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PAHO REGIONAL PROGRAM BUDGET POLICY

Background and Context

1. In January 1985, the Executive Board of the World Health Organization requested all Regional Committees to prepare regional program budget policies that would promote the optimal use of the World Health Organization's resources at all levels in order to give effect to the Organization's collective policies. In September of that year, the 31st Directing Council approved the PAHO Regional Program Budget Policy as an integral part of the Managerial Strategy for the Optimal Use of PAHO/WHO Resources in Direct Support of Member States (Resolution CD31.R10).

2. The current revision of the PAHO Program Budget Policy was initially prompted by the approval of Resolution WHA51.31 in 1998, which introduced a new method of allocation of funds across Regions and resulted in a significant reduction of the WHO allocation for the Region of the Americas, over the period 2000-2005. Directed by the Subcommittee on Planning and Programming, the process for the review of the Regional Program Budget Policy (RPBP) was deferred until after the approval, in 2002, of the Strategic Plan for the Pan American Sanitary Bureau, 2003-2007.

3. The need for the review of the RPBP became more evident when, in 2003, during the Directing Council's discussion on the Program Budget for 2004-2005, several countries called for a detailed discussion on the approach to the distribution of resources. Many countries considered that the current method of resource allocation among countries ought to be reviewed and signaled the importance of developing needs-based criteria for improving the current resource allocation practice.

4. During 2003, the Directing Council also endorsed the Managerial Strategy for the Work of the Pan American Sanitary Bureau during the period 2003-2007, which

identified strategic management of resources as one of the corporate objectives of the organizational change under way. Further, the Strategy noted that it would be important that the budget policy support the implementation of the Strategic Plan, with its emphasis on special population groups, priority countries, and technical objectives.

5. Several global and regional mandates have been taken into consideration in the review and revision of the RPBP:

(a) *Millennium Compact* - With the increased appreciation, within and outside the health sector, of the interrelationship between health and development, and more recently health and human security, health has gained prominence on the global and regional development agendas. This is best manifested by the Millennium Declaration and the Millennium Development Goals, which were adopted in 2000 by the global community to significantly reduce poverty in the world. Health is central to four of the eight goals and has an indirect role in several others. These goals will guide the development agendas of countries until 2015, and it is imperative that PAHO seize this opportunity to accelerate health development in countries, and ensure that health inequities are addressed. Countries must be supported to achieve the national goals that have been established to reflect their commitment to the Millennium Compact.

(b) *WHO Global Program of Work* – In accordance with its constitutional mandate, WHO is in the process of developing the 11th General Program of Work (GPW) through consultations with Regions, countries, partners, and other stakeholders. This GPW will cover the period 2006-2015 and aims to present a vision for health for the countries as well as the framework for action by all of WHO. Thus, it must guide both the long-term and short-term plans of PAHO.

(c) *Increased country orientation* - The need to place the countries at the center of cooperation has been recognized since the mid-1980s. In the previous budget policy, the setting of a target of 35% of the regular budget for country allocations supported the wave of decentralization that established a presence in most countries and used these mechanisms as the front line of and gateway for all PAHO technical cooperation with countries. This target, dedicated to country allocations, has been attained.

At present, a common strategic objective of WHO and PAHO technical cooperation is to increase the work in and with countries. To support this country-focused approach, WHO is in the process of shifting resources to Regions and countries to reach a target of 80% by 2009; and all Regions are expected to demonstrate a shift of resources to the countries.

One challenge is to set a more ambitious goal for the country portion of the budget while ensuring that there are adequate resources for the work to be carried out at the Regional Office and Centers as these provide critical support to the technical cooperation in the countries as well as undertake the normative work that complements the country cooperation. Another challenge is to ensure that the criteria used, while reducing inequities in the allocation among countries, address the emphasis being given to the five key countries.

While the country focus requires increasing the resources in many countries for greater impact, the strategy requires the reorientation and focusing of technical cooperation at all levels and organizational units of the Organization towards the countries' needs, and this must be reflected in the programming process.

(d) *Subregional integration* – While the scenario of globalization is well entrenched, there are strong integration processes at the subregional level, such as the Caribbean Community (CARICOM), the Southern Common Market (MERCOSUR), the Andean Community of Nations (CAN), the Central American Integration System (SICA), and the North America Free Trade Agreement (NAFTA). Health is a major component of the agendas at this level and requires collaboration on a range of issues. PAHO has been accompanying the related health development processes to different degrees and through different mechanisms, but this has only been evident in the program budgets in the case of the Caribbean subregion. This approach or level of programming now needs to be recognized in all instances, based on agreed-upon criteria and with assigned resources.

(e) *Call for international agencies to demonstrate value added* – Countries collaborate with an increasing number of institutions at the subregional, regional, and global levels. Since the early 1990s, stakeholders and partners have been demanding greater value for money in the public sector, in the international as well as national spheres. Results-based management is a crucial part of the managerial process of WHO and PAHO and is the fundamental tool that permits the assessment of the attainment of results and the improvement of the efficiency as well as effectiveness of the work of the Organization. The results of effective monitoring and evaluation must guide the development of subsequent technical programs, and transparency must be the hallmark of the planning and management process.

Planning, Programming, and Program Budget Preparation

6. The Organization's planning, programming, monitoring, and evaluation must be designed to be an integrated and continuous process, incorporating long- and medium-

term planning. Although separated into distinct phases, each component should be designed to provide a framework and reference for the other phases.

