Recommendation Implementation Analysis

TELECOM Development Symposium

ITU TELECOM ASIA 2000
Hong Kong
4-9 December

Acknowledgements

This report was prepared by Cap Gemini Ernst & Young, under the supervision of Mr Fernando Lagraña, Vice-President and Head of the Forum Division, ITU TELECOM.

Our special thanks and appreciation go to those ITU Member States that supported the project by responding to the survey questionnaires. Without their comprehensive input, the report would not have been possible in its present form.

Our thanks also go to Messrs Patrick Nicolet, Serge Messin and Xavier Logean of Cap Gemini Ernst & Young who wrote the report, and to Messrs Fernando Lagraña, Pierre Gagné, Hans Pieterse and Mrs Tsehai Bekele of ITU, for their comments, proposals, reviews and management of the project.

The views expressed in the report are those of the authors and do not necessarily reflect the opinions of ITU or its membership.

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I Introduction

Asia has one of the fastest growing and most dynamic info-communication markets in the world and has become the focus of attention for the global industry. Technological innovation, new services and rising business and consumer expectations in the region represent key challenges to the future evolution of policy and regulatory frameworks.

ITU TELECOM brings together the most influential representatives of government and the telecommunication industry for the exchange of ideas, knowledge and technology for the benefit of the global community, and in particular the developing world.

The ITU TELECOM Forum is the only global event of its scale bringing together high-ranking representatives from industry and government to discuss and shape the future of the telecommunication industry. CEOs, government ministers, policy makers, regulators, financiers and technical specialists will use the Forum at ITU TELECOM ASIA 2000 to define what is possible and what must be done in real terms to accelerate the development of the telecommunication industry in the Asia-Pacific region.

For ITU TELECOM ASIA 2000, as for ITU TELECOM 99 and ITU TELECOM AMERICAS 2000, a survey based on the TDS recommendations was sent out to 50 countries. Over one-third responded and communicated their results. The answers were analysed with the support of Cap Gemini Ernst & Young. It should be noted that it was the first survey incorporating expectations of the Fellows.

The main purpose of this report is to evaluate how the various Member States perceive the evolution of the issues that were addressed during the last Forum, and to gather their expectations. This report is not intended to present policies or strategies, but to provide valuable input to the participants of future TDS.

Fernando Lagraña
Vice-President, ITU TELECOM, and
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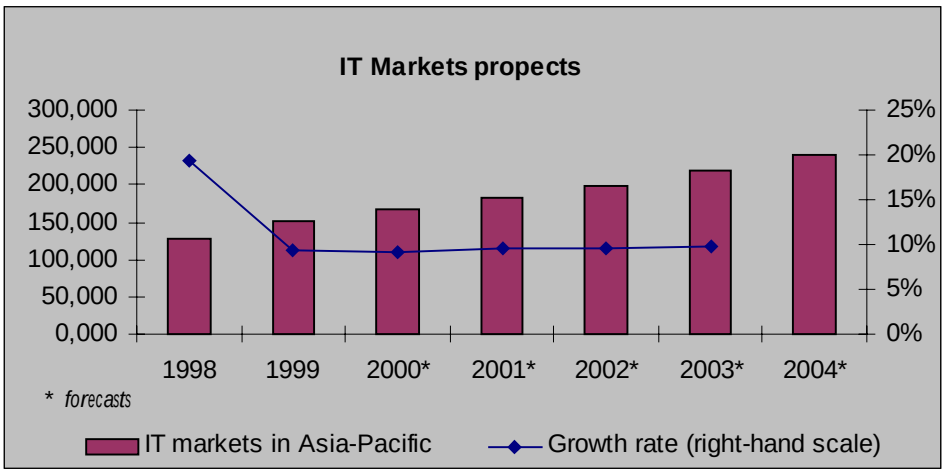
II Developing countries and the Information Society

1 Introduction

As in many other parts of the world, the telecommunication and IT markets in Asia are on the verge of becoming a major source of economic growth.

The chart below shows the actual and expected size of the IT markets in the Asia-Pacific region.



Graph 1 – IT Markets in Asia-Pacific, 1998-2004
(in US$ millions and per cent)[1]

In this context, the Internet will play a particularly important role. As illustrated in the graph below, the growth rate of the total number of Internet users in the Asia-Pacific region is unlikely to drop below 20 per cent a year before 2004.

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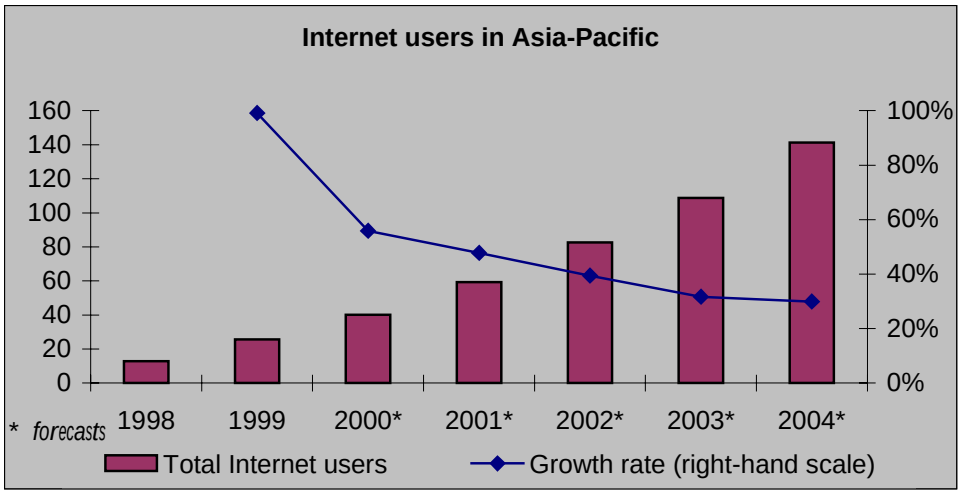
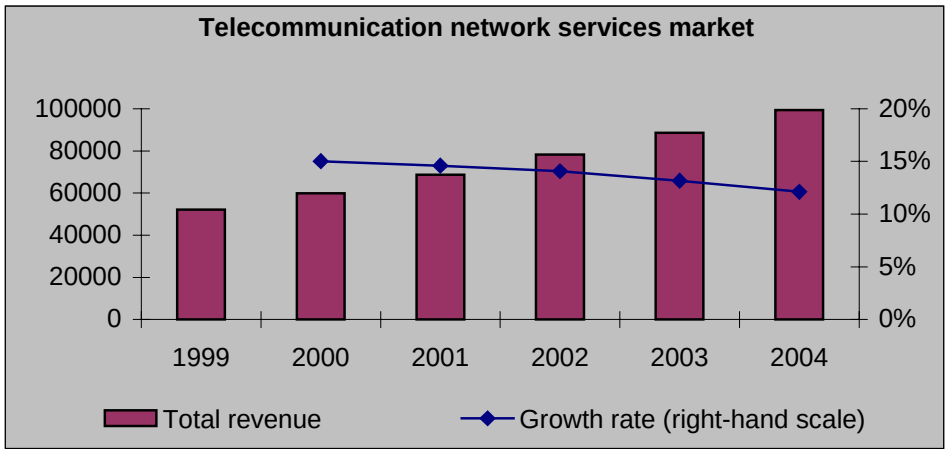
1 *Asia Pacific Black Book*, June 2000, IDC.



Graph 2 – Asia-Pacific Internet users, 1998-2004 (in millions and per cent)[2]

This development will yield high revenues. The revenues from the telecommunication network services market (such as voice telephony services, leased lines, PSTN, etc.) are expected to grow at an average rate of 13.8 per cent a year, between 1999 and 2000:



Graph 3 – Asia-Pacific Telecommunication network services market, 1999-2004 revenue (in US$ millions) and percentage change[3]

The stakes of these developments are high: the rise of the Information Society in developing countries and increasing revenues from the telecommunication market will potentially benefit to everyone.

