

## **5.0 CAPACITY-BUILDING ACTIVITIES**

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## 5.0 CAPACITY-BUILDING ACTIVITIES

### 5.1 SCOR Committee on Capacity Building

*Ittekkot*

The 2006 SCOR meeting approved terms of reference for a SCOR Committee on Capacity Building, whose primary purposes are to oversee all of SCOR's capacity-building activities and to help the SCOR Secretariat manage these activities. The approved terms of reference follow:

- Provide direction for all of SCOR's existing capacity-building activities: participation of scientists from developing countries and countries with economies in transition in SCOR activities, POGO-SCOR Fellowship Program, travel grants, and provision of reports to libraries in developing countries.
- Guide and assist SCOR Executive Director in development of new capacity-building activities, particularly the Regional Graduate Schools of Oceanography activity.
- Assist SCOR-sponsored projects in developing their capacity-building activities.
- Help SCOR arrange funding for existing and new capacity-building activities.
- Assist SCOR in interacting with regional and international groups related to capacity building in ocean sciences, such as the ICSU regional centers, START, IOC regional programs, etc.

The membership of the committee was modified in mid-2011 to create a tighter linkage between the committee and the SCOR Executive Committee.

#### **Chair:**

Venu Ittekkot (Germany)

#### **Other Members:**

Sükrü Besiktepe (Turkey)

George Boehlert (USA and PICES)

John Compton (South Africa and SCOR Executive Committee)

Missy Feeley (USA and SCOR Executive Committee)

Ilana Wainer (Brazil and SCOR Executive Committee)

Jing Zhang (China and IMBER)

A subgroup of the committee can now meet in conjunction with annual SCOR meetings at little extra cost to SCOR, making it possible for any committee recommendations to SCOR to be acted on immediately.

The committee has convened two meetings of international organizations interested in ocean science capacity building in the past year. The first was held in Bremen, Germany in August 2010 (see [http://www.scor-int.org/Capacity\\_Building/Meeting\\_Report-Bremen.pdf](http://www.scor-int.org/Capacity_Building/Meeting_Report-Bremen.pdf) for report of the meeting). One of the recommendations that resulted from the Bremen meeting was that there should be a portal on the Web for ocean science summer school activities. The International Ocean Data and Information Exchange (IODE) of IOC offered to create such a portal, which can now be found at <http://www.oceansummerschools.org/>. The second meeting organized by the committee was held in April 2011 in Izmir, Turkey to focus on the Middle East/North Africa.

## 5.2 SCOR Visiting Scholars

*Ittekkot*

SCOR began a program in 2009 to enlist the services of ocean scientists from the SCOR community, from both developed countries and developing countries, both recently retired and active, to teach short courses and to provide more extended on-site education and mentorship at developing country institutions. Some countries and/or individual institutions have requirements for their scientists to retire at a given age, sometimes as early as 60 years of age. Many retired ocean scientists are still interested in teaching and mentoring, and are supported by pensions after their retirement, so do not need salary support. Some active scientists can also use some of their already-supported work time to work in a developing country.

Hosting visiting scientists, whether retired or active, can have many benefits to host institutions also, such as inspiring, motivating, and informing students and faculty, and leading to future collaborations between the visiting scientist and the host institution.

The idea of this program is to regularly send ocean scientists interested in short-term visits to developing countries. The program is a partnership, with the host institution providing local accommodation and SCOR finding resources to pay for airfares and other local expenses, as necessary. The participating scientists donate their time. The participating scientists might be onsite for as little as two weeks to as long as visa requirements would allow. Applicants may already have selected a host institution or SCOR will help identify hosts. Information about the program is available at [http://www.scor-int.org/SCOR\\_Visiting\\_Scholars.pdf](http://www.scor-int.org/SCOR_Visiting_Scholars.pdf). The call for applications for 2012 Visiting Scholars will be issued around 1 October 2012.