7. The long-term planning takes place at the global level, and the Region must make every effort to contribute to this process. This phase ends with the approval of a General Program of Work approved by the World Health Assembly.

8. The medium-term planning process at the regional level must use the GPW as its compass and be based on the results of analyses of the external and internal environments, the previously adopted mandates at the international and regional levels, and the jointly determined need of countries. The medium-term plan should specify the strategic goals and objectives towards which the Organization is directing its efforts in the Region of the Americas and determine the strategic and programmatic orientations in that period. To complement this, medium-term planning should also take place at the country level to clarify the strategic response of WHO/PAHO over a four- to five-year period, to support an individual country in its efforts to achieve the collective global and regional goals. This is the objective of the Country Cooperation Strategy process that is being implemented widely in PAHO and seeks to define the strategic pursuit of cooperation with individual Member States within the framework of the collective mandates of the Organization.

9. The short-term planning process centers on the development of two-year program budgets to accomplish the regional medium-term plan and contribute to the global objectives for the period. The process should place the needs of the countries at the center and aim to focus the work of all levels of the Secretariat on these needs. This organization-wide managerial process should also be results based, identifying clearly the collective objectives of the countries for that period to which the Secretariat will contribute through integrated, multidisciplinary, and multilevel technical cooperation, in selected areas of work. The objectively verifiable results, for which the Secretariat will be held accountable at the end of the biennium, should be negotiated with countries and partners at the national, subregional, and regional levels. The PAHO Biennial Program Budget must be as accurate a reflection as possible of the reconciliation of specific country requirements with the current regional and global policy decisions within each area of work.

10. The development of a short-term country program should be based on the medium-term Country Cooperation Strategy, where it exists. In the absence of this Strategy, the process should aim to determine the response of PAHO over a two-year period, to assist the country in achieving the collective goals of the Organization. It should take into consideration the results of the evaluation of the last biennium, the relevant national health priorities, and the resources available nationally and from other partners. In all cases, the programming at the country levels is a critical opportunity for

strengthening strategic alliances and strengthening the intersectoral nature of the work of PAHO.

11. National participation in the elaboration of the Program Budget is of primary importance in assuring that the scarce resources of the Organization are assigned to priority areas. Country participation will occur on three levels:

(a) First, it will take place within each country through the continuing joint process of evaluating existing technical cooperation in light of changing circumstances, conditions, and needs. That joint endeavor will be supported by periodic, in-depth policy and program reviews.

(b) Second, it will occur through the active participation of PAHO Member States in the Governing Bodies of the World Health Organization. Acting as part of the collective policy-making arm of WHO, the Member States have an opportunity to comment on the amount of the WHO contribution to the Region of the Americas and on the regional contribution to the attainment of the Global Expected Results,

(c) Third, Member States through their participation in the Subcommittee on Planning and Programming, in the Executive Committee, and in the Directing Council of PAHO determine the program of work, the level of resources available to the Organization, as well as the allocation of those resources to achieve the agreed-upon Regional Expected Results.

12. The regional program budgeting process needs to be supported by a corporate management information system for programming, monitoring, and evaluation. This is the case of the AMPES system in PAHO. While the program budget is approved biennially, there must be a review and reprogramming process at least annually to ensure that the technical cooperation program responds to changing country situations and needs as well as with respect to resource availability in the countries and in the Organization. This review process needs to be undertaken jointly with the countries at the national level and with technical and support units at the regional level.

13. The process of preparation, execution, and monitoring of the PAHO program budget offers several moments and opportunities for promoting effective coordination within and among the technical units of the Organization and coordination among the various levels of the Organization.

Architecture of the PAHO Program Budget

14. The scope of work of PAHO, as a multilateral specialized agency in health, encompasses collective normative functions and common public health objectives of its

Member States as well as technical cooperation functions aimed at the support of national health development in individual countries. The former includes, among other things, setting the vision and strategic directions for health development in the Americas, establishing norms and standards agreed upon by Member States, monitoring health situations, and identifying best practices and research. Country-specific technical cooperation functions, on the other hand, are those directly related to building institutional capacity in countries and the designing and execution of integrated technical programs to address specific health situations.

15. The work of the Organization is reflected in its program budget through three interrelated perspectives:

A. Functional level
B. Areas of Work, and
C. Organizational level.

16. The figures in Annex 1 show the relationship between A and C, A and B, and B and C. In practice, it is a three-dimensional matrix that combines the three perspectives.

A. **Functional Levels** represent the scope of technical cooperation activities that the Organization undertakes in support of its mandates. These levels are country, subregional, and regional.

(i.) ***Country:*** Technical cooperation programs are aimed at meeting the needs of a particular country in its pursuit of the collective mandates of the Organization and its national health development goals. Technical support for these activities is primarily provided by country offices but centers and regional units also provide support.

(ii.) ***Subregional:*** Technical cooperation programs are aimed at meeting the needs of a group of countries in their pursuit of the subregional health development goals within the framework of the collective mandates of the Organization. Technical support for this level can be provided and coordinated by any type of organizational unit. These programs encompass all or some countries which belong to one of the recognized subregional integration institutions: CARICOM, MERCOSUR, SICA, CAN, or NAFTA. This functional level of technical cooperation work supports the health agendas of the subregional integration processes and must be developed with the countries, through the mechanisms responsible for planning and executing the respective health agendas. Clearly defined expected results should be agreed upon with the groups of countries.