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2 *Source: The Internet Market in Asia/Pacific (excluding Japan), 1998 to 2004*, 2000, IDC.

3 *Source: Asia/Pacific Telecom Network Services Market 1999-2004*, 2000, IDC.

There are, however, many questions that arise and that all Member States should be aware of. How will the wealth generated by the new technologies be distributed among citizens? Will the inequalities increase and will societies be divided into the *information rich* and the *information poor*? Is there scope for telecommunication development in rural or poor regions? How will countries with a rapidly increasing population deal with access to the Internet for all? Can new technologies be introduced in areas where more basic needs have to be met? Can they help in developing these areas? Are there sufficient human and financial resources to keep up with fast-changing technologies and to maintain the actual rate of expansion of telecommunications?

The road to the Information Society is not straight and it raises many economic, social, cultural and political concerns. ITU has a role to play in answering and solving some of these problems, notably by organizing regular forums.

The following report is aimed at evaluating this role and also at evaluating how the recommendations from ITU are implemented. It is based on a questionnaire sent to Member States.

The report first analyses the implementation of the recommendations adopted at TELECOM 95 and TELECOM INTERACTIVE 97. This section tries to assess how the development of the Information Society in developing countries has been encouraged.

Next, the implementation of the recommendations made at ITU TELECOM ASIA 2000 97 on network interconnectivity, services and technical issues is analysed. In particular, the development of a model framework for interconnection is examined.

In the last two sections, the role played by ITU is assessed and the Fellows express their expectations from the next ASIA 2000 Forum.

Some parts of the report are based on questions that have already been included in previous surveys (ITU TELECOM AMERICAS 2000 and TELECOM 99). When available and informative, comparisons have been added to the analysis.

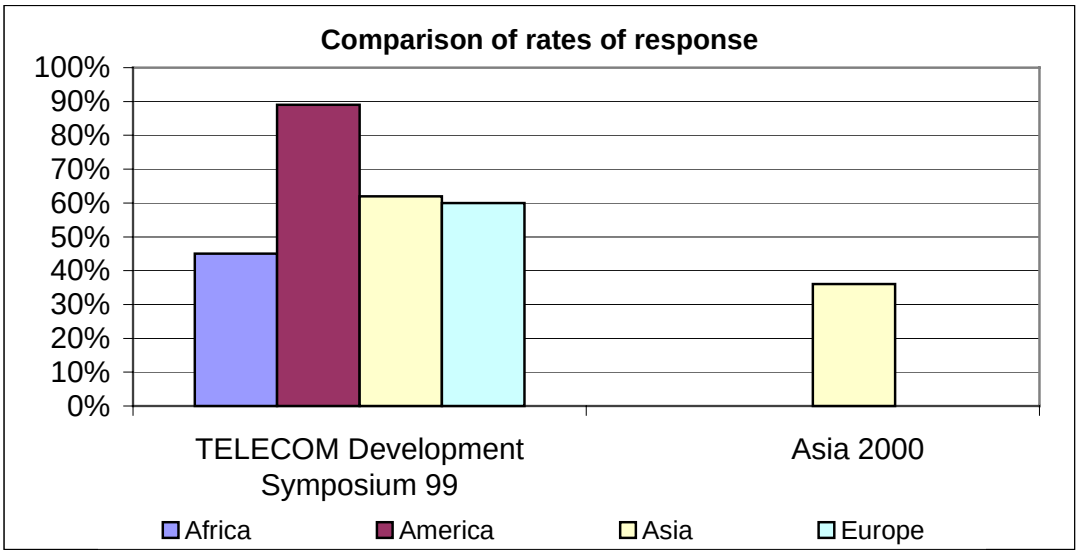
In 1997, the ASIA TELECOM Development Symposium (TDS) took place in Singapore. The cycle is now complete and ITU sought the assessment of the Member States about the progress made by ITU's Member States in implementing the various recommendations of Working Groups.

To that end, ITU sent questionnaires to the 50 Asian countries invited to nominate Fellows to attend and participate at ITU TELECOM ASIA 2000, in Hong Kong, 4-9 December 2000. Out of all 50 questionnaires dispatched, 18 were returned. The rate of response is thus 36%.

This low rate is problematic in two respects. First of all, 18 observations are not enough to have a sufficiently low margin of error, without which inferences from the data are likely to be spurious. The other problem arising is that 64% of the 50 countries have not answered. There are certainly causes underlying this fact, and they should be accounted for. But taking these into account would seriously hamper the ease of the analysis and make the report most cumbersome.

This report should thus be read with these two caveats in mind and all the results should be interpreted carefully.

A similar survey was sent to countries before the TELECOM Development Symposium 99 in Geneva, which did not concentrate on any particular region or continent. This provides us with a basis for comparing the rate of response of the two surveys. The average rate of response in 1999 was 55%. This year, the Asian countries' rate of response was lower than this average: it dropped between 1999 and 2000 from slightly above 60% to 36%.



Graph 4 – Percentage of responses by regions

2 Results of the survey

2.1 Overview

At TELECOM 95 and INTERACTIVE TELECOM 97, the following recommendations were passed:

1) Reduce the costs of set-ups, of equipment and of tariffs for end users;

2) Promote the use of the Internet by creating new value;

3) Collaborate with neighbours in order to take advantage of synergies.

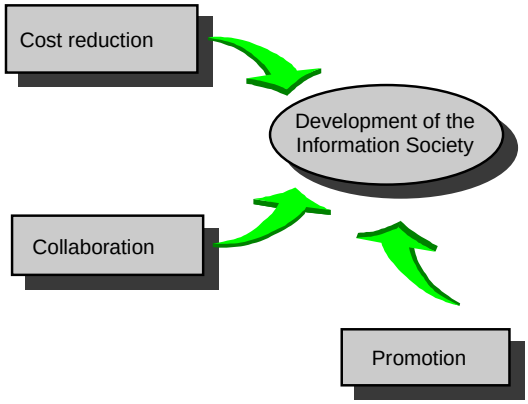


Figure 1 – Recommendation for the development of the Information Society

2.2 Consolidated results of the survey

The overall results of the survey are presented in the table below. The percentage indicates the proportion of countries that have chosen at least the combination of initiatives that is designated in the column above.

Table 1 – Overview of chosen approaches

	1 initiative			2 initiatives			3 initiatives
Cost-reduction programmes	✓			✓	✓		✓
Promotion		✓		✓		✓	✓
Collaboration with neighbours			✓		✓	✓	✓
% of countries having chosen specific option(s)	82%	65%	53%	65%	47%	42%	42%

2.3 Recommendations aimed at reducing costs

Objectives

It was recommended that countries consider lowering costs by using existing infrastructures, website cacheing, using off-line services and applying new satellite technologies (such as LEOs). It was also recommended that taxes and duty on equipment imports be cut, and usage tariffs be reduced in order to boost demand.

Evaluation of this recommendation is based on:

i) efficient use of existing technology;

ii) reduction of taxes and duties on equipment imports; and

iii) tariff reductions.

One recommendation advocated that Internet tariff structures should be cost-based, in order to avoid both extremes – high tariffs that would restrain network usage and low tariffs that would not yield sufficient revenue to allow new investment in infrastructure.

Results of the survey

According to the survey, 82% of the countries followed the recommendations to lower costs by using existing infrastructures, website cacheing, using off-line services, applying new satellite technologies, cutting taxes and duty on equipment imports, and reducing usage tariffs in order to boost demand.