### SCOR Visiting Scholars (2009-2011)

| Year | Name            | Home Country        | Host Country | Dates            | Purpose                                       |
|------|-----------------|---------------------|--------------|------------------|---|
| 2009 | Paulo Relvas    | Portugal            | Guatemala    | 2-16 July        | Teach a course on Physical Oceanography       |
| 2010 | Vadim Mokievsky | Russia              | India        | Sept. 20-Oct. 20 | Conduct field and lab training on Meiobenthos |
| 2010 | Kurt Hanselmann | Switzerland         | Namibia      | Oct. 8-Nov. 7    | Teaching bio and chem oceanography            |
| 2011 | Ali Pourmand    | USA                 | Iran         | June 6 – July 12 | Help with paleo-oceanography workshop         |
| 2011 | Alice Newton    | Norway/<br>Portugal | Morocco      |                  | Teaching on coastal lagoons                   |

|      |                 |                   |         |                 |                             |
|------|-----------------|-------------------|---------|-----------------|-----------------------------|
| 2011 | Kurt Hanselmann | Switzerland       | Namibia | 15 Sept.-6 Nov. | Will build on 2010 visit    |
| 2011 | Scott Fowler    | France/<br>Monaco | India   | Late Autumn     | Teaching on ocean chemistry |

Four SCOR Visiting Scholars, Kurt Hanselmann (Switzerland), Ali Pourmand (USA), Alice Newton (Norway/Portugal), and Scott Fowler (France/Monaco) were selected in 2011. Hanselmann will spend 7 weeks teaching biological and chemical oceanography to undergraduates at the University of Namibia. Hanselmann provided a good assessment of the marine science capabilities in the institutions he visited in 2010 and will continue to help stimulate the development of graduate education in ocean sciences in Namibia. Ali Pourmand taught a course in Iran that covered fundamental concepts in paleoceanography and paleoclimatology and examples from the current state of knowledge in these fields. Following the course, a select group of students and scholars participated in a hands-on experience with sample collection and processing techniques along several transects across the Caspian Sea coastal areas. Alice Newton will help teach the postgraduate module on Coastal Lagoons in the context of a Master-level course at Universite Mohammed V-Agdal, Rabat, Morocco. The course will include collaboration from local scientists to include regional examples. A video link using Skype will be made available for students in other North African countries (Tunisia, Algeria and Egypt). Newton will also help develop a joint research plan and capacity building of early career scientists in North Africa and Middle East (MENA) who work on coastal lagoons. Scott Fowler will spend one month in India working with and mentoring scientists at the National Centre for Antarctic & Ocean Research. Plans are under development for Fowler to visit other institutions while in India.

### 5.3 Regional Graduate Schools of Oceanography and Marine Environmental Sciences (RGSO) *Urban*

Design principles for a regional graduate network of oceanography can be found at [http://www.scor-int.org/RGSO\\_Design\\_Principles.pdf](http://www.scor-int.org/RGSO_Design_Principles.pdf). The ideas have not yet been implemented, but the April 2011 meeting of ocean science organizations in Izmir, Turkey was partially designed to ascertain the interest of countries in the Middle East/North Africa region in this concept. Travel in the region is difficult at this time, but those participating were enthusiastic about the idea of working together in the region on graduate education.

**5.4 POGO-SCOR Visiting Fellowships for Oceanographic Observations *Urban***

This fellowship program continues to attract highly qualified applicants. A report of the results of the 2010 program follows.

**Report on the 2010 POGO-SCOR Fellowship Programme**

This year saw the ninth fellowship programme implemented using POGO funds with supplementary financial support from SCOR. The announcement posted a little later this year, in March, opened the competition for one month. Even so, this year saw a total of 21 applications, which was just a little under the number for the previous year. It is felt that the response was good considering the competition only being open for one month. Countries of origin of applicants included Argentina, Iran, India, Chile, China, Mexico, Egypt, Tunisia, Taiwan and Indonesia. SCOR provided full support for two of the fellows and partial support for a third.

The applications were screened independently by a committee of four, with representation from SCOR and POGO. In making their selection, the committee considered the following factors:

- quality of the application;
- relevance of the application to the priority areas identified in the fellowship announcement;
- evidence that the training will lead to improved sustained observations in the region, or improved applications of such data;
- evidence that the training would lead to capacity-building with potential lasting impact on regional observations, and
- the need to maximize regional distribution of the awards.

Thirteen fellowships were offered to oceanographers from developing countries and countries with economies in transition. The host institutions were located in Spain, the United States, UK, Germany, Japan, Canada and the Netherlands. One fellowship did not take place due to a last-minute withdrawal.