(iii.) ***Regional****:* The regional level of activities comprises technical component programs aimed at meeting the needs of all Member States, both in terms of normative work and the attainment of regional public health goals and targets. While this component has traditionally been carried out by regional units, as well as the Pan American Centers[1], it can also be carried out by country offices.

B. **Areas of Work** are the categories used in the classification of the work of the Organization that reflect the response to global and regional health needs, as well as institutional responsibilities, such as management or support services. The number and content of the Areas represents choices for the work of the Organization for a given period of time, and these must be reviewed regularly to ensure that they respond to the changing needs of the environment. Areas of Work guide the formulation of programs at both functional and organizational levels.

Areas of Work are the basic building blocks for planning, programming, budgeting, and reporting in WHO and PAHO results-based managerial process. Priority-setting must influence the allocation of all resources among Areas of Work.

The articulation of the PAHO Regional Program Budget with the Global Expected Results by Area of Work of the WHO Program Budget makes the alignment of Areas of Work of PAHO and WHO a critical element for the managerial process.

C. **Organizational levels** are the three types of units that are part of the PAHO structure, namely: Country Offices, Centers, and the Regional Units. Work in any of the three types of units can contribute to one or more Areas of Work and/or Functional Component.

17. Technical Cooperation among Countries (TCC) occurs when two or more countries, whether developing or developed, have agreed to assist one or more of the cooperating countries or to develop common approaches to a common problem. This needs to be distinguished from the subregional and regional functional levels and requires special consideration in the development or execution of the Program Budget. In TCC, there is political cooperation among countries through voluntary agreements aimed at

[1] Pan American Centers concentrate on one or selected technical areas through a range of functions, such as research, normative work, and technical cooperation. Some also provide services. Some Centers serve the Region as a whole; others serve selected subregions.

strengthening the self reliance of one or more of the countries concerned in areas relevant to their national health priorities.

18. The role of WHO/PAHO should be mainly catalytic: mobilizing scientific, technical, and managerial resources from appropriate national partners and assisting in the design of effective interventions. The financing of TCC will be mainly the responsibility of the governments concerned in order to promote the intended objective of self reliance. Member States are entitled to seek the support of other bilateral or multilateral agencies to complement their own contributions.

19. The PAHO Program Budget is funded from various sources of funds: PAHO regular funds provided through the quota contributions of countries; the share of WHO regular funds to the Region of the Americas from its quota contributions; other sources mobilized by both WHO and PAHO respectively. All funds support programs or projects within the one Program Budget so that the logical relationship among all technical interventions can be appreciated.

20. The program budget must be seen as a flexible, strategic management instrument. It must be able to respond to changing environments, such as disasters and emerging health needs, and to take into consideration the impact of economic downturns and socio-political challenges in a timely manner. The program budget must serve as a framework for the mobilization of resources and the galvanizing of collaborative efforts with other sectors and agencies.

Criteria for the Allocation of Resources

21. The approach to the allocation of funds is firmly rooted in the principles of equity and solidarity. The former is reflected in the use of needs-based criteria for the allocation of resources among countries; the latter is recognized in the provision of a basic level of funds for cooperation by and with all countries at the regional and subregional levels and with each other.

22. The increased country focus must build on the recognized comparative advantage of PAHO having a presence in the countries and a close relationship with the health sector. The type or level of country presence should depend on the resources available in the countries and the magnitude of the country-specific allocation in the program budget.

Allocation among Functional Components:

23. As a starting point, an initial distribution needs to be made regarding work within the regional, subregional, and country levels. The distribution among functional levels should be dynamic, taking into account changes in the environment and new information,

but always with the objective of improving results at the country level. Over time, evaluation results should guide adjustments in the weighting of resources for these different approaches to the technical work.

24. As one of the indicators of the level of country focus, medium-term targets should be set for resources allocated directly to the countries, and these should be reviewed after a period of three biennia. For the upcoming period of 2006-2011, the Organization sets as a target a minimum resource allocation of 40% at the country level and 5% at the subregional level.

Allocation among Countries:

25. Country-level funding will be divided into two parts: core and variable funding.

(a) *Core funds* will comprise two components: (i) a fixed allocation, or floor, which will ensure a basic level of country presence and/or activities for all Member States, and (ii) a needs-based allocation which will distribute funds among countries based on criteria of economic and health need. All Member States will start with an equal budget allocation to cover a base level of activity; this will be the total allocation for those Member States that have the highest per capita income. For all other Member States, the remaining core funding, the needs-based allocation, will be distributed based on readily available needs-based criteria of life expectancy and per capita income, adjusted for a population factor. Greater specification of the factors and the distribution calculation are provided in Annex II. Core funds should constitute no less than 95% of the country allocations.

(b) *Variable funds* will provide flexibility in the allocation process. It will be targeted and time bound, providing a short-term boost in resources to accelerate progress toward meeting priority collective mandates where funding is a constraint. Clear objectives will be established for the use of these funds and will be tracked and monitored separately to report on progress towards the stated goals. These funds will also be used to protect current program budget levels of key countries. It is anticipated that the total resources set aside for the variable funding would not exceed 5% of the total resources allocated at the country level.

