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**International tripartite conference on urbanization challenges  
and poverty reduction in African, Caribbean and Pacific countries**

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**Basic infrastructure services<sup>1</sup>**

**I. Challenges in providing basic infrastructure in Africa, the Caribbean and the Pacific**

**A. Africa**

1. Notwithstanding the efforts being made by some African countries, around 340 million people in Africa are without access to safe drinking water and only 26 countries are on target to attain the Millennium Development Goals. The situation as regards sanitation is even more severe, with 580 million people without access to improved sanitation facilities and only six countries on track. Although impressive progress was recorded in sub-Saharan Africa from 1990 to 2002, with a 9 per cent increase recorded, this falls short of the Millennium Development Goal target of 75 per cent by 2015. The rate of progress has been severely hampered by issues such as conflict, political instability and high population growth. This, coupled with the low priority accorded to the water and sanitation sector, is the main reason for the failure to attain the Goals. The solid waste management sector is also a neglected area of infrastructure.

2. Where progress has been achieved, it can be attributed to the decentralization of responsibility and ownership, which provides a choice of service levels based on ability and willingness to pay for services. The main population growth in Africa in the coming decades will be found in the smaller urban centres. Those most affected will therefore be living in small and medium-sized towns where the combination of poor town planning and infrastructure will result in increased numbers of people failing to receive services. The main reasons for such failure are related to inadequate capacity at the local level in both rural and urban areas. Poor revenue generation and a lack of attention to operations and maintenance, which results in significant amounts of unaccounted-for water, are the main contributory factors.

3. Significant development in the region will continue to be hindered by the lack of basic infrastructure services, which will be further exacerbated by the impacts of climate change, given the weak resilience of utilities.

<sup>1</sup> Mention of firm names and commercial products does not imply the endorsement of the United Nations.

## **B. Caribbean**

4. Generally, Caribbean countries are well on track to attain the Goals pertaining to sanitation and they record higher than average coverage statistics for both water and sanitation. Over the period 1990–2000 increases in service coverage have been found predominantly in rural areas. In urban centres, water supply coverage has not varied significantly, but did decline slightly during the period in question.

5. Although the current situation is promising, the main challenges in the Caribbean are typical of small island developing States in that water resources management is a critical issue. Some countries rely exclusively on rainwater or, in some cases, desalination. In terms of technical capacity, the main challenges are the lack of a clear policy and legal framework and the loss of intellectual capacity and skilled staff owing to low salaries and migration.

6. Increasing pressure from the tourism sector, which is currently responsible for 40 per cent of the gross domestic product in the Caribbean region may well be the critical development issue, as tourism development uses significant water resources and generates excreta, solid waste and wastewater. Freshwater resources will be reduced by as much as 5 per cent as a result of climate change, which will exert further pressure. The region is well known for its inclement weather and, over the past decade, Central America and the Caribbean have suffered 20 per cent of the world's hydro-meteorological disasters. Although the region is home to 1 per cent of the world's population, 36,000 lives have been lost during the past 10 years – 50 per cent of the global population who died as a result of flooding.

## **C. Pacific**

7. The Pacific islands are not on track to attain the Millennium Development Goals pertaining to sanitation. To do so, an additional effort of nearly five times that exerted over the period 1990–2006 is needed. In the region, the number of people receiving sanitation services rose from 2.9 million in 1990 to 4 million in 2006. Coverage, however, stands at only 48 per cent and population growth means that the number of those not receiving services increased by 30 per cent from 3 million in 1990 to 4.3 million in 2006. Progress is uneven and, while some of the less populous countries have already achieved universal access to water and sanitation, nearly 40 per cent of countries have improved sanitation coverage of less than 50 per cent. A similar effort would need to be made to attain the targets pertaining to water. In the Pacific, 46 per cent of the population enjoys access to an improved water supply, but of which only 13 per cent is a piped supply. Access to water has almost stagnated, with only 300,000 people gaining access to this service since 1990 against a population growth of 2.5 million over the same period. Uneven coverage is also an issue. For example, Papua New Guinea is home to three quarters of the region's population but its improved drinking water coverage stands at only 40 per cent.

8. In the Pacific, the challenge is to encourage laggard countries to get back on track in their efforts to attain the Goals. In this respect what matters most is the prioritization of water and sanitation. Policy, funding and action will then follow. In the region, on-track countries are characterized by clear prioritization, following a demand-based sanitation policy, application of policy-based financing strategies, specific approaches for the poor and increased participation of civil society.

## **II. Responses**

### **A. Water and Sanitation Trust Fund strategic plan (2008–2012)**

9. The Water and Sanitation Trust Fund under the United Nations Human Settlements Programme (UN-Habitat) has a strategic plan that presents the overall strategic framework for the development and implementation of support to basic infrastructure. It outlines four strategic focus areas for the period 2008–2012:

- (a) Delivering sustainable services for the poor;
- (b) Ensuring synergies between the artificial and natural environments;
- (c) Monitoring the Millennium Development Goals and beyond;
- (d) Integrating infrastructure and housing.

