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## CAPACITY BUILDING FOR HUMAN SETTLEMENTS

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- Issued as submitted.

- The views expressed in this paper are those of the author and do not necessarily reflect those of the Economic and Social Commission for Western Asia.

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# **Capacity Building for Human Settlements**

## Training And Education In Urban Development, Housing And Architecture In Developing Countries

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### **Introduction**

The purpose of this paper is to look at education and training in urban development, housing and architecture in and for developing countries. Traditionally these aspects have been associated with architects and planners, and their training and education shall, therefore, be the focus of this paper. In doing so, the paper will look at the training of architects and planners to see the extent to which their training is appropriate for and relevant to the housing and urban planning needs of the developing countries. The paper will then go on to examine the new and emerging trends in housing and urban development, including those advocated by the Habitat Agenda and the accompanying Plan for Action, and analyse the training that would be required for architects and urban planners to respond adequately to these. The paper will look at new and innovative training responses that will need to be incorporated by training and educational institutions, and concludes with identifying the pre-conditions required for the implementation of these methods and approaches.

### **Background**

The Habitat Agenda was drawn up by the United Nations' Conference on Human Settlements (Habitat II) held at Istanbul in June 1996 for a Global Plan of Action to address the two themes of adequate shelter for all and sustainable human settlements for development in an urbanising world. Coming as it did, at the end of a series of UN meetings addressing a range of development issues, starting with the Conference on Environment and Development in Rio, through the Conferences on Women in Beijing, on Population in Cairo and Social Development in Oslo amongst others, it represents a wide ranging and far reaching set of actions. While consolidating and reaffirming some of the principles elucidated earlier, most notably as part of Agenda 21 and the Rio Declaration, it also recognised and instituted a number of approaches and objectives not yet in general currency, but that were part of an emerging consensus.

Much of the Agenda is of course to do with objectives to be worked towards and approaches to be adopted rather than rigid formulae to be applied. Although there are indications and suggestions as to how the intentions and the objectives of the Agenda might be achieved, there is no guarantee that it can be. While recognising a shortage of resources, the Agenda suggests that by far the greater shortage is that of political will, appropriate organisations and managerial know-how rather than of finance and materials. In this context, the capacity and capability of organisations, institutions and individuals become crucial to the success or failure of the Agenda.

The Habitat Agenda recognises this, and there are constant and consistent references to the need for institutional strengthening and capacity building for the wide variety and range of actions being promoted. Particular emphasis is placed on capacity building because of the reaffirmation of the principles of decentralisation, of local actions and of the need for partnerships between the public and the private sectors and the NGOs and households. Much of the insistence on decentralisation, on localised action and local solutions involving partnerships with the private sector and with households is in response to the overwhelming evidence that governments have neither the capacity nor the capability to even attempt to provide adequate shelter for all nor to ensure the development of sustainable settlements.

The Habitat Agenda is aware of the scale of the activity required as well as the fact that many of the activities and in particular, the approaches being advocated have not formed part of the tradition of governments and their institutions. On both counts, therefore, the need for capacity building is both fundamental and urgent.

### **Planning and architectural education in and for developing countries**

Apart from a few isolated instances, the formal training of architects and planners is of very recent invention, the overwhelming majority of the schools of architecture and planning having been established after the Second World War, and most in the last two or three decades. One reason for this stems from the changed need and demand for their services. Until the relatively recent phenomenon of urbanisation, few developing countries had more than a fifth of their population in urban settlements<sup>1</sup>.

The majority of the world's population lived in rural settlements whose planning, layout and structure had probably not changed too much over hundreds of years, nor had the design, construction or materials of rural housing. Indeed, the majority of "urban housing" was virtually identical to rural housing in terms of design, construction and materials, but built at a higher density and usually not as well maintained.

### **The Training of Architects**

For a building type that was relatively unchanging over the years, there was no need for an architect. At best, a master-builder or master-craftsman who had some understanding of crafts other than his own, was sufficient, though most households managed their housing without even employing that professional. The architect was needed only for the exceptional or public building, which too, for the most part, followed old and established traditions of design and construction, and the skills required were best learnt through a system of apprenticeship.