Among Areas of Work:

26. The distribution of resources among Areas of Work at all levels of the Organization must be consistent with the support needed to achieve collective priorities at both the global and regional levels. Special attention will be given to those areas of work

that directly or indirectly contribute to the attainment of the health-related Millennium Development Goals.

Mobilization of Resources - The Organization has a continuing responsibility to mobilize resources required for the achievement of its objectives, of its expected results and of the national, subregional, and regional health goals. The regular resources are insufficient, and additional sources must be mobilized within the framework of one single and integrated program budget.

28. The Organization should seek to mobilize human and institutional as well as financial resources. These additional resources should be directed to support regional, subregional, and country technical cooperation activities, but always in accord with regional policies and objectives and responsive to the mandates of the Governing Bodies of the Organization.

29. Criteria for accepting funds from other sources include:

(a) Their purpose must be in line with the technical policies and priorities as well as the managerial strategies of the Organization. In general, other sources should supplement the Regular Budget for the up-scaling of efforts to achieve stated national, subregional, or regional results or for the initiation of complementary activities.

(b) The conditions attached to their use must be in accord with the policies and rules of the Organization.

(c) If the resources are to be used within any Member State, the purpose must be in accord with the national policies and priorities of that Member State.

(d) Consideration must be given, both by the Organization and the Member State, to the cost of administering those external resources and to the long-term costs implied if the results are to be sustained.

30. The coordination of efforts within the Organization for resource mobilization is critical if optimal use is to be made of the limited resources from bilateral and multi-lateral partners.

Execution, Monitoring, and Evaluation

31. The approved regional program budget should be implemented through the development and execution, by all organizational units, of unit-specific biennial program budgets and unit-specific operational or implementation work plans, covering a minimum

of six months at any time. Work plans, like the biennial program budgets, should reflect the contribution of all levels of the Organization.

32. At the country level, the development and execution of the work plans are the joint responsibility of countries and the Secretariat. Countries obligate themselves to carry out agreed-upon national activities to which the resources and technical cooperation of the Organization are complementary and supportive. Through regular meetings, agreed-upon procedures, and other effective project management mechanisms, the Secretariat and the national authorities collaborate for the achievement of the expected results and ultimately the national contribution to the regional health goals.

33. Flexibility should be built into the execution phase to allow for responses to sudden changes in national or regional conditions and the appearance of previously unforeseen needs. Conditions that warrant reprogramming must be clearly defined and a process for the review and approval of the modified program budget established.

34. In times of sudden and urgent need in one country, resources from other countries and from the Regional Office level can be directed to meet that particularly urgent national need.

35. The management of resources is a shared responsibility between Member States and WHO/PAHO. However, the Organization retains the final responsibility for the administration of the funds included within its budget, and ultimately responsibility for those funds to the Governing Bodies, who represent the collective voice of the people of the Region.

36. The progress in the implementation of the biennial program budget, regardless of the source of funds, should be monitored at least every six months at the organizational unit level. Analyses of the progress across the different levels of the Organization should alert the Directorate to difficulties being encountered in implementation so as to facilitate the development in a timely manner of remedial technical or managerial interventions for the realization of the expected results.

37. Evaluations must be an integral aspect of the managerial cycle and, as in the other phases of the program budget, should be undertaken jointly with the countries as far as possible. It is often difficult to evaluate the impact of the Organization's work given: (1) the nature and complexity of the health problems; (2) PAHO's technical cooperation mainly supports the country's efforts to achieve their national health objectives; and (3) there are often several partners involved. This notwithstanding, the Organization should use available approaches to determine the effectiveness and efficiency of its programs. Routine self assessments need to be complemented by in-depth evaluations of the degree to which program objectives have been attained and to the objective determination of the

factors that contribute to the outcomes. It is crucial to ensure that the future program budgets benefit from the lessons learned in the process of cooperation and more accurately reflect countries' needs and resources.

Opportunities for Implementing and Monitoring the Policy

38. Country Cooperation Strategies are being developed for all countries and these will be updated when there are changes in the situation in the countries or in the policies of the Organization. The Strategies will identify among other things, the mix and level of technical resources required to contribute significantly to the country's efforts in addressing the health priorities.

39. The new organization-wide approach to the review of agreements, programs, and projects funded by other sources, ensures that the activities supported adhere to the current policies and mandates and that the Organization can manage the project effectively and efficiently.

40. Annual reviews of biennial program budgets facilitate: (1) mid-term adjustments to the program being implemented, and (2) refinement of proposals to the priorities of the Organization and to the changing environment. The increased use of analytical frameworks for these will improve the rigor of programming and the improvement of qualitative and quantitative reports.

41. The serial review of the program budget by the Governing Bodies allows for focusing at different times on the technical aspects, the policy orientation, and the resource allocation of the program budget. In this regard, the role of the Subcommittee on Planning and Programming is critical to ensure the soundness of the proposals.