## **B. Delivering sustainable services for the poor**

10. The Trust Fund will continue to strengthen its core programme area of developing hardware and software models to improve pro-poor access to water and sanitation in human settlements. This will include:

- (a) Promoting efficiency and consistency through pro-poor governance;
- (b) Facilitating community-led sanitation;
- (c) Building the capacity of urban water utilities;
- (d) Linking service provision to income generation.

11. The Trust Fund strives to make a sustainable impact by, first, ensuring the sustainability of the individual pilot initiatives. This includes facilities such as improved toilets and water points, the capacity to build and manage them and institutional arrangements to ensure that they are run well. Communities participate in identifying needs, designing, constructing and managing new services and monitoring results. Second, it works to leverage support through critical pre-investment capacity-building in partnership with regional development banks and other multilateral and bilateral donors. This process ensures that pro-poor issues are included in larger projects but also can reduce project preparation time significantly.

12. In designing the intervention strategy, sustainability is of paramount importance. This translates in a more practical sense to capacity-building for utilities (and other service providers) to improve cost recovery. Many activities developed to strengthen utilities, including work on water operator partnerships, will focus on both operations and maintenance expenses and, where possible, on amortized cost for capital investment. In terms of environmental sustainability, all activities undertaken undergo environmental impact assessments in line with national regulatory bodies, or, if these are unavailable, acceptable standards will be developed by UN-Habitat. In many situations, integrated environmental projects focus on the wider considerations to include elements of natural resources management and catchment protection.

13. Strong partnerships are key to ensuring that gender concerns are strengthened throughout the programme. Working with global partners has also highlighted the need to move from theory to practice. Other stakeholders have the capacity to do this better than UN-Habitat, meaning that the current focus will be on building capacity in international and national non-governmental organizations such as the Gender and Water Alliance and their national-level cooperating organizations.

## **C. Ensuring synergies between the built and natural environment**

14. Sustainable water and sanitation service provision cannot be achieved without integrating broader environmental issues such as energy consumption, transportation and climate change into urban planning and management. Indeed, environmental hazards are responsible for the most common causes of ill-health and mortality among the urban poor. Environment-related infections and parasitic diseases thrive where there is a lack of clean drinking water, sanitation and drainage, and where air quality is poor. They are exacerbated by undernourishment, poor health and inadequate public health services, such as solid waste collection.

15. These problems highlight how disregarding environmental issues has a significantly damaging effect on cities and urban settlements. In response, the Trust Fund programme supports strategic environmental assessment to ensure that the environmental impact of its interventions are identified, assessed and mitigated. The programme also supports interventions with environmental benefits, such as solid waste management, to reduce the spread of diseases and promote income generation through recycling and reuse, aided by innovative and energy-efficient non-motorized transport technologies; improving water quality by developing strategies for pollution control; construction of rainwater harvesting tanks to complement intermittent municipal supplies; local catchment management in cities; promotion of environmentally friendly technologies such as ecological sanitation; facilitation of citizen participation in urban decision-making; and other modest income-generating activities such as water vending and the provision of toilet facilities and biogas.

16. Greater attention is also being paid to the development of approaches to integrate climate change, including adaptation, mitigation and disaster management, into the framework of the strategic planning options and approaches in water utility operation. This will be assessed and developed within an integrated water resource management framework that takes account of long-term sustainability in water resources management and infrastructure development, including locally sustainable community

forestry practices to ensure a more energy-efficient use of biomass. Close attention will also be paid to energy consumption patterns and efficiencies from the supply and demand sides of water utilities and water consumers. This will include working with energy providers to ensure that power supplies for water utilities are available and that the service provided is more energy-efficient. Attention will also be paid to the exploration of biogas options as part of an ecological sanitation approach. In addition, a central component of ecological sanitation is the recirculation of nutrients for wastewater treatment.

17. Opportunities to link this with livelihood creation, such as improved opportunities for urban agriculture, will be explored. There are also many opportunities for carbon trading, particularly in relation to the capture of greenhouse gases in relation to solid waste management and excreta collection and disposal. Renewable energy technologies, such as solar power, wind power and hydropower, are a growing source of supplemental energy for water utilities, and their applications in a variety of service delivery settings will be explored.

18. The issue of nutrient recycling is gaining importance against a background of depleting natural reserves. Naturally occurring sources of phosphate will most likely be exhausted in 15–20 years, with a resulting impact on fertilizer and subsequent food production. The reuse of wastewater, excreta and other biosolids will become increasingly important.