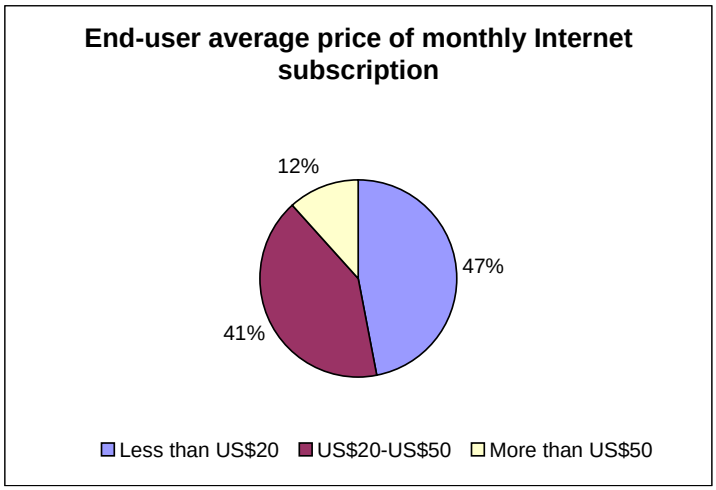
Different cost-reduction methods have been implemented, as shown in the following table:

Table 2 – Cost-reduction methods

Efficient use of existing technology	57%
Cutting taxes and duties on equipment imports	43%
Reducing tariffs	64%

Comments

The end-user monthly average price for an Internet subscription is one of the key factors for the expansion and development of access to the Internet. The results of the survey show that in roughly 88% of the countries the price is lower than 50 US dollars, and that in 47% of the cases it is lower than 20 US dollars, as illustrated in the following graph:

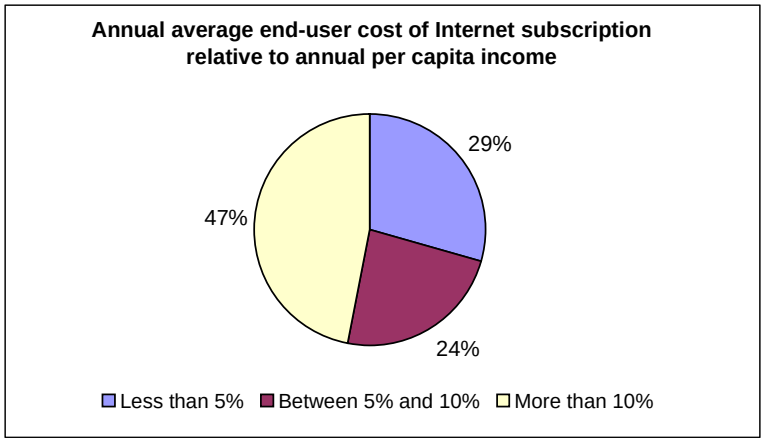


Graph 5 – Average price of Internet subscription

This measure of cost is, however, not accurate *per se*. Indeed, purchasing power amongst countries may differ substantially. As an alternative measure (which highlights *effective* cost), the end-user average price of an annual Internet subscription is compared to the annual *per capita* income in US dollars, the conversion being computed at purchasing power parity[4] (PPP). This gives the expenditure of the annual end-user cost of the Internet as a percentage of his annual income. This method changes the perspective dramatically. For instance, a user in a country with a cost higher than 50 US dollars spends between 2 and 7 per cent of his income for the Internet,

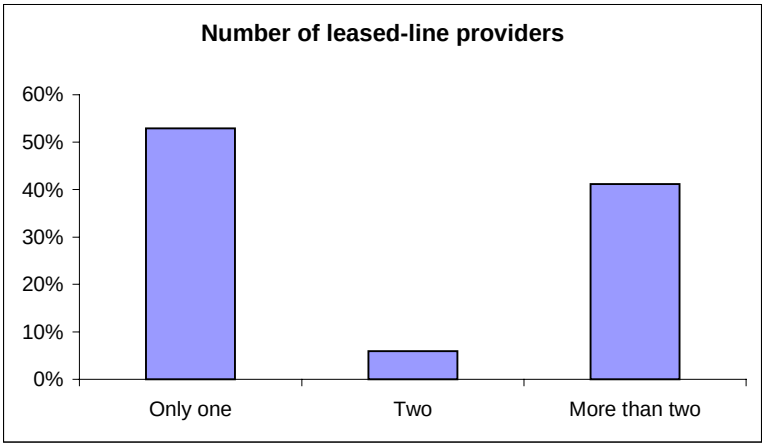
4 *Source:* World Factbook, CIA, www.cia.gov.

whereas a user in another country confronted with a cost lower than 20 US dollars (and hence seemingly better off than his fellow user) spends in fact more than 20 per cent of his annual income. These results are summarized in the following graph:



Graph 6 – Adjusted average cost of Internet

The number of competitors in the market, especially that of leased lines, can be regarded as another key factor of cost reduction. It is generally believed that competition among many players drives access prices down and leads to better quality. Nonetheless, 53% of the countries still have only one provider of leased lines, although 65% of them want to create a competitive market for leased-lines services. In 88% of the countries that have more than one provider, some of the latter own infrastructure, and 25% of the countries all resell capacity to the incumbent. There is not enough information up to now to allow an assessment of the market structure's evolution, but further surveys will surely give the needed data. The graph below summarizes these results:



Graph 7 – Number of leased-line providers

In comparison with the survey presented at ITU TELECOM AMERICAS 2000, more countries in the Middle East and Asia have applied the recommendations than have countries in America. For instance, the recommendation of efficient use of existing technology has been applied by only 6% of the American countries surveyed.

Another comparison can be drawn from the *Recommendations Implementation Analysis* presented at TELECOM 99. The survey on which this analysis is based covers not only Asia, but all continents.

The table below summarizes the degree of implementation of the cost-reduction recommendation. It appears that the rate in the Asian countries surveyed for the present report (82%) is higher than that of Asian countries as displayed in the table (62.5%), which could denote a progress (beware that the countries that answered may not be the same for each survey). In both cases, the actual degree of implementation in Asia is the highest.

Table 3 – Implementation of the recommendation aimed at reducing costs, by region

	Africa	Americas	Asia/Oceania	Europe	Total
Recommendation application	71%	33%	63%	33%	58%

With regard to particular methods of cost reduction, the efficient use of technologies is more widely applied in Asia now than at the time of the older survey (TELECOM 99), bearing in mind naturally that the countries surveyed may not be the same. The present rate of 57% is higher than the average (33%) as well as above that of the other continents (except Europe), as shown in Table 4:

Table 4 – Efficient use of existing technologies as an Internet-promotion method, by region

Internet usage promotion method	Africa	Americas	Asia/Oceania	Europe	Total
Efficient use of existing technologies	37%	0%	30%	100%	33%

2.4 Recommendations aimed at generating new value for promotion of the Internet

Objectives

One recommendation suggested that the Internet is not an end in itself and that the objective is not to create content but to create value.

The following key criteria are used for the evaluation:

- Creation of a competitive market for Internet service provision
- Creation of a competitive market for the provision of leased-line services

- Encouragement of favourable tariff strategies in the public telephone network
- Promotion of applications (e.g. virtual e-mail addresses for all students)
- Use of government/academic procurement to prime the Internet backbone network
- Collaboration with neighbours to establish regional Internet hubs
- Encouraging the creation of local content.