A. Contribution of Organizational Units to the Technical Cooperation Activity of the Functional Levels of the Organization

Organizational Units	FUNCTIONAL LEVEL		
	Country	Subregional	Regional
Country Offices	+ + + +	+ +	+
Centers	+ +	+ +	+ + +
Regional Units	+	+ +	+ + + +

B. Contribution of Functional Levels to Areas of Work

Functional Levels	AREAS OF WORK (example)		
	HIV/AIDS	Communicable Diseases	Essential Medicines
Regional	+	+ + +	+ + +
Sub regional	+ +	+ +	+ +
Country	+ + +	+ + + +	+ +

C. Contribution of Organizational Units to Areas of Work			
AREAS OF WORK	**ORGANIZATIONAL UNITS**		
	Country Offices	**Centers**	**Regional Units**
HIV/AIDS	+ + +	+	+ +
Child and Adolescent Health	+ + +	—	+ +
Communicable diseases	+ + +	+ +	+
Essential Medicines	+ +	—	+ + +

Allocation of PAHO/WHO Resources to Countries

Conceptual Model

1. The development of the model is guided by the principles already put forth in the policy document. Table 1 illustrates the conceptual model, and an explanation of the various elements of the model is provided in the following paragraphs.

Two-tier approach to the allocation of resources

2. The allocation of resources to countries will be divided into two components: core and variable. The core component consists of two portions—the "floor" and the "needs-based" portion. The "floor" portion of the core component represents resources that all countries will receive equally. This will be a budget allocation designed to ensure a basic level of technical cooperation activity for every Member State, and will be the only budgetary allocation to those countries considered to have the highest Per Capita Income. The "needs-based" portion of the core component represents the share of the budget that will be subject to the needs-based criteria developed for the model which is explained in the following sections. The needs-based portion of the core component represents the greatest share of the total budget allocation to countries.

3. The variable component is designed to provide some flexibility in the budget process. This will be targeted funding that is time-bound and intended to provide a short-term boost in resources to countries to accelerate progress toward meeting collective global and regional mandates and priority setting. The programming of these funds will be proposed by the PAHO Director in consultation with the countries. Clear objectives will be established for the use of these funds and will be tracked and monitored separately to report on progress towards the stated goals. The resources set aside for this purpose is not expected to exceed 5% of the total level of resources allocated to countries.

Needs-based Parameter

4. A needs-based parameter is used to ensure that objectivity is present in the measure of the relative need among countries. In considering a parameter, it is felt that the overall health conditions in a country, together with its relative economic status, would best capture the relative health need of a country. It is also important that data used for developing a needs-based parameter is available for all the countries of the region. And although a statistic reflecting equity in health within countries would also be ideal, it was determined that at present no relevant statistic exists which is available on a consistent basis for all countries in the Region.

5. As a surrogate marker of the degree of health needs currently present in a given country, a composite index was computed to guide a more equitable allocation of PAHO core funds. This health needs index (HNI) incorporates two broad dimensions of health and its determinants, through two well-known summary measures: the life expectancy at birth (life expectancy, leb) and the gross national income per capita, adjusted by power purchase parity (income per capita, ipc).

6. For each country, an arithmetic mean of its two more recent estimates of life expectancy and income per capita —as presented in PAHO's Regional Core Health Data System— is computed. For a given country i, the HNI is then calculated as follows:

$$\text{Health Needs Index}_i = \frac{\left(leb_{i\,actual} - leb_{\min}\right)}{\left(leb_{\max} - leb_{\min}\right)} \times 0.5 + \frac{\left(\log ipc_{i\,actual} - \log ipc_{\min}\right)}{\left(\log ipc_{\max} - \log ipc_{\min}\right)} \times 0.5$$

7. Where *actual* is the country's current value, min the minimum value observed in the regional data series and *max* the maximum value observed in the regional data series.

8. As noted from the formula, each index's component—namely, life expectancy and income per capita for a given country—is computed by applying a standard transformation statistical procedure that assigns a relative value in the range from zero, for most needy countries, to 1 for least needy countries. It is worthwhile mentioning that, following a well-established recommendation[2], a logarithmic transformation of the income distribution is computed instead of its actual value, in order to appropriately reflect the lower end of the income distribution, i.e., the poorer countries. The health needs index is thus comprised from the addition of the values of its two components, after they receive the same weight (0.5).

9. The distribution of the Health Needs Index is used subsequently to compute percentiles and determine membership of countries within these percentiles of relative health needs (refer to Table 2 for an illustrative example of the application of the HNI using the latest official data).

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[2] Anand S, Sen A. The income component in the HDI –alternative formulations. Occasional Paper. United Nations Development Programme, Human Development Report Office, New York; 1999. Also: Sen A. Assessing human development. Special contribution, in: United Nations Development Programme. Human Development Report 1999: Globalization with a human face; Oxford University Press; New York, 1999

Grouping countries into quantiles

10. Although an index is considered an acceptable measure for determining the relative status of countries, the direct application of an index alone is not considered the most appropriate means for the outright allocation of funds among countries. The underlying statistics have different degrees of confidence, and even the increments in the index are not consistently weighted across the scale. The model attempts to avoid over-interpreting the index by placing countries into five quantiles, or quintiles in this case, using the standard statistical formula for this purpose. The countries that fall within a given quintile will receive the same treatment with respect to the application of needs-based criteria.

Progressive distribution of resources based on relative need

11. In order to preserve the principle of equity, the model allocates resources progressively to quintiles based on relative need. In other words, for any two countries with the same population, the country within a quintile reflecting greater need will be allocated a proportionately higher share of resources than the country falling within a quintile of lesser need.

