



Jiro Kondo D. Eng.

PRESIDENT

CENTRAL COUNCIL FOR ENVIRONMENTAL
POLLUTION CONTROL

SCIENCE COUNCIL OF JAPAN

22-34 ROPPONGI 7-CHOME, MINATO-KU, TOKYO, 106 JAPAN
TELEPHONE: (03) 403-6291

中央公害対策審議会

会長 近藤次郎

Send information on
W Creewater
Domitory Center



THE THIRD WORLD ACADEMY OF SCIENCES

OFFICE OF THE EXECUTIVE SECRETARY:

INTERNATIONAL CENTRE FOR THEORETICAL PHYSICS - 34100 TRIESTE (ITALY) - P.O.B. 586 - MIRAMARE - STRADA COSTIERA 11
TEL.: (040) 2240-1 - CABLE: CENTRATOM - TELEX: 460392 ICTP I

17 March 1989

Dear Prof. Swaminathan,

We were delighted to receive your communication accepting to participate in the TWAS Third General Conference to be held in Bogotá, Colombia, during the period 16-20 October 1989.

The enclosed circular gives you general information about the meeting, including a Tentative Programme of the Conference. It would be greatly appreciated if you could kindly complete the attached Registration form and the other relevant forms and return them to the appropriate offices no later than **1 June 1989**.

We look forward to hearing from you soon and to your participation in the Conference.

With kindest regards,

Yours sincerely,

Mohamed H.A. Hassan
Executive Secretary

Enclosures

Prof. M. Sambasivan Swaminathan
B-4/142 Safdarjung Enclave
New Delhi 110 029
India

THE THIRD WORLD ACADEMY OF SCIENCES (TWAS)
TWAS THIRD GENERAL CONFERENCE

(Organized in collaboration with the Third World Network of Scientific Organizations – TWNSO)

Science in Latin America and the Caribbean and Its Role in the Regional Development

Tequendama Hotel, Bogotá, Colombia
16 - 20 October 1989

Preliminary Programme

Monday, 16 October 1989

10:00 - 12:00	Opening and Awards Ceremony
12:00 - 13:30	Reception
14:00 - 16:00	Symposium on the Role of Science and Technology in the National and Regional Planning in Latin America and the Caribbean (Conveners: S. Trindade, F. Del Rio, G. Taylor)
16:00 - 16:30	Coffee Break
16:30 - 19:00	Lectures by Awardees of TWAS Prizes
19:00 - 20:30	Dinner
20:30 - 21:30	Invited Lecture: The Life and Work of Bernardo A. Houssay and Luis F. Leloir

Tuesday, 17 October 1989

08:30 - 10:30	South-South and South-North Cooperation in Developing Third World Science: Problems and Modalities (Convener: Abdus Salam) Presentations by: The South Commission TWAS and TWNSO ICSU and the Unions
10:30 - 11:00	Coffee Break
11:00 - 13:00	Biological Sciences in Latin America and the Caribbean (Conveners: E. Forero, R. Villegas)
13:00 - 14:30	Lunch
14:30 - 16:30	Chemical Sciences in Latin America and the Caribbean (Convener: L.A. Romo)
16:30 - 17:00	Coffee Break
17:00 - 19:00	Physics and Space Science in Latin America and the Caribbean (Convener: G. Violini)
19:00 - 20:30	Dinner
20:30 -	Invited Lectures by Nobel Laureates/Scientific Films and Exhibition

Wednesday, 18 October 1989

08:30 - 10:30	Mathematics and Information Science in Latin America and the Caribbean (Convener: M.M. Peixoto)
10:30 - 11:00	Coffee Break
11:00 - 13:00	Technology for Latin American and Third World Development (Chairman: D. Armao de Uzcategui)
13:00 - 14:30	Lunch
14:30 - 18:30	Scientific Symposia (In parallel) a) Symposium on Tropical Diseases and Vaccines (Convener: E. Martinez-Palomo) b) Symposium on Tropical Agriculture (Convener: J. Döbereiner) c) Symposium on Natural Disasters (Conveners: A. Giesecke Matto, O. Moretto)
19:00 - 20:30	Dinner
20:30 -	Invited Lectures by Nobel Laureates/Scientific Films and Exhibition