Results of the Survey

All the countries that answered the questionnaire provide access to the Internet. Different activities have been key components of the Internet development and promotion process:

Table 5 – Key components of the Internet development and promotion process

Create a competitive market for Internet service provision	83%
Create a competitive market for the provision of leased-line services	47%
Encourage favourable tariff strategies in the public telephone network	65%
Promote applications	59%
Use government/academic procurement to prime the Internet backbone network	53%
Collaborate with neighbours	35%
Encourage the creation of local content	59%
Others	18%

Comments

In 65% of the countries, governments have taken the lead in promoting connectivity and use of the Internet. Many schemes have been developed by these governments to promote the Internet directly, such as multipurpose telecom centres, encouragement of cyber-parks and e-government, connection of government agencies to the Internet for eased access to information and policies, as well as the installation of Internet-compatible telephone lines in all, even the remotest, villages.

However, there are still 35% of the countries in which governments have not taken the lead in promoting the Internet. Among those countries is the richest of the survey (in terms of *per capita* GDP in US$ at purchasing power parity). If we exclude it and compute the average *per capita* GDP in the remaining countries, we find that it does not exceed 1500 US dollars, whereas, for the other 65%, it is slightly above 5200 US dollars. Financial and budgetary considerations may thus lie behind this absence of official promotion of the Internet.

65% of the countries commented on the main barriers to their Internet development process, which can be grouped in three broad categories:

- *Financial barriers*: these include most notably high cost of leased lines, high ICAIS, high cost of computers and equipment relative to household income. 29% of the countries that commented on the barriers claimed to be confronted with such barriers.

- *Technological barriers*: the main obstacles are lack of adequate human resources, inadequate infrastructure for customer demand and international technology standards, language barriers and low connection speeds. 47% of these countries claim to be confronted with such barriers.

- *Market structure barriers*: these include mainly low usage and penetration of computers in the domestic arena, small customer base and high communication costs for people in remote areas. 24% of these countries claim to be confronted with such barriers.

2.5 Recommendations aimed at increasing collaboration with neighbours

Objectives

It was recommended that collaboration between neighbouring countries within sub-regions and regions should be expanded. The use of regional Internet societies, associations and conferences should be promoted. The recommendation also suggested that small countries may achieve economies of scale by uniting efforts with neighbouring countries in order to constitute a more attractive market to equipment vendors. Also, within a given country, a similar economy of scale could be achieved by negotiating multi-annual contracts with potential suppliers.

There are various facets to the application of this proposal – the use of regional Internet societies, associations and conferences (44% of the countries that have tried collaboration); uniting efforts with neighbouring countries (also 44%); and multi-annual contracts with suppliers (11%).

Result of the survey

% of the countries collaborating with neighbours by uniting efforts	53%

Comments

Lack of coordination and communication between countries, differences in market needs and states of economic development seem to be the main barriers to international collaboration, although only but a few countries expressed any difficulties at all. In particular, when it comes to uniting efforts with neighbours in order to benefit from economies of scale by providing a more attractive market for vendors, the differences in the needs of each country are regarded as an important obstacle.

It appears from the results that Asian countries tend to collaborate with neighbouring countries more than their American counterparts. Indeed, 22% of the latter have united efforts with their neighbours.

3 Summary

Figure 2 presents an overview of all recommendations:

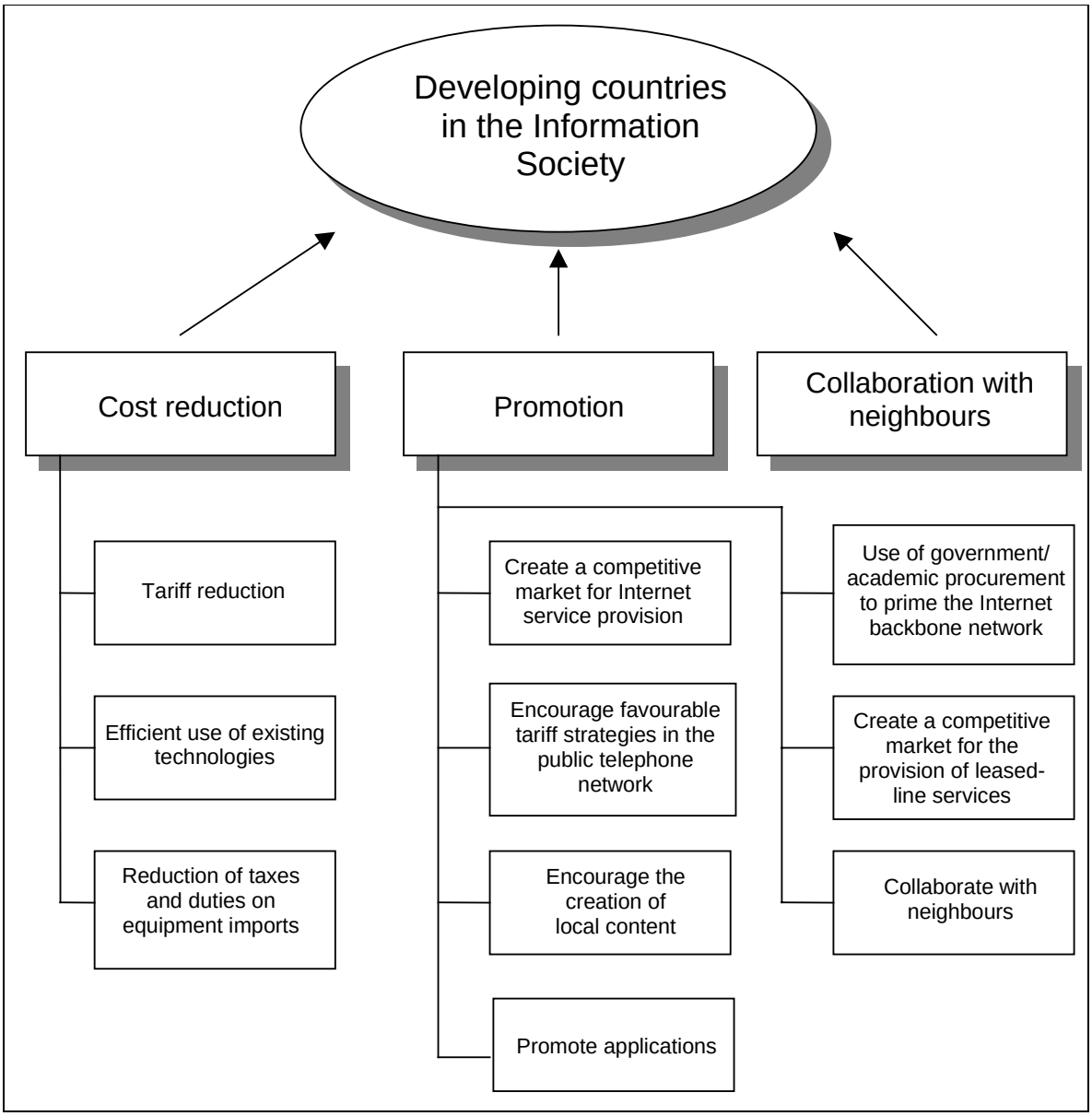
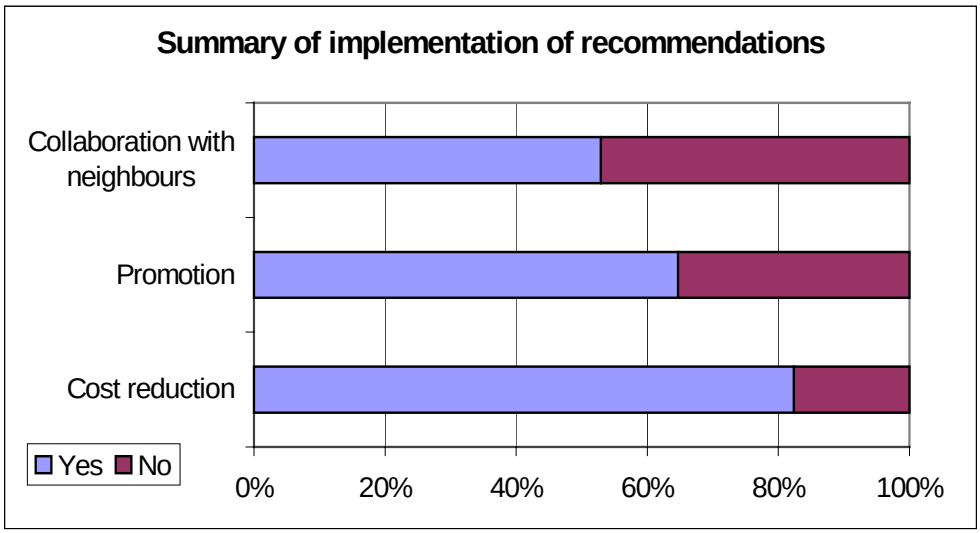


Figure 2 – Summary of the recommendations for the development of the Internet

The following graph summarizes the implementation of the three methods recommended for the development of telecommunications in developing countries.