It is worthwhile noting that the level of progressive weighting used in the model has a direct impact on the level of re-distribution of resources among the countries. The greater the progressive weighting scale applied, the greater the re-distribution of resources favoring the more needy countries.

Population

12. Population is another factor in the model used in the allocation of resources. All models presented assume that, all other factors being equal, a country with a larger population will need more resources than a country with a smaller population. However, the models also assume that the multiplier effect that exists in the type of cooperation PAHO engages in with Member States is such that smaller countries will need more resources per capita than larger countries. These assumptions are built into the model by adjusting the actual population statistics using a statistical "smoothing" method. Population smoothing effectively reduces the range of the populations before using them to calculate resource levels.

13. The smoothing method chosen for the proposed model is the *Square Root of the Population*. Although there are a number of standard statistical smoothing methods used for this type of modeling, this method has a lower compression factor on the population statistics than more aggressive smoothing techniques; the effect, therefore, is that it

generates a more gradual level of re-distribution of resources from larger-sized to smaller countries.

Results of the Modeling

(a) The two elements of the model which substantially affect the degree of re-distribution of resources among the countries of the region are the population smoothing method and the quantile weighting scale applied. The criteria for selecting the methods of these two elements in the proposed model are designed to meet two principle objectives: 1) that equity is present and that there is a clear positive impact for the countries in greatest need, and 2) the resulting re-distribution of resources among countries is done in a gradual manner..

(b) The proposed model uses a gradual progressive weighting scale whereby each successive quintile receives a factor greater than that of the previous quintile. Specifically, the Q2 factor is 20% greater than Q1; the Q3 factor is 30% greater than Q2; the Q4 factor is 40% greater than Q3; and the Q5 factor is 50% greater than Q4. This scale of progressiveness generates a more gradual level of re-distribution of resources, yet still making a positive impact on the most needy groups of countries.

(c) The proposed model uses the Square Root of the Population. As stated earlier, this method of smoothing has a lower compression factor on the population statistics than more aggressive smoothing techniques, such as the Log Square of the Population; the effect, therefore, is that the square root method generates a more gradual level of re-distribution of resources from larger-sized to smaller countries.

(d) The core allocation is shown in proportional terms. Column j shows the floor portion of the core component which is a pre-determined fixed amount for all countries in accordance with the criteria established for this allocation portion. Column k represents the needs-based portion of the core component as calculated using the model logic. The total of the core allocation is presented at 95% of the total country budget allocation. The remainder 5% will be assigned as the variable portion (column m) following the criteria mentioned earlier for this component.

(e) The statistical data (life expectancy at birth; ppp income per capita; population) used in this model and to compute the health needs-based index comes from the official PAHO Core Health Data System. The most recent data available from the PAHO Core Health Data System will be used in every iteration of the budget cycle for the preparation of the allocation of country resources.

(f) The proposed model serves to indicate the proportional share of resources that will be allocated among countries. The actual amount of budget resources allocated to any given country will depend on the budget levels approved by the Directing Council in future years.

Table 1: The Conceptual Model

COUNTRY		QUANTILE	CORE FUNDING		VARIABLE FUNDING
			Floor	Needs-based (quantile weighting)	
Country A	(-) Needs-based Parameter (+)	Group 1 (least needy)	$	$	?
Country B			$		?
Country C			$		?
Country J		Group 2	$	$$	?
Country K			$		?
Country L			$		?
Country X		Group 3 (most needy)	$	$$$	?
Country Y			$		?
Country Z			$		?

Table 2: Computation of the Health Needs-Based Index

(Data source: the most recent data available, as of September 2004, taken from the official PAHO Core Health Data System)