Thursday, 19 October 1989

08:30 - 10:30	Scientific Workshops (In parallel) a) Workshop on Environment and Development (Convener: M.S. Swaminathan) b) Workshop on the Role of Biotechnology in Health Care (Convener: I.C. Gunsalus)
10:30 - 11:00	Coffee Break
11:00 - 13:00	Scientific Workshops (In parallel) a) Workshop on Environment and Development (Convener: M.S. Swaminathan) b) Workshop on the Role of Biotechnology in Health Care (Convener: I.C. Gunsalus)
13:00 - 14:30	Lunch
14:30 - 16:30	Regional Meetings
16:30 - 17:00	Coffee Break
(14:30 - 15:30)	Meeting of TWAS Council
(15:30 - 17:00)	Meeting of TWNSO Executive Board
17:00 - 19:00	Second General Meeting of TWNSO
19:00 - 20:30	Reception/Dinner
20:30 - 21:30	Fourth General Meeting of TWAS

Friday, 20 October 1989

09:00 - 11:00	Reports
11:00 - 11:30	Coffee Break
11:30 - 12:30	Conclusions and Recommendations
12:30 - 13:30	Lunch

General Information

A. Date and Location

TWAS Third General Conference will be held at the Hotel Tequendama, Bogotá, Colombia during the period 16 - 20 October 1989.

B. Organization

The Conference will be hosted by the Colombian Academy of Exact, Physical and Natural Sciences (ACCEFYN). It is being organized by ACCEFYN in collaboration with COLCIENCIAS, The International Centre of Physics (CIF), The Colombian Association for the Advancement of Science (ACAC), The National University of Colombia, Academies, Research Councils and other scientific institutions in Latin America and the Caribbean.

The Local Organizing Committee:

Chairman: L.E. Mora-Osejo
Members: P. Amaya
P. Leyva
G. Misas
E. Posada
J.E. Ruiz
L. Villaveces
G. Violini

The Local Secretariat:

G. Ahamada
S. Diaz-Piedrahita
N.E. Hoyos
A. Pantoja
M. Wasserman

C. Participation

An invitation to attend the Conference has been extended to TWAS Members; Ministers of Science and Technology and Higher Education in the Third World; Chairpersons of National Research Councils in the Third World; Presidents of Academies from developing and advanced countries; and representatives of various international governmental and non-governmental organizations. Participation in the Conference will be **by invitation only**.

President Virgilio Barco, President of the Republic of Colombia has kindly agreed to inaugurate the Conference.

D. Travel

Participants should make their own travel plans to Bogotá as early as possible. A limited number of partial travel grants will be provided to participants from **Third World countries** who are unable to obtain full support from their institutions. Requests for travel support should be made on the attached form. Participants from Third World countries offered partial travel support from TWAS will be notified in a special letter and will receive a cheque in US\$ for the amount offered after their arrival in Bogotá. Arrangements will be made by the Local Organizing Committee to meet all participants at the airport and accompany them to the Hotel. Participants should, therefore, inform the Committee of their exact date and time of arrival well in advance so as to ensure that necessary arrangements are made.

E. Visas

Participants needing a visa to enter Colombia should apply to the nearest Colombian Embassy as early as possible and should present the formal letter of invitation. In addition, they should fill in the attached form and send it to the Colombian Academy of Exact, Physical and Natural Sciences **before 1 June 1989**. The Academy will contact the appropriate body to ensure that a visa is issued.

F. Accommodation

All participants will be accommodated at Hotel Tequendama, which is a first-class, five star hotel situated at the Centre of Bogotá. A special daily rate of US\$ 69.00 per person, including meals, has been offered by the Hotel to the participants of the Conference. The rate for an accompanying person staying in the same room is US\$ 22.00 per day. The total amount should be paid to the hotel upon arrival.

Participants from Third World countries and Members of TWAS who have been offered hospitality by the Colombian Academy of Exact, Physical and Natural Sciences will have their living expenses covered by the Academy under the same arrangement. However, extra costs including the difference of US\$ 22.00 per day for accommodating a spouse, private telephone calls and laundry should be settled by the participants directly with the Hotel.

G. Health and Medical Insurance

Arrangements for medical insurances covering emergencies during the Conference period will be made by the Local Organizing Committee. Medical expenses other than emergencies should be covered by the participants.