#### **D. Monitoring the Millennium Development Goals and beyond**

19. Data gathering and monitoring is essential in tracking progress towards water and sanitation targets, but also has other important functions in that it helps policymakers and decision makers to improve their performance and achieve results, it enables communities to be better informed and consequently empowers them to demand better services; it provides essential baseline data for advocacy; and it helps to identify weaknesses hindering progress in the water sector. Notwithstanding the importance of adequate and accessible data and how such data can positively contribute to accountability between policymakers, providers and citizens, monitoring is still rarely used to its full potential. Lack of reliable, affordable and accessible monitoring practices continue to limit the potential usefulness of monitoring in bringing safe and affordable water and sanitation to those who need it most. In recent years, the Trust Fund has been honing its capacity in this area, for example, through its continuing involvement in the joint monitoring programme, and more recently through the development of its Lake Victoria monitoring methodology. This methodology enables the collection of relatively low-cost, geo-referenced, ground-level data disaggregated by gender and social and economic group and supported by information on health, the environment and social and economic status.

20. The Fund is working with the Monitoring Systems Branch to apply this area of competency to the development of further monitoring tools that can be used to benefit the poor. Notably, its new collaboration with Google.org aims to combine powerful data collection methodology (such as that developed and tested in the Lake Victoria initiative) with utility benchmarking and citizen-based participatory monitoring techniques to support and empower communities. The initiative will test the usefulness of the internet in democratizing the monitoring process – both by enabling a more balanced collection of information and by making it more transparent.

#### **E. Integrating infrastructure and housing**

21. There is a growing realization that integrated infrastructure provision can be an entry point for slum upgrading and comprehensive urban planning and development. Provision of infrastructure constitutes as much as 40 per cent of the cost of upgrading a slum or establishing a new settlement. New approaches combining affordable and durable housing and infrastructure remain beyond the reach of many urban poor. It is also reasonable to assume that there is a great similarity between the types of novel financial mechanisms needed for both housing and infrastructure provision. Using infrastructure as an entry point for slum upgrading could thus yield huge potential, reducing unit costs and leading to a genuine improvement in the lives of slum-dwellers.

22. The UN-Habitat Global Slum Upgrading Facility is working closely with the Trust Fund. It is designed to mobilize domestic capital for urban upgrading activities. It does so by facilitating links between local stakeholders and helping to prepare local projects for potential investment by international donors and financial institutions and, potentially, investors in the global capital markets with the intent of leveraging further, domestic, capital for slum upgrading. Its key clients are municipal authorities, civil and non-governmental organizations and central government departments, together with the local private sector, including retail banks, property developers, housing finance institutions, service providers, microfinance institutions and utility companies. It was established in 2005 in response to General Assembly resolution 56/206 of 21 December 2001 on strengthening the mandate

and status of the Commission on Human Settlements and the status, role and functions of the United Nations Centre for Human Settlements (Habitat).

### **III. Key issues, stakeholders and roles for effective implementation of basic infrastructure**

#### **A. Local level**

23. Perhaps the most important focus of activity to achieve improved basic services is action at the local level. This, however, requires a suitable policy and legislative environment. In many cases resource constraints restrict the implementation of national policies and strategies. This is typical in the water and sanitation sector.

24. Local-level actions in all subsectors of basic infrastructure require greater engagement with civil society, both in the form of contributing to the design and selection of infrastructure and also in construction, operations and maintenance. To be effective this support needs to be institutionalized at the local level through by-law formation that makes civil society structures part of the solution rather than a problem.

25. In addition, at the local level relationships and responsibilities are complicated, with reform in one subsector influencing the other. For example, the loss of revenue to a local council from water privatization entails fewer resources for solid waste management. This impact is most keenly felt in the smaller urban centres, where the capacity of local authorities and service utilities is weak. In terms of financing, smaller urban areas and secondary cities do not have access to the same financing as capitals and larger cities. There is therefore a need to find a way to catalyse investments. In practice this means selecting the right combination of grants and loans with grants being made available for initial investments in capital expenditure.

26. Another important issue is the need to change the mindset of underserved communities. There is a clear comparison between water and sanitation in this respect. Consumers expect to be provided with water by a utility, whereas they often consider sanitation a personal or household responsibility. Local resources should therefore be channelled into the financing of institutions responsible for advocacy and awareness and provision of support for microfinancing schemes.

#### **B. National level**

27. At the national level, sector reform policies should be developed from working models but with the specific requirement for them to be implementable locally. In many cases this will require the availability of local finance. National sector policies should consider that many aspects of service provision, for example tariff settings, must be determined locally based on the cost of production, operations and maintenance. In many countries national sanitation strategies can help to use available resources, particularly for advocacy, in an extremely cost-effective manner.