With the advent and introduction of new or imported building materials and the emergence of new building types – the railway station, the electricity, water or sewage pumping station, there was the need to employ a specialist. These services were initially most likely to be supplied by the engineer (for most of these buildings were adjuncts to a service designed, installed and operated by engineers). To this day,

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<sup>1</sup> In 1951, only 21% of the world's population lived in settlements of 20,000 or more, and 28% in settlements of 5,000 or more. In a couple of years, the majority of the world's population will be urban.

in most of the ESCWA region, it is the engineer and not the architect, which has the status and seniority in public if not private building and construction works.

The architect emerged (in the UK at least) as the buffer, between the gentlemen who wanted to have their houses built but did not want to have to deal with the tradesmen. The architect was at home in the drawing room and could understand the needs of the client, translating them into drawings for the contractor whose work he would also supervise on behalf of the client. The architect thus became associated more for his drawings than for the actual construction, which was after all, seen to be done by the engineers and the contractors. This image, of the architect being an artist, responsible for the looks, or the façade of the building, is another one that has persisted.

The initial training of architects was naturally based on preparing them for this role. Though architects had to learn about structures and plumbing, this was not to replace the engineers, but merely to be able to better supervise or instruct them. The real emphasis was on drawings and “selling” them to the client. Thus, the training started off by drawing simple buildings and progressed year by year for four or five years, by the end of which a design for a complex building (a hospital or an airport perhaps?) was produced. A unique feature of an architect’s training was the “selling” session, usually called the presentation to a jury (or just “the jury” for short), where the student pins up her drawings and talks about them to a small group of assessors. Since most of this is based on “art” rather than scientific fact, the jury is swayed as much by beautiful drawings and slick talking as anything else.

Over time, the major change in architectural education has been a shift away from copying or learning from the work of “the masters” or the classical Greek orders and principles<sup>2</sup>, in favour of developing unique solutions in a style that is not expected to be beholden to anyone. The other change is that today’s architectural students are much more concerned with “mass housing” than perhaps their predecessors were. However, just like them, the subject is treated as a spatial, 3-D, design puzzle, with only a superficial acknowledgement of the social and economic realities that perpetuate housing shortages.

### **Architectural Education in Developing Countries**

Over the years, a number of architectural schools have been opened in developing countries, based, for the most part, on models in Europe or the United States. With a very few exceptions, mostly in the private sector, these are based at universities, usually in departments or faculties of engineering. Most architectural courses require five years of study, often needing another year or two of work experience before allowing professional practice.

In 1992, the Aga Khan Trust for Culture commissioned a study of schools of architecture in the Muslim world, which covered over 100 schools in 28 countries,

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<sup>2</sup> On a visit to the Department of Architecture in the Faculty of Engineering in the University of Baghdad, in 1974, I found the corridor walls covered by beautifully drawn plans, sections and elevations of classical Greek and Roman buildings, but not a single one from the Islamic world!

including of course, all those in the ESCWA region<sup>3</sup>. Since this is one of the few such surveys done, it is worth looking at and quoting at length.

“Architectural education in Muslim societies has generally remained influenced by foreign and alien reference points. There has been a total failure to adopt to local culture, socio-economic realities (or) even the climatic factors of the area. Some schools have tried to introduce (relevant) courses here and there, mainly on climatology – the other areas remain neglected or if tackled, lack depth and seriousness. For most schools, the starting point and basic reference of architectural design remains the concepts of the four pioneers of modern architecture, Gropius, Mies, Corbusier and Wright. The admission criteria and the manner of teaching has only helped to produce elitist architects to serve the few: the life and environment of the urban poor and rural masses remain unaffected by the work and training parameters of the architects in the Muslim world. The emphasis is either on luxury projects, aesthetics-based exercises and on a project methodology divorced from the virtues and spirit of the traditional habitat and the socio-economic parameters and realities of today.”<sup>4</sup>

In summarising its findings on the Middle East Region<sup>5</sup>, the Survey reports that the majority of the curricula and training programmes of the schools are patterned on the model of the *beaux-arts* with an emphasis on the aesthetics of the spatial and built form, although there is a growing concern amongst the professionals and some academics that the study of architecture should not be divorced from socio-economic realities.