H. Climate

The climate in Bogotá in October is mild with some rain. The average daily temperature is 15°C and drops to about 6°C at night.

I. Accompanying Persons and Post-Conference Tours

A programme of visits and excursions will be organized for the accompanying persons during the Conference at no cost to the participants. In addition, post-Conference tours will be available to participants and their accompanying persons on 21 and 22 October 1989. For details, please see the attached form.

J. Registration Forms

Copy 1 of the attached Form should be returned to the TWAS Offices while copy 2 should be sent to the Colombian Academy of Exact, Physical and Natural Sciences **before 1 June 1989**.

The Final Registration will take place at the lobby of the Hotel Tequendama. The Registration Desk will be open on Saturday, 14 and Sunday, 15 October 1989 from 09:00 to 21:00. Participants are expected to register and pick-up their badges and conference material during this time.

K. Address for Correspondence and Further Information

TWAS Third General Conference
Third World Academy of Sciences
c/o I.C.T.P.
P.O. Box 586, Strada Costiera 11
34100 Trieste
ITALY

TWAS Third General Conference
Colombian Academy of Exact, Physical
and Natural Sciences
Carrera 3ª No. 17-34
Apartado Aereo 44763
Bogotá 1, D.E.
COLOMBIA

Telephone: (+39 40) 2240-327
Telex: 460392; Cable: CENTRATOM
Fax: (+39 40) 224559

Telephone: (+57 1) 2414805 /2424174
Telex*: 44701 AVTR CO
Fax: (+ 57 1) 2830141/2841834

SIGHTSEEING

Bogotá

Bogotá is the capital of Colombia. It is located in the centre of the country, on a plateau called the "Sabana de Bogotá", 2600 metres above sea level. Its average temperature is 15°C year round and it has more than 6 million inhabitants.

In 1538 Gonzálo Jiménez de Quesada founded Bogotá on a beautiful lush green meseta, protected by the hills of Monserrate and Guadalupe; the name given to the settlement originally was Santa Fé de Bogotá. At the same time the area was inhabited by Chibcha natives who called the location the "Region of the Condor".

The city has a European air, with modern skyscrapers and broad boulevards, but it still preserves a great deal of its colonial past in its old streets and buildings. There are many sights and shows to see, and the city's restaurants and nightlife are magnificent. For shoppers, the city offers high-quality leathersgoods and textiles, emeralds and many typical handicrafts.

The main shopping malls are Unicentro, Granahorrar, Centro 93, Metrópolis and the Centro Internacional.

Bogotá has many churches that are outstanding examples of colonial architecture, with altars beautifully carved out of wood and embellished with antique paintings. The most noteworthy churches are the Cathedral and the Churches of San Francisco, San Diego, San Agustin, La Tercera and Las Aguas.

La Candelaria is a district which still preserves its original narrow streets and the city's most important houses, dating back to colonial times. The best known are the Casa de la Moneda, Casa de los Presidentes, Casa del Marqués de San Jorge and the Museo de Arte Colonial.

At the very centre of the city, the Cathedral, the National Capitol and the Palacio Cardenalicio cluster around the Plaza Bolívar.

The Gold Museum houses the richest collection of pre-Columbian jewels and emeralds. Its more than 20000 exquisitely designed pieces make it the most important museum of its kind in the world.

Close to Bogotá, Guatavita, Sopó, Chia and Zipaquirá are amongst the typical towns which still preserve their colonial atmosphere. Forty-two kilometres from Bogotá, Zipaquirá is famous for its Salt Cathedral, built underground in a salt mine gallery with a surface of 8000 square metres and galleries up to 22 metres high.

The Sabana has several lakes and reservoirs which are well-suited for fishing. Fusagasugá, 63 kilometres from Bogotá and Melgar are vacation resorts due to their warm climate. Girardot, the second largest city in the department, is 144 kilometres from Bogotá and is frequently visited by the people living in Bogotá.

Cartagena

Cartagena is a must for tourists visiting the Colombian Caribbean. In addition to its beautiful plazas, visitors can tour the Palacio de la Inquisición which was finished in 1776 and is clearly representative of civilian architecture during colonial times. The Torre del Reloj (Clock Tower) stands where a bridge previously connected the Getsemani district with the walled city. The Casa del Marques del Valdehoyos was built in the 17th century for the first marquis of valdehoyos. The average temperature is 28°C. The city has several modern first class hotels.