Graph 8 – Overall implemetation of the recommendations aimed at promoting the Information Society

It should be noted that 12% of the countries have not implemented any of the three recommendations. Compared to the results published at ITU TELECOM AMERICAS 2000, the rate of collaboration is higher between Asian countries than between Member States of the Americas (53% against 19%), while promotion of the Internet is implemented in all American countries and only partially for Asian countries (100% against 65%). As for the implementation of cost-reduction programmes, the rates of implementation are comparable (82% in Asia, 61% in the Americas).

III Network interconnectivity, services and technical issues

1 Results of the survey

1.1 Overview

The aim of this section of the survey is to assess whether countries have applied the recommendations dealing with interconnectivity and information-sharing.

1.2 Recommendations aimed at developing a model framework for interconnection

Objectives

It was recommended at ITU TELECOM ASIA 97 to develop a model framework for interconnection for both voice and non-voice services, which should include data and multimedia. Fixed, mobile and interactive applications should be considered as well.

Results of the survey

Countries were asked whether they had developed or invested in such a framework, as described above. The results are summarized in the table below:

Table 6 – States of the development of model frameworks

Percentage of countries having developed a framework	40%
Percentage of countries planning to develop such a framework (all within a year or two)	33%
Percentage of countries not planning to develop such a framework	27%

Countries were then asked which services had been interconnected within their model framework. 35% of countries did not give any answer to this question. The results are summarized in the table below (in percentage of the total of the countries that have answered):

Table 7 – Services already interconnected to the model frameworks

Voice	82%
Data	64%
Multimedia	45%
Mobile	73%
Others	18%

Next, countries were asked what features their model framework includes. Again, 35% of the countries surveyed have not answered the question, which is consistent with the previous question.

The results are summarized in the following table:

Table 8 – Features included in the model frameworks

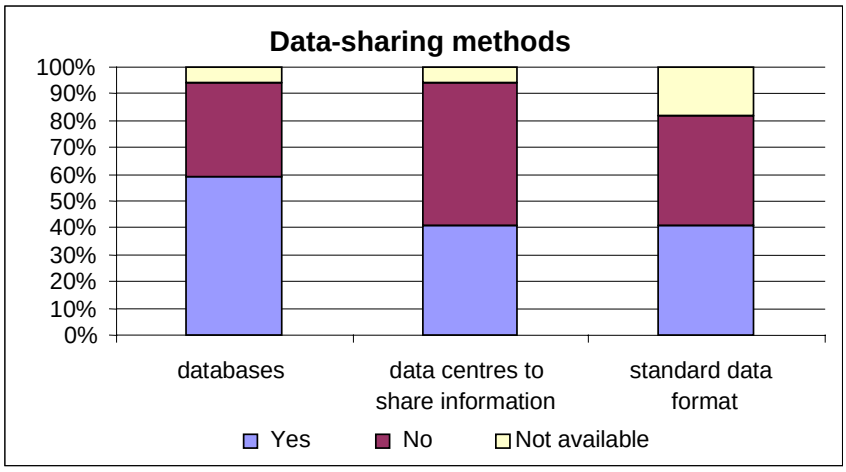
Points of interconnection	100%
Technical interfaces	82%
Traffic and signalling flows	91%
Synchronization	82%
Network management information	64%
Billing	73%
Data security	55%
Privacy	64%
Quality of Service	73%
Methodology of coordination in operation of networks	64%
Others	18%

Comment

The main challenges for the development of such a framework are related to market structure (for example, starting competition in the telecommunication market, incumbent dominance and "number of players", uncertainty as to the market demand), technology (fast-changing technological standards, new generations of network infrastructures) and poverty (less developed countries).

Although 27% of the countries have not planned anything yet, three quarters of these are still studying the eventuality of developing a model framework. The difficulties encountered by these countries are financial and technical (lack of human resources) in nature.

The survey also concentrated on problems of data sharing. 56% of the countries generate databases for information regarding networks and interconnect technical agreements, 41% use data centres to share information with other countries in the region as part of a global information system and 41% use a standard data format to share interconnection information. Graph 9 summarizes these results.



Graph 9 – Data-sharing

IV Assessment of the role of ITU

1 Objectives

In order to obtain feedback after ITU TELECOM ASIA 97 on the role played by ITU, and in particular on its communication process with participating countries and the appropriateness of its publications with regards to their needs, the following questions were included in the questionnaire:

- How did you perceive the information given by ITU on the subject of interconnection?
- How did you perceive the promotion given by ITU of data centres which exist in some of the countries of the region?
- It has been recommended that the members of the working party should have better knowledge of the participating countries of the Forum in order to adapt their work and presentations accordingly. How has this knowledge been improved for your country?
- Regarding technical cooperation requirements, how efficient is your country communication process with ITU?
- How accurate is your information about ITU publications?

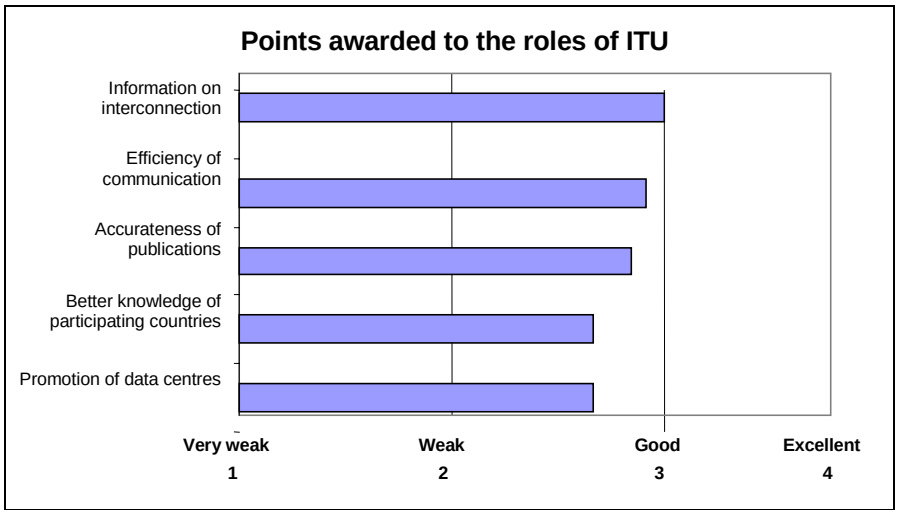
2 Results of the survey

The results of the questions are given in the table below:

Table 9 – Assessment of the role of ITU

Assessment / ITU roles	Excellent	Good	Weak	Very weak	Not available
Information on the subject of interconnection	0%	59%	0%	0%	41%
	59%		0%		41%
Promotion of data centres	0%	41%	6%	6%	47%
	41%		12%		47%
Better knowledge of participating countries	0%	41%	6%	6%	47%
	41%		12%		47%
Country communication process with ITU for technical cooperation requirements	6%	53%	12%	0%	29%
	59%		12%		29%
Accurateness of information on ITU publications	0%	70%	0%	6%	24%
	70%		6%		24%

The graph below gives an overview of the rating of each role of ITU.



