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Nations Conference on Science and  
Technology for Development

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Preparations for the United Nations  
Conference on Science and Technology  
for Development: (b) Draft programme  
of action

SYNOPTIC TABLE OF REGIONAL RECOMMENDATIONS

Note by the Secretary-General of the Conference

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#### INTRODUCTION

The General Assembly, at its thirty-third session, requested the Secretary-General of the Conference "to prepare a synoptic table classifying recommendations into those that are common to all regions, those that are common to some regions, and those that are specific to one region, with the indication of their origin." 1/

The order of presentation of this synoptic table follows that adopted for the "Preliminary draft programme of action" (A/CONF.81/PC.21). Those recommendations that pertain exclusively to one region, that are sectoral in nature or that are not action-oriented have not been included. The full text of the recommendations of the Economic Commission for Europe (ECE), the Economic and Social Commission for Asia and the Pacific (ESCAP), the Economic Commission for Africa (ECA), the Economic Commission for Western Asia (ECWA) and the Economic Commission for Latin America (ECLA) is contained in A/33/303/Add.1 and 2.

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1/ Report of the Second Committee (A/33/516).

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Synoptic table of regional recommendations

Recommendations	Made by				
	ECE	ESCAP	ECA	ECWA	ECLA
<u>Target area I. Sharing of knowledge and experience by all members of the international community</u>					
Establish/strengthen effective centres or networks for scientific and technological information and documentation	20	15;18.a; 25.h		A.1.j; C.5.a	IV.3.4.2 57
Participate in the international efforts to establish world-wide networks of scientific and technological information and documentation systems				A.3.a.IV	
Encourage co-operative activities aimed at the development of mutually-beneficial and user-oriented information systems in areas of major scientific and technological concern and of importance to the developing countries	21		26.c	A.2.f	
Increase as much as possible information exchanges likely to assist developing countries to improve their technological capabilities			26.f		
Consider measures aimed at facilitating access to scientific and technological information	22				
Take into account the possibilities offered by countries within the region that have acquired valuable experiences in the application of science and technology in fields of particular pertinence to developing countries				7	
Take measures to initiate and to strengthen research work undertaken within institutions in the developed countries on problems of concern to the developing countries					3

Recommendations	Made by			
	ECE	ESCAP	ECA	ECWA
Carry out in the developing countries scientific and technological research aimed at solving the problems of these countries				75
Extend the successful concept of international research centres and networks to areas of major importance to the developing countries	12			
All commercial applications of research findings be considered the joint property of the countries participating in the research			IV.4.2.8	

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Recommendations	Made by				
	ECE	ESCAP	ECA	ECMA	ECLA
<u>Target area II. Increasing the capability for policy making in science and technology in its framework of development planning</u>					
Make firm political commitment to the application of science and technology for development and link the implementation of national policies on the same					
Ensure the linkage of imported technologies with indigenous research and development infrastructure	1		A.1.a		
Orient a major proportion of the national scientific research resources towards applied objectives		7		C.1.h	
Make a systematic study of the country's technological dependence in areas of national importance to development			13		
Set up registers of imported technologies			10	C.1.1	
Create or strengthen existing national structures for policy making and planning in science and technology	1;25.a			A.1.b	
Create a general body for the study of industrial projects and their effects on the environment and on people					IV.2.2.4 IV.3.1.2
Provide the necessary funds to finance independent studies of past projects in order to evaluate the method of implementation followed					IV.2.1.1

Recommendations	Made by				
	ECE	ESCAP	ECA	ECWA	ECLA
Formulate a comprehensive national science and technology policy that is an integral part of national development plans and programmes	1	1a	A.1.c C.1.e		31
Strengthen the machinery for identifying, studying, preparing and evaluating scientific and technological research programmes and projects					43
Research directed to social problems of development should take its place in science and technology policies	2				
Bring the universities into involvement with the communities in which they live			IV.2.4.3		
Conduct studies that promote the development of scientific and technological mentality in the community			IV.2.4.3		
Intensify action for the popularization of science and technology	2		A.1.g		
Undertake action to create a climate for the application of science and technology for development and to make science and technology part of the national culture	2				
Integrate the role of social sciences and the humanities in the process of over-all development, while working towards the preservation of the cultural identities of the region			A.1.i		
Endeavour to acquaint the developed societies with the civilization and heritage of the African nations and the potential of their contribution to humanity				A.1.k	