All the people involved in each fellowship (the fellowship holder, the supervisor at the parent institute and the supervisor at the host institute) were requested to submit short reports at the end of the training period. Eleven out of twelve trainee reports have been received to date, as well as seven host supervisor reports and five parent supervisor reports. They indicate that these exchanges should lead to effective capacity building at the host institute and facilitate longer term collaborations between the institutes concerned. All conclude that the program serves a useful purpose. One host report commented that a training period of one month was not sufficient to carry out experimental work.

There is tremendous interest in the fellowship programme at all levels, both in the oceanographic institutions of the developing nations, as well as among leading scientists who are eager to contribute to this initiative. It is seen to be filling a niche in capacity building through specialized training that is not filled by intensive courses or by participation in scientific meetings. It helps

improve the *esprit de corps* among oceanographic institutions around the world, and serves as a stepping stone to building collaborations.

### Demography of Fellowships

| Parent Institutions of Successful Candidates: |  |
|---|--|
| Argentina                                     | <ul style="list-style-type: none"> <li>• Centro Nacional Patagónico, (CENPAT-CONICET)</li> <li>• University of Buenos Aires</li> </ul>   |
| Chile   | <ul style="list-style-type: none"> <li>• University of Concepcion</li> <li>• Centro de Estudios Avancados en Zonas Aridas (CEAZA), Coquimbo</li> </ul>   |
| China   | <ul style="list-style-type: none"> <li>• Yantai Institute of Coastal Zone Research, Chinese Academy of Sciences,</li> <li>• Dept of Oceanography, Xiamen University</li> </ul>   |
| Czech Rep                                     | <ul style="list-style-type: none"> <li>• Institute of Microbiology, Trebon</li> </ul>  |
| India   | <ul style="list-style-type: none"> <li>• Department of Marine Sciences, National Institute of Oceanography, Goa - withdrawn</li> <li>• INCOIS, Hyderabad</li> </ul>  |
| Indonesia                                     | <ul style="list-style-type: none"> <li>• IMRO, Bali</li> </ul>   |
| Iran  | <ul style="list-style-type: none"> <li>• University of Tehran</li> </ul>   |
| Mexico  | <ul style="list-style-type: none"> <li>• Centro de Investigación Científica y de Educación Superior de Ensenada (CICESE), Baja California</li> </ul>   |
| Host Institutions:                            |  |
| Canada  | <ul style="list-style-type: none"> <li>• Institute of Ocean Sciences, Fisheries &amp; Oceans</li> </ul>  |
| Germany                                       | <ul style="list-style-type: none"> <li>• Coastal Research Laboratory, University of Kiel</li> </ul>  |
| Japan   | <ul style="list-style-type: none"> <li>• Lab. of Marine Bio Resource &amp; Environ. Sensing, Hokkaido University</li> <li>• Dept of Physics &amp; Earth Sciences, University of the Ryukyus</li> </ul>   |
| Netherlands                                   | <ul style="list-style-type: none"> <li>• Department of Marine Microbiology, University of Amsterdam</li> </ul>   |
| Spain   | <ul style="list-style-type: none"> <li>• Centro Tecnológico del Mar-Fundación (CETMAR)</li> </ul>  |
| UK  | <ul style="list-style-type: none"> <li>• Plymouth Marine Laboratory</li> <li>• Dept Pure &amp; Applied Ecology, Institute of Environmental Sustainability, Swansea University</li> </ul>   |
| USA   | <ul style="list-style-type: none"> <li>• Woods Hole Oceanographic Institute, Massachusetts</li> <li>• College of Oceanic &amp; Atmospheric Sciences, Oregon State University Department of Marine Sciences, University of Connecticut</li> <li>• National Oceanographic Data Centre, Maryland</li> </ul> |

### 5.5 NSF Travel Support for Developing Country Scientists

SCOR has received support from the U.S. National Science Foundation (NSF) since 1984 to provide funding for an important SCOR activity in the area of capacity building. Travel grants are awarded to ocean scientists from developing countries and the former Soviet Union, Eastern Europe, and other countries with economies in transition, to enable them to attend international scientific meetings. A new three-year grant began on 15 July 2011, running until 14 July 2014.