San Agustin

The great cultures of the Americas necessarily include the San Agustin culture in Colombia. Scientists have traced it back to 600 B.C. and it flourished almost until the Conquest by the Spaniards, some 500 years ago.

Named San Agustin after the village founded there in 1539 by the Spaniards, very close to the Guacacallo River and the Las Tumbas River, as the upper part of the Magdalena River was called at the time, this culture grew up in the Colombian massif, where the Andes mountains divide into the Central and Eastern ranges and many of the major Colombian rivers originate. This area was a natural crossroads for different ethnic groups.

The many statues scattered throughout the municipalities of San Agustin, San José de Isnos and Saladoblanco teach a great deal about this people's beliefs, rites and customs, and about the animals living in the area. Some of these creatures are considered to be totemic animals or gods, like the jaguar. Other statues represent the concept of a double or second self. The figures found in San Agustin are characterized by their association with a cult of the dead; it seems that many myths and ideologies centre around the dead and life after death, as well as focusing on the natural forces that somehow governed their activities.

The most significant findings from this culture are on display in the Archaeological Park and at important sites like the Bosque de las Estatuas (Forest of Statues), where styles can be easily compared; Mesitas, with its extraordinary pavilions and colossal monoliths and the Fuente del Lavapatas, a unique monument deemed to be the most grandiose sculptured piece from this culture.

The Lost City - Buritaca 200

For many years, the Sierra Nevada of Santa Marta has been a centre of special interest for researchers from different disciplines, not only because of its special geographic, geological, topographic and ecological nature, but also because in pre-Columbian times it was densely populated by Tayronas. The culture of these indians was characterized by advanced goldsmith and pottery techniques and by a highly specialized social organization which allowed the construction of large urban centres made of stone, and connected by a network of stone-paved roads.

Among the main settlements found, the one on the upper river Buritaca was chosen as the primary research unit because of its special characteristics of construction area, its intricate urban design, the state of conservation of its stone structures, and its strategic location in an undisturbed ecological niche. This settlement was given the technical name of Buritaca 200 and is also known as the "Lost City" because it was found in the depth of the jungle.

The Sierra Nevada of Santa Marta (at only 20 minutes from Santa Marta by helicopter) is an independent mountain formation on the Atlantic coast of Colombia, located between 72° 50 longitude west of Greenwich, and 10° 5 and 11° 20 latitude north. It is considered the world's highest massive coastal mountain, with peaks reaching an altitude of 5775 metres above sea-level. The shape of the mountain is similar to that of a three-sided pyramid. The north side is parallel to the Caribbean, and is characterized by very steep slopes and many rivers. The west side goes from northwest to southeast and is characterized by very rugged descents. The bay and the port of Santa Marta are located at the base of this side, at the intersection of the north and west sides. Lastly, the third side faces east, and runs from northeast to southwest. It has relatively wide valleys, and fewer steep descents and torrential rivers than the north side, but nevertheless, there is a good volume of water.

Post-Conference Tour

The organizers of the TWAS Third General Conference are pleased to offer to the participants and the accompanying persons a choice of two Post-Conference Tours for Friday, 20 October 1989. Spanish, English and French speaking guides will be available. Participation in either tour is free. For reservations, please fill in the form at the bottom of the last page and send it to AVIATUR, Bogotá.

Alternative 1

AVT-B-01 CITY TOUR BOGOTA

Departure: 20 October 1989, at 14:00 hours
Duration: 3.5 hours

Visit the Capitol, the cathedral, Bolivar Square, the famous Gold Museum, Bogotá Colonial, the churches of San Francisco and La Tercera built in the XVII century, Bolivar's house and ascension by cable car to Monserrate shrine.

Alternative 2

AVT-B-02 ZIPAQUIRA UNDERGROUND CATHEDRAL

Departure: 20 October 1989, at 14:00 hours
Duration: 4 hours

One of the most interesting and pleasant drives. Passing by the residential districts of Bogotá and the countryside you arrive to Zipaquira. The underground Cathedral with its altar sculptured into the salt rocks is the only one of its kind in the world.

