per year;
- Collection of membership dues and all other dues; it's the standard daily routine;
- Maintenance of master mailing members and potential members list; no particular problems arises from this point, but it is not always easy to keep the database at pace with the affiliated organization data;
- Development of and assistance to campaigns for the development of member interest;
- Development of and assistance to fund raising campaigns; it was not a continuos task, it has some peak activity: the main one was tied to the request of EU support for the WGC2005 fellowship, under the framework of Marie Curie Large Conference Program;
- Assistance to planning and budgeting: once a year, after the financial statement closing;
- Yearly declaration to the New Zealand Justice department and every three-year statement to the UN- NGO;
- Maintenance of all the Association Secretariat financial accounts: four financial statements per year, and at the End of the Year also the auditing and controlling task;
- Editing the IGA newsletter: four times per year, it takes two-three weeks per each issue, including the selection of papers, their editing, publication and delivery;
- Co-operation with the IGA Information Committee in any information campaign, through preparing, printing and distributing brochures, leaflets, CD, etc. on demand;
- Editing and Updating of the BoD manual and relevant documentation.

On the basis of our experience, we would like to suggest for the future Secretariat some improvements form a better handling of all the bunch of activities.

- Intensive use of the email, also for running electronic ballot among the BoD and the Executive Committee: it is a very valuable, reliable and fast way of handling urgent questions.
- Improvement of the website: it can be much better utilized not only as source of information for membership and general public, but also for internal

IGA use: dissemination of documentation among BoD and members, IGA BoD general election and approval from membership of future bylaws revision.

- It was proposed at the beginning of our experience the suggestion of holding AGM electronically, with a forum on website: it was never realized, and it can be a very innovative way for extending participation of membership in the association life.
- Try to have the Information Committee Chairperson in the same country of the Secretariat: we found this close cooperation very proactive and really effective.
- In order to reduce the IGA expenditures and to obtain a faster dissemination, we suggest to study the possibility of preparing *IGA News* and *IGA Directory* only electronically, to be disseminated via website. Only a limited number of printed copies should be mailed in the Complimentary distribution list.

- It is important to have a good financial consultant, with the possibility of book-keeping in USD (and of course a bank account in the same currency): we experienced some problems in the double handling of books in ITL/Euro and Bank Account in USD. The Financial Statements should be done every four months. The coordination among Executive Director, Financial Consultant, Treasurer, Finance and Audit Committee Chairpersons is very delicate and it should be improved.
- There is a critical lack of advertising for the *IGA News*: a real effort in finding in the due time some financial support for editing/printing this magazine should be one of the first point in the Executive Director's mind.

The Italian Team wishes the Icelandic colleagues to be successful in their Secretariat handling for the 2004-2009 term.