The amount of the award from NSF is \$75,000 per year. Recipients of SCOR travel awards are always chosen in consultation with the organizers of meetings that SCOR has agreed to

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cosponsor; direct applications from individuals are not accepted by the SCOR Secretariat. Priority is given to applicants who are presenting a paper or poster at the meeting or to those who have some special expertise or regional knowledge to bring to a workshop or working group. Preference is also given to younger scientists. In general, care is taken to ensure that the recipients of SCOR/NSF funds are *active* scientists, and that they have not received similar support from SCOR in the previous two years. All travel grant recipients are informed that their support comes from SCOR and that it is made possible through NSF funding.

Since 2001, a portion of total funding has been provided for longer-term courses or fellowships, such as the POGO-IOC-SCOR Visiting Fellowships for Oceanographic Observations, and another portion is used for the SCOR Visiting Scholar program.

Some of the requests listed below are for meetings in which SCOR is directly involved in planning, so there is no formal written request. \$37,500 can be committed for each 6-month period. Requests come in throughout the year and the SCOR Committee on Capacity Building considers new requests between meetings. The following requests have been approved since the 2010 SCOR annual meeting:

|   |                      |                      |          |
|---|----------------------|----------------------|----------|
| First Workshop of the Global Alliance of CPR Surveys (GACS) | Plymouth, UK         | 20-21 September 2011 | US\$5000 |
| Land-Ocean-Atmosphere interactions in the Changing World    | Vistula Spit, Russia | 5-10 September 2011  | US\$5000 |
| IOC/PICES/ICES Climate Conference                           | Yeosu, Korea         | 15-19 May 2012       | US\$5000 |
| GEOTRACES Cruises   | Various              | Various              | US\$5000 |

## 2011/2012 Requests for Travel Grants

The SCOR Committee on Capacity Building will recommend amounts to devote to each of these meetings, based on amount requested (if specified), other grants to the same project/organization, the relevance of the project/organization to SCOR activities, and total amount available to disburse. The recommendations will be presented at the meeting.

### **Request #1**

#### Third Symposium on The Ocean in a High-CO<sub>2</sub> World—Monterey, California, USA—24-27 September 2012

The U.S. NSF grant to SCOR for this activity includes \$40,000 for travel support for early-career scientists, some of whom might be from developing countries. Since this support will be limited to scientists within 5 years of receiving their graduate degree, we request travel support for scientists from developing countries and countries with economies in transition who might be somewhat older.

**Request #2**

39th COSPAR Scientific Assembly—Mysore, India—14-22 July 2012

See pdf file following.

**Request #3**

Third IMBER Summer School—Ankara, Turkey—August 2012

IMBER requests SCOR Developing Country Travel Funds to assist scientists from developing countries to attend the third IMBER Summer School that will be held in Ankara, Turkey in August 2012.

**Request #4**

2012 SOLAS Open Science Meeting—Washington State, USA—7-10 May 2012

See pdf file following.

**Request #5**

2012 SCOR Visiting Scholars

The SCOR Committee on Capacity Building recommends that SCOR continue to attempt to fund three SCOR Visiting Scholars per year, at an average amount of \$2500 each, for air travel and local expenses, as needed.

**Request #6**

2012 PICES Annual Meeting

Travel support at a level of US\$5,000–7,500 is requested for scientists from countries with “economies in transition” from the Pacific Rim to attend SCOR-relevant sessions/workshops at the 2012 PICES Annual Meeting to be held October 12–21, 2012, in Hiroshima, Japan, under the theme “*Effects of natural and anthropogenic stressors in North Pacific ecosystems: Scientific challenges and possible solutions*”. The scientific program for this event will be finalized in October at PICES-2011. From Section 6.4.





President: Prof. G.F. Bignami  
Executive Director: Dr. J.-L. Fellous

c/o CNES, 2 place Maurice Quentin, 75039 Paris Cedex 01, France ● Tel: +33 (0)1 44.76.75.10  
Fax: +33 (0)1 44.76.74.37 ● cospar@cosparhq.cnes.fr ● http://cosparhq.cnes.fr

Dr. Edward Urban  
Executive Director  
Scientific Committee on Oceanic Research (SCOR)  
University of Delaware  
College of Marine & Earth Studies  
Robinson Hall Newark, DE 19716, USA

8 June 2011

Ref: 29.70

Dear Dr. Urban,

The 39th COSPAR Scientific Assembly and Associated Events will be held in Mysore, India, 14 - 22 July 2012. Attached you will find a list of meetings to be organized in the context of the Assembly, many of which will be of interest to **SCOR**. Your organization has sponsored the scientific program of the COSPAR Assembly in previous years, and it is my pleasure to invite **SCOR** to become one of the many organizations sponsoring this major event in 2012.