Graph 10 – Points received by each role of ITU

3 Comments

The overall rating of ITU's roles is positive. Indeed, at least 40% of the countries assessed each of ITU's roles as *good* or *excellent*. Taking into consideration that many countries have not given any answer to these questions (possible reasons for this fact shall be commented upon below), and adjusting the results by computing the percentage on the countries that actually answered, the results are excellent. In all cases, over 75% of the countries answered positively, i.e. *good* or *excellent*.

As noted above, many countries have not answered the questions. These are countries that differ both geography- and economy-wise: they spread from the Middle East to the Far East and they include countries among the richest as well as the poorest of the survey. Hence, no conclusive explanation can be inferred from such criteria. However, among these countries, some said they had insufficient information to answer the questions, perhaps indicating inefficient communication between certain Member States and ITU.

When asked how efficient their communication process with ITU is regarding technical cooperation, 17% of the countries that answered expressed their need for technical and human resources support and cooperation with ITU.

The survey presented at ITU TELECOM AMERICAS 2000 also included questions for the assessment of ITU. With respect to the communication process with ITU, 67% of American states that answered this question thought this process was good or excellent, compared with 83% in Asia. Commenting on the quality of information about ITU publications, a mere 39% gave them credit, compared with 92% in Asia. Different editing policies and teams in different regions and continents may explain this difference in evaluation by the two groups of Member States. One should also be aware that the publications considered in the case of America deal mainly with rural telecommunication operating and planning whereas, in the case of Asia, the evaluation is on ITU publications in general.

V Comments by and expectations of the Fellows

1 Objectives

In order to increase the efficiency and relevance of ITU's activities, and in particular for the future recommendations to be in line with the expectations of the Fellows, it is important that the needs and expectations of participating countries are well understood. Hence, this section of the questionnaire is dedicated to assessing current and future expectations of the Fellows.

In the first part, countries were asked to comment on their expectations from ITU with regards to the development of telecommunications, whereas in the second part, they are asked what they expect from the Developing Countries Forum in the near future.

2 Expectations from ITU with regard to the development of telecommunications

2.1 Results of the survey

The following question was asked: "*What do you expect from ITU with regard to the development of telecommunications*?". There were eight subtopics:

- To raise the level of awareness of decision-makers concerning the role of telecommunications
- To promote the development of telecommunication networks and services
- To mobilise resources to provide assistance to developing countries
- To accelerate the transfer of technologies
- To provide information and advice on policy and structural options
- To carry out studies on telecommunications issues
- To co-operate with other organizations
- To provide accurate programme supervision and technical advice

For each topic, there were four possible answers, to which points were assigned:

- *Imperative* 4 points
- *Very useful* 3 points
- *Useful* 2 points
- *Not a priority* 1 point

The eight topics are ranked in the table below by the average points they obtained, together with the percentage given to each possible answer for every question.

Table 10 – Expectations from ITU with regards to the development of telecommunications

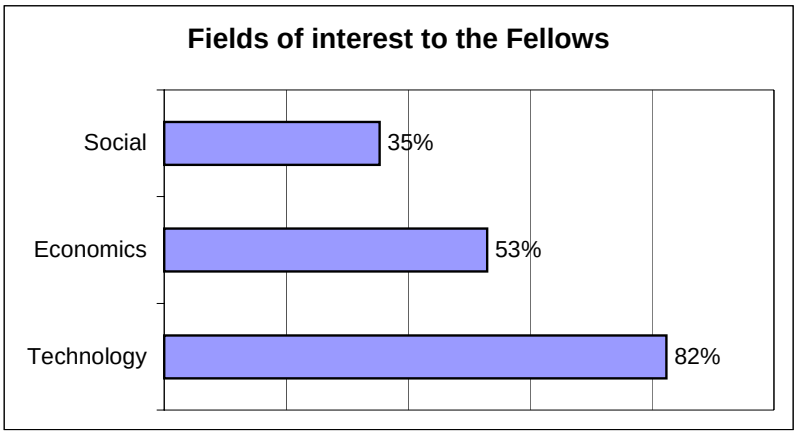
Usefulness / Expectations	Imperative	Very useful	Useful	Not a priority	Not available
Accelerate the transfer of technologies	31%	38%	25%	0%	6%
(2.9 points average)	69%		25%		6%
Carry out studies on telecommunications issues	19%	56%	19%	0%	6%
(2.8 points average)	75%		19%		6%
To raise the level of decision makers' awareness concerning the role of telecommunications	19%	50%	25%	0%	6%
(2.8 points average)	69%		25%		6%
Mobilize resources to provide assistance to developing countries	25%	38%	25%	6%	6%
(2.7 points average)	63%		31%		6%
Promotion of the development of telecommunication networks and services	19%	38%	38%	0%	6%
(2.6 points average)	57%		38%		6%
Provide information and advice on policy and structural options	25%	19%	50%	0%	6%
(2.6 points average)	44%		50%		6%
Cooperation with other organizations	0%	47%	47%	0%	6%
(2.5 points average)	47%		47%		6%
Provide accurate programme supervision and technical advice	6%	29%	53%	0%	12%
(2.5 points average)	35%		53%		12%

2.2 Comments

At the top of the ranking of expectations is the need to accelerate the transfer of technologies.

In second position comes the importance of carrying out studies on telecommunications issues. There are three areas on which countries wish the studies to concentrate:

- Technology
- Economics
- Social



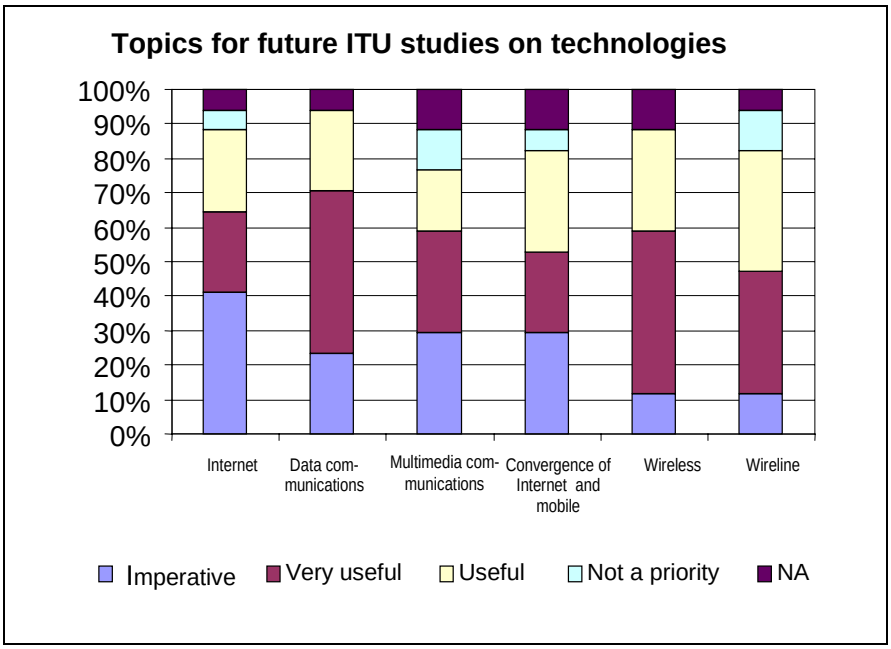
Graph 11 – Evaluation of proposed fields for ITU studies in telecommunications

Technological issues are desired by over 80% of the countries. This reflects the general lack of human and technical resources encountered by many countries, as it often comes out from the survey (for example, in the above Table 10, acceleration of the transfer of technologies comes in first position in the ranking of the Member States' expectations).