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Recommendations	Made by				
	ECE	ESCAP	ECA	ECWA	ECLA
Inculcate in the general population reading habits and the attitude of self-improvement through reading			B.1.1		
Intensify efforts to help the developing countries in solving their problems			A.3.a.ii	IV.4.2.2	
Agree to extend all types of technological co-operation through specialized local organizations				IV.4.2.3	
Accept the indigenous leadership and management of all co-operation and technical-technological assistance agreements selected by national Governments and leaders of developing countries				IV.4.2.7	
All agreements should contain provisions for training and development and for supplying the data and information needed for the vertical and horizontal application of science and technology				IV.4.2.5	
Give preferential treatment to countries of relatively less technological development, to foster the scientific and technological progress of the developing countries			IV.4.2.4		
	C.4.a	IV.4.2.11		101	

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Recommendations	Made by				
	ECE	ESCAP	ECA	ECWA	ECLA
<u>Target area III. transfer of technology for the benefit of development</u>					
Ensure that the creation of funds and other means of financing the scientific and technological development of the developing countries does not contribute to increasing the technological dependence of these countries on the multinational corporations					82
Levy an international contribution on multinational corporations to finance the most urgent international requirements of the developing countries in the application of science and technology for development			IV.4.1.7		
Base taxation of the multinational corporations on an accurate register of the financial transactions and the profits derived from their activities in the developing countries			IV.4.1.9		
Adjust national legislation on industrial property to the changing conditions of development				56	
Participation of local research and development institutions in consultative and executive capacities in the various phases involved in the process of transfer of technology	C.1.k				
Establish national laws governing the import and use of technology	C.1.e	IV.4.1.3			31;52;56
Promote efforts to maximize the effectiveness of technical assistance	C.1.j				17
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Recommendations	Made by				
	ECE	ESCAP	ECA	ECWA	ECLA
Establish centres to advise on the development, adaptation, transfer and appropriate choice of technology					
Adopt measures necessary for obtaining from the transnational corporations technological information, assistance, transfer of technology and administrative and managerial know-how under just and favourable conditions	8;19.a	C.1.a		IV.2.5.1	91
Orient scientific and technological co-operation towards the elimination of monopolistic and oligopolistic exploitation in regional technological trade					59
Encourage the transfer of appropriate technology between countries within the region			C.2.i		
Provide freer and more complete access to all types of technological know-how and to all technologies				98	
Continue efforts to facilitate access to, and the transfer of, results of the research and development activities of the developed countries				16	
Adopt an open position towards the aspirations of the developing countries in the negotiations taking place to revise the Paris Convention for the Protection of Industrial Property and towards the formulation of a code of conduct on the transfer of technology					78

Recommendations	Made by				
	ECE	ESCAP	ECA	ECWA	ECLA
Adopt measures to abolish the restrictive practices governing the current transfer of technology					96
Observe, in the developing countries, the same rules and standards practised in the more advanced countries with regard to environmental protection, public security and worker safety				IV.4.2.9	
Encourage enterprises in both the public and private sectors through incentives, whenever possible, to stimulate the flow of technology	26.d			IV.4.1.10 IV.2.1.3	
Establish a technology unit devoted to the analysis of the effects that specific technology transfer strategies have on development policy				IV.3.6.3	
Adhere to the Paris Convention for the Protection of Industrial Property					93
Promote the deletion of article 5 of the Paris Convention					
Adopt a multilateral legally binding code of conduct on the transfer of technology		C.3.a			81
Expedite negotiations relating to code of conduct for multinational corporations, code of conduct for international transfer of technology and the Paris Convention for the Protection of Industrial Property					39
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Recommendations	Made by				
	ECE	ESCAP	ECA	ECWA	ECLA
Participate in the negotiations on the code of conduct for transnational corporations					73;92
Adopt the necessary measures to prevent the activities of the transnational corporations from contributing to preventing the achievement of the scientific and technological objectives of developing countries				IV.4.1.1.	90
Monitor the relationship between the multinational corporations, parent companies and their affiliates in the developing countries			IV.4.1.2		
Multinational corporations be obliged to give priority to local raw materials, intermediate products, technology and personnel			IV.4.1.5		
Multinational corporations be obliged to commit themselves to the vertical and horizontal integration of their contributions to technology transfer activities			IV.4.1.6		
Endeavour to apply the final recommendations adopted regarding the application of science and technology to development			IV.4.3.3.8		
Establish a mechanism for an effective and continuing dialogue and consultation between developed and developing countries			C.5.d		
Take action to facilitate access to technology on reasonable terms and conditions to the developing countries					40