28. In regions in which water resources are scarce (or in danger of becoming scarce), water conservation and demand management must be made a prerequisite before any new schemes are developed. In most cases, water that is unaccounted for is in excess of 50 per cent and not only affects reduced revenue but increases operating costs significantly through high power costs.

29. Solid waste management remains the institutional orphan of basic service provision, which makes planning and management in the sector difficult and ineffective. Waste management stands to benefit from the involvement of the informal sector as much and if not more than any other aspect of infrastructure. Waste recycling can provide a sustainable income for a significant proportion of the population. There is also the issue of nutrient recycling, which will become increasingly important as natural resources of phosphorous become exhausted.

#### **C. Regional and international level**

30. There are many opportunities at the regional level for the development and implementation of shared policies and approaches. These may be in response to the need to protect a vital resource from negative environmental impacts, such as over-abstraction from an aquifer or protection of a water source from the impacts of unsustainable urbanization.

31. In the African, Caribbean and Pacific region, key characteristics of the provision of basic services benefit from intraregional exchange of information and experience. Capacity-building for utilities is a good example, where the more experienced can support those lacking capacity. There are also good opportunities to develop regional strategies on issues such as recycling of solid wastes and hazardous wastes, which can seek to strengthen local markets and capacity to recycle while reducing the health risks of transportation of hazardous wastes.

32. There is clearly a lack of resources to attain the Millennium Development Goals pertaining to water and sanitation to a greater or lesser extent in all areas of Africa, the Caribbean and the Pacific. To overcome this obstacle, therefore, financial support from external aid and internal allocation of finances are required. There are significant opportunities for organizations such as UN-Habitat to work more closely with regional financing institutions to support the development and application of new financing models and monitoring mechanisms to ensure not only that the most needy receive services, but also that financial resources are used most effectively. The role of regional and international non-governmental organizations continues to have a significant effect on the sector and their experience and support is vital. One of the main contributions that such bodies can make to development efforts is by fostering a better understanding of the civil society sector and other key stakeholders and promoting partnerships.

## **IV. Conclusions**

### **A. Role of central Governments**

33. Resources to attain and indeed exceed the Goals require additional support from both bilateral and multilateral financing organizations but, more importantly, this must be matched with greater allocation of internal funds, both at the national and local levels.

34. To increase sector support, advocacy interventions should focus on those decision makers and political leaders who work in related sectors and outside the sector. For example, convincing educationalists and health professionals of the need for improved basic services will directly affect service delivery and capacity to deliver. Similarly, convincing ministries of finance and planning of the importance of basic services and the contribution that they make to development could improve financial flows.

35. Linking income generation to the provision of basic services can have the combined effect of improving service coverage and engaging the poor and unemployed. Good examples are the role of small-scale service providers, waste recycling organizations and sanitation service providers. This is particularly important in peri-urban areas of large cities where a symbiotic relationship can exist between the urban poor and the wealthier, in the same city.

36. Provision of basic infrastructure represents around 40 per cent of the cost of slum upgrading. UN-Habitat is exploring ways of using infrastructure provision as an entry point for slum upgrading, whereby infrastructure provision is used to forge partnerships to deal with other key issues in slum communities including land tenure and security.

37. Perhaps the most important observation is that there is a need for improved ministerial coordination to ensure that resources are used as effectively as possible and avoid duplication and what could be termed "turf wars". In many countries, ministries of water, local government, urban development, environment and health all contribute but in some cases do not work for the common good. Progress has been greatest in countries where sanitation ministries have been established. Solid waste management is a good example of an institutional orphan and increased attention should be paid to the development of the sector.

### **B. Role of local authorities**

38. The role of local authorities centres around their ability to engage civil society better. The need will be greatest in the smaller urban centres where local authority capacity is weakest. By forging partnerships at the local level and institutionalizing key multi-stakeholder groups, the selection of basic service levels, ability to pay and performance monitoring and feedback will greatly improve delivery within available resources.

39. There is a need to ensure that local authorities and related local institutions understand their role in the development of national legislation related to regulation and that rules and regulations are enforced more effectively at the local level.

**C. Role of civil society**

40. The role of civil society in service delivery cannot be questioned. Not only does it play a key role in selection, design and often construction of basic infrastructure services, but also it is increasingly being recognized as a key player in the governance of adequate service provision. As communities are empowered, they have a role to play in lobbying local authorities and making them more responsive, particularly to the needs of the poor. Their role in advocacy cannot be understated.

**D. Role of the international community**

41. The international community continues to play an important role in the delivery of basic services. Aside from highlighting and documenting good (and bad) practices, it can promote improved partnerships between service providers and consumers. There is a good opportunity to develop new tools and approaches to both delivery and monitoring of services and investments, particularly in the critical area of pre-investment capacity-building. Good examples include the phasing of capital investments, improved linking of capacity-building and capital investments and integrating infrastructure and shelter. This should be focused on the lending institutions and government ministries.

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