Furthermore, COSPAR will receive many requests for support from scientists hoping to participate in the Assembly, especially from young researchers and scientists in countries with limited resources. Our community would be most grateful if **SCOR** would consider making a contribution toward meeting these requests. Given the limited funds currently at the Committee's disposal, I would like to stress that even a modest sum would be appreciated. In order to allocate funds as equitably and efficiently as possible, we prefer that financial support be without specific constraints. We plan to allocate at least 50% of available funds to young scientists but will, of course, respect wishes of sponsors providing financial support. Please do make clear in your response any restrictions which may apply to the allocation of funds offered.

All sponsors of the scientific program will be listed in Assembly documentation and reports. Sponsoring organizations which provide financial support will be specially acknowledged.

In order to assist the greatest number of scientists possible, I request that you please send the responses, positive or negative, concerning sponsorship and available support to the COSPAR Secretariat at your earliest convenience and by 16 December 2011 at the latest.

Your consideration of involvement in the scientific program of COSPAR is appreciated. For greater visibility and involvement in the Assembly, please do not hesitate to contact us about general sponsorship possibilities.

Yours sincerely,

Prof. G.F. Bignami  
COSPAR President

enc. scientific event list



39th COSPAR Scientific Assembly and Associated Events:  
14 - 22 July 2012, Mysore, India  
<http://www.cospar-assembly.org>  
Chair, COSPAR Scientific Program Committee:  
Prof. U.R. Rao  
Department of Space, Antariksh Bhavan  
New BEL Road, Bangalore - 560 231, India  
[urao.isro@hotmail.com](mailto:urao.isro@hotmail.com)

Dr Ed Urban  
Executive Officer  
Scientific Committee on Oceanic Research  
College of Earth, Ocean, and Environment  
Robinson Hall  
University of Delaware  
Newark, DE 19716 USA

13 July 2011

Dear Ed,

The Surface Ocean- Lower Atmosphere Study (SOLAS) will be holding its next Open Science Conference (OSC) in Washington State, USA, 7-10 May 2012 ([www.solas-int.org/osc2012](http://www.solas-int.org/osc2012)).

This OSC will have a format similar to that of the previous SOLAS conferences in Halifax Canada, Xiamen China and Barcelona Spain with oral presentations from leading scientists in the field of SOLAS, sustained poster presentations by the majority of conference attendees with ample time for networking, and afternoon discussion fora on topics of future importance to the project. This time though a new feature will be implemented, one third of the speakers will be chosen by review process from the poster abstracts submitted.

SOLAS feels strongly that this conference program is most constructive for moving the science forward, for the development of the next generation of SOLAS researchers and for bringing together the U.S. SOLAS community.

With this in mind, SOLAS kindly requests support from SCOR to cover the travel costs for scientists and students from nations with economies in transition. We expect that a contribution of \$10k will partially support the participation of from 4-8 scientists and students.

I thank SCOR for their continued support of SOLAS and for your consideration in this matter.

Yours sincerely



Dr. Emilie Brévière  
Executive Officer, SOLAS  
International Project Office

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## 5.6 SCOR Reports to Developing Country Libraries

Three reports were sent to developing country libraries since the 2010 General Meeting:

1. *The Birth and First Years of the Scientific Committee on Oceanic Research (SCOR)*
2. *Harmful Algal Blooms in Asia: A Regional Comparative Program*
3. *GEOHAB Core Research Project: HABs in Fjords and Coastal Embayments*