Recommendations	Made by				
	ECE	ESCAP	ECA	ECWA	ECLA
Set up a permanent international agency to be responsible for transferring technology to the developing countries for purposes of socio-economic development				IV.4.3.3.6	
Provide practical assistance to developing countries in matters relating to the transfer of technology	35	C.3.h			
Increase aid with regard to the provision of technical and scientific expertise in the field of the peaceful uses of atomic energy			IV.4.3.3.5		

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Recommendations	Made by				
	ECE	ESCAP	ECA	ECWA	ECLA
<u>Target area IV. Enhancing endogenous capabilities in a context of national self-reliance</u>					
Orient indigenous science and technology capabilities, <u>inter alia</u> , towards the identification of those national socio-economic problems susceptible to a scientific and technological solution	9				
Each university, college and research centre define its role in terms of the services it offers and the type of research it undertakes			IV.2.4.2		
Each State review the technical competence of its national technical organizations			IV.2.5.5		
Reinforce existing institutions of scientific research and technology with regard to their human and material resources	25.C;37	A.1.d.	IV.2.5.3		
Give priority to the implementation of scientific and technological research programmes			IV.2.4.1	47	
Promote local capability in the fields of engineering design and consultancy services	4	C.1.f			
Develop national engineering consulting and contracting firms with system engineering and prime contracting capability			IV.2.5.2		
Set up an organization to establish and maintain national standards and quality control		9;25.d			

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Recommendations	Made by				
	ECE	ESCAP	ECA	ECWA	ECLA
Award all professional organizations the necessary financial resources to develop libraries, training and research workshops and professional seminars					IV.2.3.1
Adopt a national information strategy and policy consonant with the science policy and the development policy of the country					IV.3.4.1
Prepare a large variety of scientific and technological programmes to be addressed by radio and by television to the community and to individuals					IV.3.5.1
Every research institute publish a periodic report on the status of its research activity					IV.2.2.3
Evolution of the existing wage and incentive systems departing from traditional patterns	6	B.I.r.			
Study the possibility of granting special incentives in the form of patents, invention certificates and the like to university laboratories, research groups, technical schools and other public-sector organizations					55
Grant all research centres free access to foreign exchange					IV.2.2.2
Evaluate the effect of the tax instruments applied by certain countries to motivate scientific and technological research and consider the suitability of applying such instruments in other countries					42