	country[1]	code	population 2004 (x1000)	life expectancy (e_0)		income per capita (i$)		arithmetic averages		log income	standardized weights		health needs index	health needs group
				2003	2004	2001	2002	e_0	income		e_0	income		
1	United States	USA	297,155	77.3	77.4	35,220	36,110	77.4	35,665.0	4.552	0.964	1.363	1.164	0
2	Canada	CAN	31,744	79.5	79.6	27,940	28,930	79.6	28,435.0	4.454	1.043	1.263	1.153	0
3	French territories	FRT	1,020	78.2	78.4	26,550	27,040	78.3	26,795.0	4.428	0.998	1.236	1.117	0
4	Netherlands territories	NET	294	77.1	77.3	28,140	28,350	77.2	28,245.0	4.451	0.958	1.260	1.109	0
5	UK territories	UKT	172	77.4	77.6	25,890	26,580	77.5	26,235.0	4.419	0.970	1.227	1.099	0
6	Puerto Rico	PUR	3,898	75.7	75.9	16,250	18,090	75.8	17,170.0	4.235	0.909	1.040	0.975	0
7	Barbados	BAR	271	77.3	77.5	14,850	14,660	77.4	14,755.0	4.169	0.966	0.973	0.970	1
8	Costa Rica	COR	4,250	78.3	78.4	8,360	8,560	78.4	8,460.0	3.927	1.000	0.728	0.864	1
9	Argentina	ARG	38,871	74.4	74.6	11,440	10,190	74.5	10,815.0	4.034	0.863	0.836	0.850	1
10	Chile	CHI	15,996	76.2	76.3	9,240	9,420	76.3	9,330.0	3.970	0.925	0.771	0.848	1
11	Uruguay	URU	3,439	75.5	75.7	8,590	7,710	75.6	8,150.0	3.911	0.902	0.711	0.807	1
12	Bahamas	BAH	317	67.2	67.4	15,680	15,680	67.3	15,680.0	4.195	0.607	1.000	0.804	1
13	St. Kitts & Nevis	SCN	39	71.6	71.9	10,640	10,750	71.8	10,695.0	4.029	0.766	0.831	0.798	1
14	Mexico	MEX	104,931	73.6	73.8	8,740	8,800	73.7	8,770.0	3.943	0.835	0.744	0.789	2
15	Antigua & Barbuda	ANI	68	71.3	71.6	10,120	10,390	71.5	10,255.0	4.011	0.755	0.813	0.784	2
16	Trinidad & Tobago	TRT	1,307	71.1	70.8	8,710	9,000	71.0	8,855.0	3.947	0.737	0.748	0.743	2
17	Panama	PAN	3,177	74.9	75.0	6,030	6,060	75.0	6,045.0	3.781	0.879	0.580	0.729	2
18	Venezuela	VEN	26,170	73.9	74.1	5,770	5,220	74.0	5,495.0	3.740	0.845	0.537	0.691	2
19	Colombia	COL	44,914	72.4	72.7	6,080	6,150	72.6	6,115.0	3.786	0.794	0.585	0.689	2
20	St. Vincent & Grenadines	SAV	121	74.2	74.4	5,120	5,190	74.3	5,155.0	3.712	0.856	0.509	0.683	3
21	Dominica	DOM	69	74.1	74.4	5,170	4,960	74.3	5,065.0	3.705	0.854	0.502	0.678	3
22	Brazil	BRA	180,654	68.4	68.7	7,350	7,450	68.6	7,400.0	3.869	0.652	0.669	0.660	3
23	St. Lucia	SAL	150	72.7	72.9	4,960	4,950	72.8	4,955.0	3.695	0.803	0.492	0.647	3
24	Belize	BLZ	261	71.4	71.3	5,360	5,490	71.4	5,425.0	3.734	0.751	0.532	0.642	3
25	Jamaica	JAM	2,676	75.9	76.1	3,630	3,680	76.0	3,655.0	3.563	0.917	0.358	0.637	3
26	El Salvador	ELS	6,614	71.0	71.2	4,720	4,790	71.1	4,755.0	3.677	0.742	0.474	0.608	4
27	Paraguay	PAR	6,018	71.1	71.3	4,750	4,590	71.2	4,670.0	3.669	0.746	0.466	0.606	4
28	Peru	PER	27,567	70.1	70.4	4,670	4,880	70.3	4,775.0	3.679	0.712	0.475	0.594	4
29	Dominican Republic	DOR	8,872	66.6	66.6	6,040	6,270	66.6	6,155.0	3.789	0.583	0.587	0.585	4
30	Grenada	GRE	89	64.5	64.5	6,570	6,600	64.5	6,585.0	3.819	0.508	0.617	0.563	4
31	Suriname	SUR	439	71.3	71.5	3,480	3,480	71.4	3,480.0	3.542	0.753	0.336	0.545	4
32	Cuba	CUB	11,328	76.8	77.0	2,004	2,350	76.9	2,177.0	3.338	0.948	0.129	0.539	4
33	Ecuador	ECU	13,192	71.0	71.2	3,250	3,340	71.1	3,295.0	3.518	0.742	0.312	0.527	5
34	Guatemala	GUT	12,661	66.1	66.5	4,000	4,030	66.3	4,015.0	3.604	0.572	0.399	0.485	5
35	Nicaragua	NIC	5,597	69.8	70.1	2,360	2,350	70.0	2,355.0	3.372	0.702	0.164	0.433	5
36	Guyana	GUY	767	63.4	63.6	3,960	3,940	63.5	3,950.0	3.597	0.472	0.392	0.432	5
37	Honduras	HON	7,099	68.8	68.8	2,510	2,540	68.8	2,525.0	3.402	0.661	0.194	0.428	5
38	Bolivia	BOL	8,973	64.2	64.6	2,350	2,390	64.4	2,370.0	3.375	0.504	0.166	0.335	5
39	Haiti	HAI	8,437	50.0	50.4	1,640	1,610	50.2	1,625.0	3.211	0.000	0.000	0.000	5

1 Netherlands includes Aruba, Netherlands Antilles; France includes French Guiana, Guadeloupe, Martinique; United Kingdom includes Anguilla, British Virgin Islands, Montserrat, Bermuda, Cayman Islands, Turks and Caicos Islands

e_0 = life expectancy at birth; income = power-purchasing parity-adjusted gross national income per capita (international dollars, i$)