Optional Tours

A choice of daily tours will be organized for accompanying persons during the Conference. The following are some suggestions for optional tours. For further information and reservations, please contact Ms. Fatima Sanchez, AVIATUR S.A., Avenida 19 No. 4-62, Apartado Aéreo 3445, Bogotá, Colombia.

AVT-B-04 FUSAGASUGA ORCHID LAND TOUR

Departure: 09:30 daily. Lunch included.
Duration: 8 hours
Cost: US\$ 40.00 (min. 4 participants)

Passing by the Artificial Lake Muña, you drive to an altitude of 12.000 feet to reach the other side of The Andes. You will find fascinating vegetation on your way to the town of Fusagasugá. Visit the Clarita Orchid Gardens, banana, coffee and exotic flower plantations.

AVT-B-05 BOGOTA BY NIGHT

Departure: 20:00 daily
Duration: 3.5 hours
Cost: US\$ 53.00 (min. 4 participants)

From 1-5 participants without guide. If a guide is requested, please add US\$ 31.00 divided by number of persons.

Panoramic ride through the colonial parts of the city. Dinner at a typical restaurant with show and one drink included.

AVT-B-06 SHOPPING TOUR

Shopping all afternoon with the assistance of a bilingual speaking guide. Leather, jewels, handicrafts, textiles, etc...

Cost: US\$ 16.00 (min. 4 participants)

AVT-CTG-1 CARTAGENA EMERALD COAST

Duration: 3 nights, 4 days
Minimum: 2 persons

- 1st day: Arrival Cartagena. Meeting, assistance and transfer to the hotel. Rest of the day at leisure.
- 2nd day: Breakfast. 3.5 hours morning tour of Cartagena. Visit of the Walled-in City, Wall of the Clock, Inquisition Palace, Coachmen's Square, San Felipe Fortress and Convent of La Popa. Afternoon at leisure. 20.00 hrs: transfer to one of Cartagena's finest restaurants for a gourmet delight.
- 3rd day: Breakfast 08:00 hrs. Transfer to the pier to take the boat for the tour of Rosario Islands. Lunch included.
- 4th day: Breakfast and transfer to the airport for departure.

Basis a five star hotel		15 persons minimum (group rates)	
Single basis:	US\$ 280.00	Single basis:	US\$ 250.00
Double basis:	US\$ 250.00 per person	Double basis:	US\$ 210.00 per person

General Information for Package Tours in Colombia

Prices include:

- First accommodation in double or single rooms with private bath and taxes included;
- American breakfast with service charges included;
- Lunch during the full day tours and excursions when mentioned in the programme. Full board in San Agustin, Leticia tours;
- All tours and excursions by private cars or motor-coach, bilingual speaking guides and admission fees;
- Transfers airport-hotel-airport and from piers. Porterage and transportation of two pieces of luggage per person.

Prices do not include:

- Air tickets and taxes;
- Airport taxes;
- Personal expenses at hotels and restaurants;
- Alcoholic beverages, laundry, telephone calls, meals not specified in the programme;
- Extra charges if caused by delays in plane schedules;
- Excess baggage.

Prices are subject to change without previous notice.

Please note that the deadline for reservation of Package Tours is **15 August 1989**.



TWAS Third General Conference

Please mark with a cross (X) your preference for the Post Conference Tour on 20 October 1989 and send to:

Ms. Fatima Sanchez
AVIATUR S.A.
Avenida 19 No. 4-62
Apartado Aéreo 3445
Bogotá, Colombia
Phone: (Int.+ 571) 282-7111
Telex: 044 701
Fax: (Int. + 571) 283-0141 or 284-1834

- Alternative 1
(AVT-B-01 City Tour Bogotá)
- Alternative 2
(AVT-B-02 Zipaquirá Underground Cathedral)

Number of seats required: No. ____

Please indicate full name(s) and address(es) of tour participant(s) on the blank space overleaf (please include telex/fax number).



The Third General Conference of the Third World Academy of Sciences (TWAS)

Hotel Tequendama

Bogotá, Colombia, 16 - 20 October 1989

- *General Information*
- *Tentative Programme*
- *Registration and Visa Forms*