Despite their numbers in some countries (over 6,000 in Egypt and some 2,500 in Iraq) architects still do not have a professional body of their own to represent their interests, or regulate their profession. Instead, architects can register with the Union of Engineers. In most of the academic institutions, the staff is not allowed to engage in professional practice, nor does architectural work count towards staff promotions. In many cases, however, staff does practice on the side.

Most schools of the region remain without an identity, teaching philosophy or clear goals. The general strategy is to have a project-based (design-based) approach to teaching. Some of the schools have irrelevant and outmoded curricula and teaching programmes. For instance, in Egypt the curriculum has not changed for 70 years. Most schools have a rigid curriculum and options are rarely permitted. Many have very poor facilities, and libraries are poorly stocked, often been inaccessible to the students. Only a few schools require students to do any practical work, and even that is usually in the form of a summer attachment at an office. Except for Jordan, the schools do not have site visits, nor do they take advantage of visiting other countries

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<sup>3</sup> *Architectural Education in the Muslim World: Country and Regional Survey*, in 2 volumes, Aga Khan Trust for Culture, Geneva, 1992.

<sup>4</sup> *ibid*

<sup>5</sup> The Survey uses this to cover Egypt, Iran, Iraq, Jordan, Lebanon, Palestine, Saudi Arabia, Syria, Turkey, UAE, and the Yemen. In citing the Survey for this paper, the material has been edited to exclude Turkey and Iran.

in the region. Entrance to most schools is based on the same criteria as for engineering and is generally dependent on the marks in mathematics and physics. Architectural aptitude tests are virtually non-existent.

The majority of the schools are owned or directly controlled by the State, and charge no or only nominal fees. In most cases architects earn less than other professionals with similar lengths of training and do not have a high social status generally. The number of women entering the profession has been increasing, and in countries such as Iraq, there has also been an increase in women staff members.

### **The Training of Planners**

Planning education has a similarly disappointing track record. Urban planning has its foundations in the ideas of Ebenezer Howard, essentially as a counter to the increasing growth of cities. From the earliest post-industrial age, the rapid increases in urban population were accompanied by an increase in densities, shortages of accommodation, poor services and infrastructure leading to an increase in health risks and anti-social activities. One reaction to this phenomenon was a yearning for the "idyllic life of the countryside". Romantic notions of the harmonious rural lifestyle were contrasted with the realities of life in the cities, and led to the Garden City movement of "cities within the country and the country within the cities". To complete the picture of the ideal living, a number of moralistic codes of conduct were drawn up for the residents of the earliest Garden Towns. None were able to fulfil their promise or flourish.

Nevertheless, the idea for the need to control urban development, to counteract the greed of the speculative builders, as well as to control the spread of disease and crime, legislation was framed laying down standards and guidelines for the planning and development of urban areas. The real boost for urban planning came after the Second World War as the opportunity was presented to redress some of the poor design and layout of towns. Planning legislation multiplied and the need for planners boomed. Most post-war planners came from an architectural background, but it soon became obvious that urban planning required skills and understanding that architecture alone did not possess, and sociologists, economists, geographers and other linked disciplines were brought in to make a contribution.

The earliest planning schools were post-graduate departments that required entrants to have a first degree in one of the linked disciplines. There was, and continues to be, an at-times bitter debate as to whether anyone other than an architect-planner has the necessary skills to lead an urban planning team. Within the schools, it was obvious that it was easier for architects to read social science texts and acquire a working knowledge of the social sciences than it was for non-architects to acquire design and drawing skills. Schools of planning came to be dominated by social scientists, more intent on pursuing the social science research required for advancement and promotion than honing their spatial planning skills.

Unlike architecture, planning was largely taught at a post-graduate level, and therefore there were far fewer schools of planning established in the developing countries than there were schools of architecture. However, as with architectural schools, teachers of planning drifted further away from planning practice, and it was

schools of urban studies rather than urban planning that flourished. The basis of a lot of urban planning education was the urban plan, and planning students were taught how to initiate and develop new urban plans. Many of the cities around the world went through exactly that process in the 1950s and early 1970s. Expatriate teams of planners, who were often British, having gained their experience and expertise in UK's local authority planning projects, undertook most of this work.

By the time urban planning was being exported to the developing countries, the Master Plan as a product was shown to be unworkable, but the basis of planning education was still of trying to envision and direct the wholesale development of urban areas, and conceptually, urban planners were still learning how to be comprehensive in their planning approaches. Spurred to obtain a planning qualification by the prospect of doing comprehensive urban planning, the work that most graduates were being asked to perform in practice was in planning and development control.