Recommendations	Made by				
	ECE	ESCAP	ECA	ECWA	ECLA
Create effective linkages between research and development institutes and the users of their results	6;16	C.1.g			3 <sup>l<sub>4</sub></sup>
Organize joint training, study and research workshop among ministries, professional organizations and university faculty				IV.2.3.3	
Develop and strengthen managerial skills in research, development and production systems	17				
Institute a systematic study of traditional technologies as well as of related social systems	12				
Remove the obstacles to the foreign trade of developing countries in the markets of the more developed countries			IV.4.2.11. IV.4.2.14		
Each foreign consultant in the developing countries be accompanied by a local colleague to share his work and responsibility				IV.4.2.6	
Increase the amount of training facilities offered to nationals from developing countries	15	26.a			
Furnish assistance to the developing countries at their request, in the formulation of measures to encourage the return of scientific, professional and technical personnel living outside their country of origin					88
Provide co-operation in efforts to reverse the brain-drain process				38	65;86
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Recommendations	ECE	ESCAP	ECA	ECIA	ECLA	Made by
Study and implement measures to stem and reverse brain-drain and the inappropriate deployment of high-level personnel			C.1.i	IV.1.4	65	
Establish an international compensatory fund to compensate Africa for the serious brain-drain from the region			C.3.b			
The developed countries should orient training assistance towards the work environment and needs of a given developing country	15		B.3.a.VI B.3.a.V	IV.1.2	65;86	
Establish an articulated system of selection of candidates for programmes of study and training overseas for relevant and specific manpower needs at the local level			B.1.q			
Establish and strengthen institutions for the training of craftsmen and technicians	5		B.1.h			
Review and redesign university courses in engineering, medicine and environmental studies			B.1.f			
Institute in-service and in-plant work study or holiday job programmes with strong support from industry			B.1.o			
Strengthen applied-science and science-based programmes in existing universities			B.1.e			
Provide for periodical self-improvement through attendance at refresher courses and workshops			B.1.m	IV.2.5.4	39	
Educational institutions undertake field studies of the performance of their graduates and determine the curricular implications of this performance				IV.2.3.2		

Recommendations	Made by				ECLAC
	ECE	ESCAP	ECA	ECWA	
Organize and mobilize science and engineering professional associations			B.1.n		
Encourage more women to pursue careers in science and technology			B.1.k		
Improve science teaching in primary and secondary schools			B.1.a		
Train teachers and technicians for technological education			B.1.b.iv		
Improve the technological content of vocational training programmes			B.1.d		
Introduce technological education at both primary and secondary levels		B.1.b			
Assist, where appropriate, the development of national capabilities	18		A.3.a.i		
Assist developing countries in the establishment of nationwide co-operative information systems	20		A.3.a.1	IV.4.2.13	
Provide material assistance and expertise to the developing countries in the establishment and development of indigenous scientific and technological capabilities	10	35	A.3.a.iii	IV.4.2.1 IV.4.2.10	
Review the criteria used in granting assistance and loans in support of scientific and technological activities in developing countries				IV.4.2.20	
Provide the risk capital required for generating local technological innovation			IV.2.2.1		51
Ensure that financing for scientific and technological development is based on, among other sources, the funds derived from the reduction in military expenses of the developed countries					80

Recommendations	Made by				
	ECE	ESCAP	ECA	ECWA	ECLA
<u>Target area V. Promoting collective self-reliance through co-operation among developing countries</u>					
Need for close co-operation between the developing countries	3	22	C.2.j	IV.4.4.1	74
Develop and ensure the political will necessary to make possible an exchange of experience and co-operation in the use of science and technology in the development process					
Establish exchange programmes in the field of libraries		B.2.e		IV.4.3.3.4	
Compile a directory of developing countries containing model texts of licensing agreements based on international experience					
Maintain up-to-date information on machinery, equipment and instruments manufactured in the developing countries		28			
Maintain a roster of engineering design and consultancy services as well as data on experts and research and development institutions		21;23	C.2.c		
Organize exchange programmes for students and teachers of science and technology			B.2.b B.3.a.ii		
Give priority to the nomination of foreign experts from other developing countries				IV.4.2.6	
Organize exchange programmes for scientists and technologists in the region			A.2.b		