### SCOR List of Developing Country/Country in Transition Libraries

|               |   |
|---------------|---|
| Argentina     | Universidad Nacional del Sur<br>Bahía Blanca, Argentina   |
| Bangladesh    | Library<br>SPARSO<br>Dhaka, Bangladesh  |
| Brazil        | FURG<br>Departamento de Oceanografia<br>Rio Grande, Brazil<br><br>Instituto Oceanográfico<br>Universidade de São Paulo<br>São Paulo, Brazil<br><br>Dept. of Oceanography and Hydrology<br>University of the State of Rio de Janeiro |
| Bulgaria      | State Fisheries Inspectorate (SFI) Fisheries and Aquaculture Department<br>Sofia, Bulgaria  |
| Chile         | Departamento de Oceanografia<br>Universidad de Concepción<br>Concepción, Chile<br><br>Servicio Hidrografico y Oceanografico<br>Valparaiso, Chile  |
| China-Beijing | Library of Ocean University of Qingdao<br>Qingdao, China<br><br>Institute of Oceanology<br>Chinese Academy of Sciences<br>Qingdao, China<br><br>Second Institute of Oceanography<br>State Oceanic Administration<br>Hangzhou, China |
| Croatia       | Rudjer Boskovic Institute<br>Zagreb, Croatia  |
| Cote d'Ivoire | Centre de Recherches Oceanologiques (CRO)<br>Abidjan, Côte d'Ivoire   |

|             |   |
|-------------|---|
| Cuba        | Centro de Investigaciones Pesqueras (CIP)<br>Ministerio de la Industria Pesquera (MIP)<br>Habana, Cuba                            |
| Egypt       | National Institute of Oceanography and Fisheries<br>Cairo, Egypt  |
| Fiji        | Pacific Islands Marine Resources Information System (PIMRIS)<br>The University of the South Pacific<br>Suva, Fiji Islands         |
| Ghana       | Institute of Aquatic Biology<br>Achimota, Ghana   |
| India       | National Institute of Oceanography<br>Goa, India<br><br>Physical Research Laboratory<br>Ahmedabad, India                          |
| Indonesia   | Centre for Oceanology<br>Indonesian Institute of Sciences<br>Jakarta, Indonesia   |
| Kenya       | Kenya Marine and Fisheries Research Institute (KMFRI)<br>Mombasa, Kenya   |
| Malaysia    | ICLARM - The World Fish Center<br>Penang, Malaysia  |
| Mexico      | Universidad Nacional Autónoma de México (UNAM)<br>México, D.F., México<br><br>Biblioteca CICESE<br>Ensenada, Mexico               |
| Morocco     | Institut National de Recherche Halieutique (INRH)<br>Casablanca, Morocco  |
| Namibia     | Library of the Sam Nujoma Marine and Coastal Resources Research Centre (SANUMARC)<br>University of Namibia<br>Henties Bay NAMIBIA |
| Pakistan    | National Institute of Oceanography<br>Karachi, Pakistan   |
| Peru        | Instituto del Mar del Perú (IMARPE)<br>Callao, Peru   |
| Poland      | Institute of Oceanology<br>Polish Academy of Sciences<br>Sopot, Poland  |
| Philippines | College of Science, University of the Philippines<br>Quezon City, Philippines   |
| Romania     | Romanian Marine Research Institute<br>Constanta, Romania  |
| Russia      | P.P. Shirshov Inst. of Oceanology<br>Russian Academy of Sciences<br>Moscow, Russia  |

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|              |   |
|--------------|---|
|              | All Union Research Inst. of Fisheries and Oceanography V<br>Moscow, Russia  |
| South Africa | University of Cape Town<br>Cape Town, South Africa  |
| Thailand     | Dept. of Marine Sciences<br>Chulalongkorn University<br>Bangkok, Thailand   |
| Tunisia      | Institut National des Sciences et Technologies de la Mer (INSTM)<br>Salammbô, Tunisia   |
| Turkey       | Institute of Marine Sciences<br>Middle East Technical University<br>Icel, Turkey  |
| Ukraine      | Southern Scientific Research Institute of Marine Fisheries and<br>Oceanography (YugNIRO)<br>Laboratory of Pacific and Indian Oceans Fish Resources and Fishery<br>Statistics<br>Crimea, Ukraine<br><br>Marine Hydrophysical Institute<br>Ukrainian Academy of Sciences<br>Sevastopol, Ukraine |
| Vietnam      | National Institute of Oceanography<br>Nha Trang, Vietnam  |