In the mean time, however, urban planning, in common with other notions of centrally controlled planning, was being abandoned and derided for being irrelevant. Planning, according to the new political thinking that was gaining ground, got in the way of the market, and therefore hindered development. What cities needed was not urban planning, but better management. As the role of the State was curtailed, so was that of planning. By the end of the 1970s, many schools of planning had more members of staff than they had students.

### **Professional Training**

In both architecture, and to an even greater extent, planning, graduates from architecture and planning schools are not being equipped to deal with the problems that their professions have to confront in the developing countries. In the case of architecture, many schools in the UK openly acknowledge that they are not producing students that can go and become productive on their first day at an office. They claim that they are producing designers with problem-solving skills, able to tackle a range of problems, not necessarily limited to building and construction. It is considered the role of the architectural practices to provide the necessary professional input. This is acknowledged and is allowed-for in the two years of "professional practice" required of architects.

The professional training of architects in the UK is guided by a system of apprenticeship that provides for a two-way "contract" between architect and trainee under which the office agrees to provide opportunities to experience at first hand the range of activities of an architectural practice. Few architectural institutes or certifying bodies in developing countries include such a systematic exposure and introduction to architectural practice, despite having imported an architectural curriculum based on that of the UK.

Whereas a similar in-service process exists for the professional training of planners, it is not as rigorous as for architects, and it is possible to get into practice without having gone through it. In reality, most planners enter practice through one of the specialist fields, and gradually broaden their areas of operations. Thus most will operate as sociologists, economists, demographers rather than planners covering the whole



area of operations. Again, the situation regarding planners trained for developing countries probably suffer a fate similar to that of the architects, in that there is not the support infrastructure to provide them with the necessary in-service training to operationalise their training.

One consequence of the lack of availability of suitably trained and experienced architects and planners in developing countries has been that most projects funded or assisted by external aid and development agencies have been accompanied by technical assistance in the form of foreign experts brought in to undertake the project design. To help rectify the lack of indigenous skills or expertise, such assistance has increasingly included a training component.

### **In-Service Training**

Particularly for planning professionals, project-related training has been of far greater importance than that provided through academic institutions, both in terms of the numbers trained and the amounts spent. Under this rubric, three training modes have been prominent. The first, perhaps least used and therefore affecting the least number of planners, has been the use of project funds to send project or project-related personnel on training (abroad) to an academic or professional institution. To the extent that such training has been at a conventional academic institution, the observations above regarding the irrelevance and inadequacy of such training apply just as much. Very rarely has such training been "tailor-made" for the job, since the very basis of academic education is that in order to deliver a known quality, it is designed to satisfy its own standards and criteria and not amenable to modification to suit the trainee.

The second, more common mode of project-related training has been through on-the-job training. Here, the planner providing professional inputs to the project is also charged with the task and responsibility of training the "counter-part" staff. While such a method has much to recommend it, and is to an extent the basis of the original master-apprentice schema, in practice it has not been very successful. First of all, the professionals brought to work on the project are selected on the basis of their planning skills and not on their ability to train. Secondly, the performance of the professionals, and indeed that of the project as a whole is dependant upon the quality and output of the project, especially against time and financial budgets, and not on the level and quality of the training imparted. Therefore, where there is conflict of interests, the training suffers. This is especially noticeable as projects begin to draw to a close and there is the inevitable last minute rush to complete on time. Training is only felt to be getting in the way. Secondly, the "counter-part" staff has little in common with the expatriate professionals either in terms of goals and objectives or status and remuneration. Often, both parties are quite content if they have little to do with the other. The expert can get on with her work, and the trainee can slip away to attend to the many demands of daily life. Moreover, the reality of the project means that there is no time for any genuine apprenticeship learning. There is just not the time to respond to the trainees' needs. In any case, there is usually no explicit programming or methodology for the training, and it is presumed to take place through some osmotic process whereby the trainee acquires skills and knowledge through the very fact of being in close proximity to the expert.