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Recommendations					Made by
	ECE	ESCAP	ECA	ECWA	
Convene regional conferences and seminars and publish scientific and information periodicals on topics of importance of the region					A.2.d
Create unions and professional associations for scientists and specialists in the region					A.2.c
Examine and, where appropriate, establish regional and subregional science and technology centres	11	29			C.2.b A.2.a
Support the expansion of the concept of regional training and educational facilities for the benefit of developing countries	14		B.3.a.ii A.2.e B.2.b		
Encourage joint industrial ventures			C.12.d		
Promote subregional and regional indigenous consultancy and contracting associations			C.2.e		
All new projects in the region should include subcontracting and procurement clauses to apply to both the design and the construction phases				IV.3.1.4	
Conduct detailed analytical studies of the mission, functions and production of research centres				IV.3.6.1	
Conclude agreements on economic, scientific and technological co-operation	6				
Develop national capability in the design and execution of recurrent projects				IV.3.1.1 IV.3.1.3	
Continue to encourage maximum utilization of engineering design consultancy organizations, machinery and equipment available in the developing countries					36

Recommendations	Made by				
	ECE	ESCAP	ECA	ECWA	ECLA
Consider ways and means of enhancing co-operation among the States of the region in the area of science and technology	5				60
Create appropriate conditions for financing scientific and technological development co-operation projects					69
Support projects involving co-operation among two or more countries of different developing regions					70
Support the routing of information on scientific knowledge and technological invention achieved in the developed countries					70
Support the promotion of scientific and technological meetings which can give rise to further action					70
Establish a system to enable the relatively less developed countries to have access under favourable terms to technologies already existing in other developing countries					67;89
Grant preferential treatment in scientific and technological matters to the relatively less developed countries					89
Pay special attention to the requirements of the land-locked and island developing countries					79

Recommendations	Made by				
	ECE	ESCAP	ECA	ECWA	ECLA
<u>Target area VI. Strengthening the role of the United Nations in the field of science and technology co-operation</u>					
Harmonize the policies and activities of the United Nations system in the field of science and technology and co-ordinate them with those of other international organizations	32	A.3.b.IV C.3.e C.5.c	84		
Take steps to ensure that member States fully meet their responsibilities with regard to the use of science and technology for peaceful purposes			IV.4.3.14		
Maintain linkages between national focal points, regional commissions and the appropriate United Nations bodies in the field of science and technology	43				
Encourage UNDP to catalyze the development of science and technology and its application in the developing countries	34				
Overall assessment of the output of the United Nations development projects which have so far been implemented in the region	42	A.3.b.iii			
Revise existing procedures for the implementation and follow-up of the recommendations of international conferences and appraisal of their results		A.3.b.ii	IV.4.3.37		
Give support to activities to achieve collective technological collaboration for development				83	
Encourage all the developing countries to utilize their human and financial resources for the application of science and technology to socio-economic development in their countries					IV.4.3.32

Recommendations	Made by				
	ECE	ESCAP	ECA	ECWA	ECLA
Consolidate the training and scientific and technological research programmes of the United Nations University and the United Nations Institute for Training and Research and adjust them to the needs of the developing countries					87
Assist and enable the developing countries to obtain their full rights and financial resources through their foreign trade with the capitalist countries				IV.4.3.31	
Exert efforts to ensure that a substantial number of competent experts and consultants from the region would be selected for commissions within the region			B.3.b.ii C.3.f		97
Over-all assessment of the criteria used in the selection of international experts with regard to their capabilities, suitability for their commissions and remuneration	41		B.3.b.ii		
Establish a risk capital fund to finance technological development projects in developing countries			C.3.c		100;101
Provide the contributions pledged for the development and the scientific and technological progress of the developing countries				IV.4.2.15	77
Increase financial contributions to the international organizations and the national scientific and technological promotion institutions					76

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Recommendations	Made by				
	ECE	ESCAP	ECA	ECWA	ECLA
Strengthen the role of the regional commissions in co-ordinating and following up on the implementation of regional scientific and technological activities					84.b
Co-ordinate the restructured regional commissions with subregional and regional organizations	30	C.2.h		IV.4.3.16	84
Periodic review and appraisal by the regional commissions of the programme of action to be approved by the United Nations Conference on Science and Technology for Development					85
Adopt a world-wide integrated programme for the development of appropriate and intermediate technologies		C.5.b			
Exert a world-wide effort for approaching a state of unified standards and measures			A.3.b.i		
Need for close co-operation between developing and developed countries	3	26.b			71;94