Technology comes first; in order to have a more precise idea of what countries really expect in this area, several fields have been rated.

- Fixed telecommunications (Wireline)
- Mobile telecommunications (Wireless)
- Data communications
- Internet (Internet telephony, eBusiness, etc.)
- Multimedia communications
- Convergence of Internet and mobile communications

The fields are ranked in the following graph:



Graph 12 – Evaluation of proposed fields for ITU studies in the technology area

The more basic technologies, such as mobile (wireless) and fixed (wireline) telecommunications, are not a priority, because they are more readily available and documented. This does not mean, however, that these telecommunications' features have been implemented in most countries yet. The more advanced features of telecommunication, such as multimedia communications and convergence of Internet and mobile, are not a priority either since they presuppose the development of other technologies first, namely the Internet and data communications. That is why these two last features are ranked first.

Publications concerning wireless technologies are ranked after those on convergence of Internet and mobile, because the average point they obtained is greater than that of the studies on convergence. This may be somewhat misleading since wireless publications obtained nearly 60% of ratings *imperative* or *very useful* against slightly more than 50% for the convergence. In this respect, wireless technologies should come first. The difference comes from the *imperative* rating.

Hence, countries wish ITU's publications to concentrate more on the Internet and data communications. Note, however, that the other fields should in no way be neglected since at least 50% of the countries stress their importance (i.e. imperative or very useful).

Also, when it comes to choosing new products, countries expressed some difficulties in avoiding confusion in the proliferation of ever-new technologies. They feel that they would benefit from ITU directions and publications.

The figure below summarizes the results:

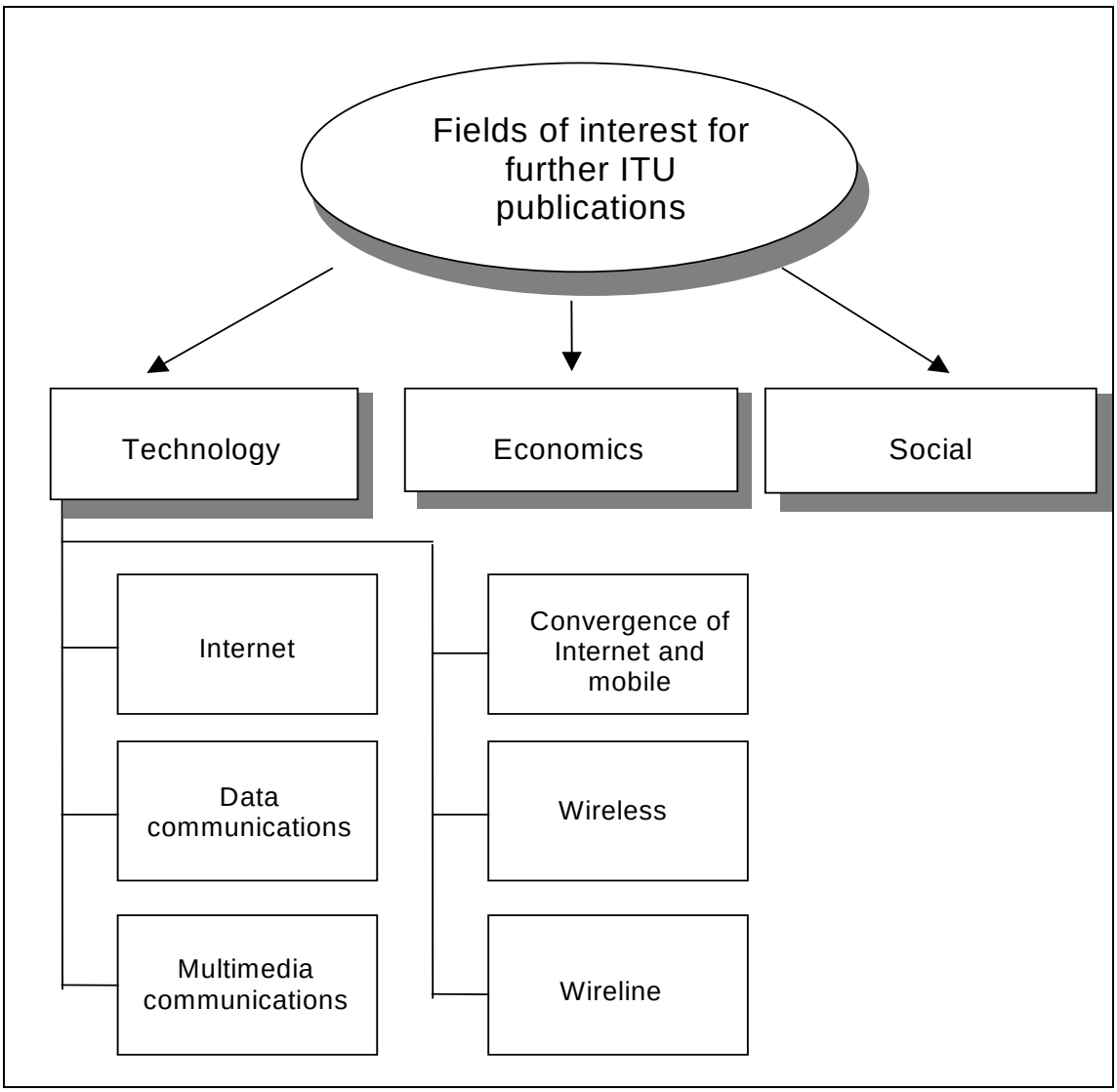


Figure 3 – Summary of the expectations from ITU studies in telecommunications

Fourth in the ranking is the mobilisation of resources to provide assistance to developing countries. Indeed, countries stress the consulting role that the ITU can play, particularly because its advice is not commercially biased. Also, countries need advice, training and information from the ITU that is based on its experience with other countries.

As regards cooperation with other organizations, countries listed a plethora of institutions, but very rarely have they reached a consensus (no organization obtained more than 12 per cent). Among the many, we list a few of them: ANSI, APT, ETSI, OECD, UNDP, WHO, WIPO, WTO, etc. Some expressed their desire to collaborate with neighbouring countries and set up regional workshops, whereas others wanted closer collaboration with telecommunication providers, manufacturers and policy makers.