Table 3. Proposed Model for Country Budget Allocation

	a	b	c	d	e	f	g	h	i	j	k	l	m	n
Member Countries	Needs Group	Needs-based weighting		Population		Square root of population		Share of needs-based allocation		Core allocation (proportional share)			Variable allocation	Total allocation
		factor	%	thousands	%	thousands	%	(b x f)	%	Floor	Needs-based allocation	Subtotal (j + k)		(l + m)
United States	0									0.32%	-	0.32%	?	?
Canada	0									0.32%	-	0.32%	?	?
Netherlands	0									0.32%	-	0.32%	?	?
France	0									0.32%	-	0.32%	?	?
United Kingdom	0									0.32%	-	0.32%	?	?
Puerto Rico	0									0.16%	-	0.16%	?	?
St Kitts and Nevis	1	1.00	1.6%	42	0.0%	6	0.2%	6	0.1%	0.32%	0.10%	0.42%	?	?
Barbados	1	1.00	1.6%	270	0.1%	16	0.6%	16	0.3%	0.32%	0.25%	0.57%	?	?
Bahamas	1	1.00	1.6%	314	0.1%	18	0.6%	18	0.3%	0.32%	0.27%	0.59%	?	?
Uruguay	1	1.00	1.6%	3,415	0.6%	58	2.0%	58	1.1%	0.32%	0.89%	1.21%	?	?
Costa Rica	1	1.00	1.6%	4,173	0.8%	65	2.2%	65	1.2%	0.32%	0.99%	1.31%	?	?
Chile	1	1.00	1.6%	15,805	2.9%	126	4.3%	126	2.3%	0.32%	1.92%	2.24%	?	?
Argentina	1	1.00	1.6%	38,428	7.1%	196	6.7%	196	3.6%	0.32%	3.00%	3.32%	?	?
Antigua and Barbuda	2	1.20	1.9%	73	0.0%	9	0.3%	10	0.2%	0.32%	0.16%	0.48%	?	?
Trinidad and Tobago	2	1.20	1.9%	1,303	0.2%	36	1.2%	43	0.8%	0.32%	0.66%	0.98%	?	?
Panama	2	1.20	1.9%	3,120	0.6%	56	1.9%	67	1.2%	0.32%	1.03%	1.34%	?	?
Venezuela	2	1.20	1.9%	25,699	4.8%	160	5.4%	192	3.6%	0.32%	2.94%	3.26%	?	?
Colombia	2	1.20	1.9%	44,222	8.2%	210	7.1%	252	4.7%	0.32%	3.86%	4.18%	?	?
Mexico	2	1.20	1.9%	103,457	19.2%	322	10.9%	386	7.1%	0.32%	5.91%	6.23%	?	?
Dominica	3	1.56	2.5%	79	0.0%	9	0.3%	14	0.3%	0.32%	0.21%	0.53%	?	?
St Vincent & the Grenadi	3	1.56	2.5%	120	0.0%	11	0.4%	17	0.3%	0.32%	0.26%	0.58%	?	?
St Lucia	3	1.56	2.5%	149	0.0%	12	0.4%	19	0.4%	0.32%	0.29%	0.61%	?	?
Belize	3	1.56	2.5%	256	0.0%	16	0.5%	25	0.5%	0.32%	0.38%	0.70%	?	?
Jamaica	3	1.56	2.5%	2,651	0.5%	51	1.7%	80	1.5%	0.32%	1.23%	1.55%	?	?
Brazil	3	1.56	2.5%	178,470	33.2%	422	14.3%	659	12.2%	0.32%	10.08%	10.40%	?	?
Grenada	4	2.18	3.5%	80	0.0%	9	0.3%	20	0.4%	0.32%	0.30%	0.62%	?	?
Suriname	4	2.18	3.5%	436	0.1%	21	0.7%	46	0.8%	0.32%	0.70%	1.02%	?	?
Paraguay	4	2.18	3.5%	5,878	1.1%	77	2.6%	167	3.1%	0.32%	2.56%	2.88%	?	?
El Salvador	4	2.18	3.5%	6,515	1.2%	81	2.7%	176	3.3%	0.32%	2.70%	3.02%	?	?
Dominican Republic	4	2.18	3.5%	8,745	1.6%	94	3.2%	204	3.8%	0.32%	3.13%	3.44%	?	?
Cuba	4	2.18	3.5%	11,300	2.1%	106	3.6%	232	4.3%	0.32%	3.55%	3.87%	?	?
Peru	4	2.18	3.5%	27,167	5.1%	165	5.6%	360	6.7%	0.32%	5.51%	5.83%	?	?
Guyana	5	3.28	5.3%	765	0.1%	28	0.9%	91	1.7%	0.32%	1.39%	1.71%	?	?
Nicaragua	5	3.28	5.3%	5,466	1.0%	74	2.5%	242	4.5%	0.32%	3.71%	4.02%	?	?
Honduras	5	3.28	5.3%	6,941	1.3%	83	2.8%	273	5.0%	0.32%	4.18%	4.50%	?	?
Haiti	5	3.28	5.3%	8,326	1.5%	91	3.1%	299	5.5%	0.32%	4.57%	4.89%	?	?
Bolivia	5	3.28	5.3%	8,808	1.6%	94	3.2%	307	5.7%	0.32%	4.70%	5.02%	?	?
Guatemala	5	3.28	5.3%	12,347	2.3%	111	3.8%	364	6.7%	0.32%	5.57%	5.89%	?	?
Ecuador	5	3.28	5.3%	13,003	2.4%	114	3.9%	374	6.9%	0.32%	5.72%	6.04%	?	?
TOTAL		61.78	100.0%	537,823.00	100.0%	2,947	100.0%	5,406	100.0%	12.27%	82.73%	95.00%	5.00%	100.00%

Note: The needs-based weighting scale in this model is progressive: the Q2 factor is 20% more than Q1; the Q3 factor is 30% more than Q2; the Q4 factor is 40% more than Q3; the Q5 factor is 50% more than Q4

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