3 Expectations from the Developing Countries Forum in the near future

3.1 Objectives

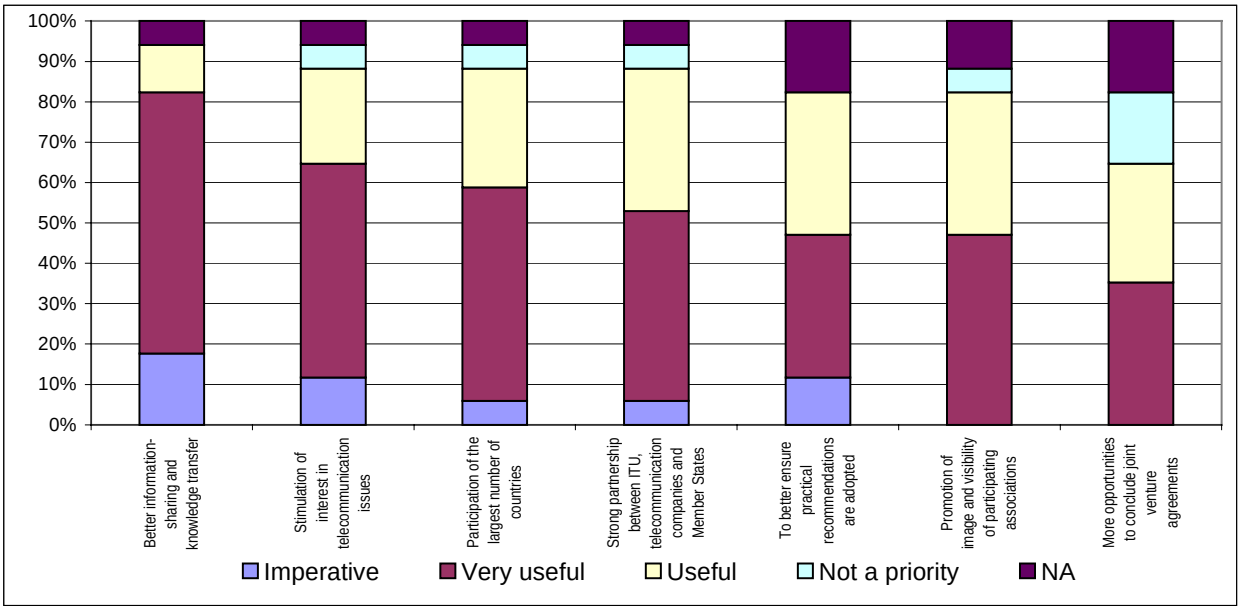
In order to achieve the most efficient results at the next Developing Countries Forum, the Member States surveyed were asked what they expect from it. It is hoped that the programme of the Forum will thus assess and concentrate on problems that are really relevant to the needs and concerns of these countries.

Expectations were grouped in seven categories:

- To stimulate further interest about telecommunication issues in developing countries
- To create stronger partnerships between ITU, telecommunication companies and Member States
- To develop more opportunities to conclude joint venture agreements
- To ensure the participation of the largest number of countries
- To better allow information-sharing and knowledge transfer (publications, studies, recommendations, events, etc.)
- To better ensure that practical recommendations are adopted
- To promote the image and visibility of participating associations

3.2 Results of the survey

The overall results are ranked in order of approval in the graph below:



Graph 13 – Ranked expectations from the forthcoming Developing Countries Forum

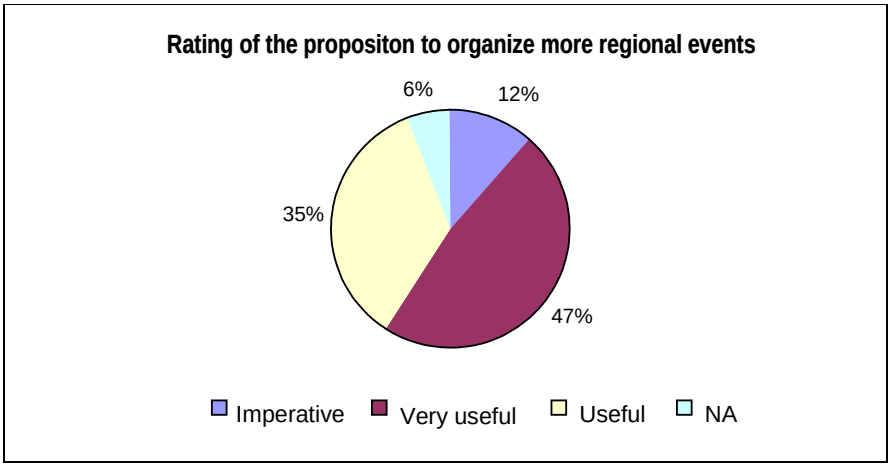
3.3 Comments

What countries expect most from the forthcoming Developing Countries Forum is better information-sharing and knowledge transfer, such as publications, studies, recommendations, events, etc. This would help developing countries to understand and appreciate more fully various telecommunication issues, topics and services. The result is consistent with the general fact (already highlighted in previous sections of the survey) that the main difficulties encountered by Member States are technological in nature.

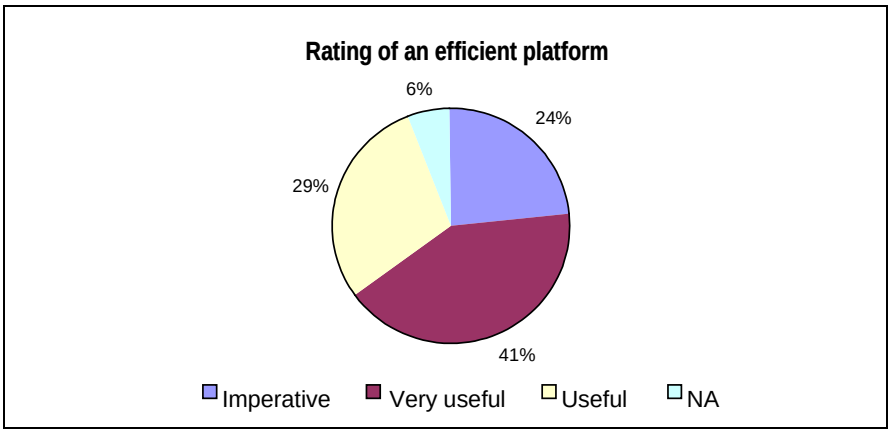
To ensure the best diffusion of information and knowledge, the questionnaire included two vehicles that countries were asked to rate.

- The first one is the organization of more regional events that would allow neighbouring countries to cope with problems, which are likely to be similar.
- The second one is the idea of an efficient platform for the sharing of information and knowledge.

As illustrated by the two graphs below, these propositions are rated as *imperative* or *very useful* by at least 59% of the countries, the creation of an efficient platform being the most approved proposal.



Graph 14 – Evaluation of the organization of more regional events



Graph 15 – Evaluation of an efficient platform for the sharing of information and knowledge

Some Member States believe that information and knowledge transfer, as well as views and idea-sharing between countries, is in fact a means to stimulate further interest about telecommunication issues in developing countries, which is, according to the ranking, the second priority.

The participation of the largest number of countries is also a great concern, since it comes third in the ranking. The number of participants is a signal of the importance of the Forum and is perceived as a means to exchange experience. A related issue is that of a stronger partnership between ITU, telecommunication companies and Member States: the more participants, the greater the synergy effects, for the benefit of all countries.

VI Conclusion

The outcome of the ITU TELECOM ASIA 2000 survey affirms the overall rating of ITU's roles as positive. More than 75% of the countries answering the survey assessed each of ITU's roles as *good* or *excellent*. However, it must be noted that the response rate for the survey was at its lowest, rendering the analysis questionable in two respects: the margin of error is low and the positions of countries not responding remain unknown.

The direction of the recommendations – particularly those identified at ITU TELECOM ASIA 97 on Network Interconnectivity, Services and Technical Issues – were in line with the actual situations and telecommunication activities in the countries of the region. Indeed, the implementation of the recommendations will vary by country depending on the specific economic, social and geographic situations.

For the first time since the first survey, a section devoted to the expectations of the Fellows was included in the questionnaire. Topping the ranking of expectations is the need to accelerate the transfer of technologies for the Internet and Multimedia. In second position comes the importance of carrying out studies on telecommunication issues. There are three areas on which countries wish the studies to concentrate: technology, economics and social issues. What countries expect most from the forthcoming Developing Countries Forum is better information-sharing and knowledge transfer, in the form of publications, studies, recommendations, events, etc.

To ensure the best diffusion of information and knowledge, two alternatives were favoured: the organization of more regional events and an efficient platform for the sharing of information. They are rated as *imperative* or *very useful* by at least 59% of the countries, the creation of an efficient platform being the most approved proposal. Such platforms should encompass interactive services with appropriate tools for learning as well as virtual communities for sharing information.

At ITU TELECOM ASIA 2000, participants will have a unique opportunity to actively share experiences and discuss their expectations.

Welcome to ITU TELECOM ASIA 2000.

Fernando Lagraña
Vice-President, ITU TELECOM, and
Head, Forum Division