The third and perhaps most popular mode is the “study tour”, whereby the counterpart staff are sent to the expert or the donor’s country to see “how things are done”. The study tour may be brief, or extend to a few months, turning into an “attachment” where the trainee “shadows” or works alongside an experienced professional. Study tours can of course be very effective if there is a programme of things to see at first hand that are appropriate. Often, the working environment and the support structures are so different, and the actual work or practice so removed from the project’s tasks, that there is little or no learning to be had. On the other hand, the brevity of the tour makes it ideal for the busy executive who does not want to spend too much time away from his native work environment. The study tour thus becomes a mere junket, designed to act as a tourist, sightseeing or shopping trip rather than a vehicle for serious learning. Of course it has the merit of being relatively easy to mount and therefore has come to be quite widely used.

### **The Relevance of Training and Education**

Overall, then, despite the exceptions, it is true to say that the general quality and content of the training of architects and planners in and for the developing countries is inadequate and inappropriate. It is inadequate to face the size and scale of the task facing them and it is inappropriate for the nature of the task.

At the same time, unfortunately, the evolution and trend of education generally is in a direction that is going to increase rather than decrease the distance between the training offered and the training needed. On the one hand, academics are under pressure to undertake research in order to advance their careers since “practice” is not taken into consideration when evaluating an academics’ performance, even in practical subjects such as architecture and planning. Research naturally leads to specialisation, and the universities are tending to disaggregate the original broad-based fields into ever finer, narrow fields. On the other hand, employers who use educational qualifications as a convenient if inappropriate screening device drive the demand for higher education, especially at the post-graduate level. Thus whereas previously a BSc or an MSc would have sufficed, employers are now looking for a PhD, even though the very nature of a PhD tends to narrow rather broaden the mind. Architects and planners wanting to do a Doctorate, when their only interest and sole reason for doing so is to obtain a job are thus approaching the universities. With neither the interest, nor the skills, much of the research effort is abortive, and the overall quality of the output lower than it ought to be.

As one of the background studies done for the Habitat conference states: “Governments and international agencies are responding to the great lack of adequately trained and qualified personnel for settlement management and development and many new approaches have been developed to make training more relevant to addressing the wide range of settlement problems.... However, the scale of support for training from governments and international agencies remains far below that needed. In addition, much of the training remains inappropriate to the tasks that the personnel will face when they work in institutions for settlement management.”<sup>6</sup>

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<sup>6</sup> UNCHS, *An Urbanising World: Global Report of Human Settlements*, Oxford University Press, 1996

The document goes on to say that “a scarcity of adequately trained, qualified personnel - for policy, management and technical aspects - has long been one of the main obstacles to the improvement of human settlements. This is especially the case at local (for instance district or municipal) level. The need to address this scarcity has become even more pressing since (the) mid-1980s as a result of various global developments.”<sup>7</sup> The next section looks at some of these developments and their impact on the training needs for shelter and human settlements.

### **New and Altered Training Needs**

Over the last decade, there has been a growing consensus regarding the role of governments vis a vis shelter and settlements, not just in terms of what should be done, but much more importantly, in terms of the way it should be done. With the collapse of the “alternative” of the Soviet model, there has been a downsizing in the overt role of government, and an increased reliance on the market to provide basic urban and social services. Although ideological rhetoric rather than economic or social efficiency or effectiveness has driven much of this change, the underlying ethos has become fairly widely accepted, in word if not in deed.

As a consequence, there has been a concerted effort by the development agencies to incorporate the new wisdom into its aid and technical assistance programmes around the world. Although there is as yet little evidence that the new approaches will be any better at making an overall impact on the problems of the developing countries, or even that they can in fact be implemented on a large enough scale, for the moment we appear to be locked in it. Either the approach will be modified and evolve into something genuinely workable, or will be replaced by another. In any case, for the foreseeable future, the new global agenda seems to be firmly in place.

Amongst the trends implicit in the emerging approach, the following can be identified:

- The failure of central governments to deliver the goods and services to their populations, coupled with an illdisguised show of ostentatious spending by government on politically motivated or personal aggrandizement schemes, resulting in huge debt burdens has led to calls for a decentralisation of government powers and functions. The inability of centralised government to generate or mobilise the necessary resources has also led to calls for the greater involvement of the private sector, and there has been an increase in the demands for new public-private partnerships. Therefore, new roles and responsibilities have been placed on local governments both to generate their own resources and to identify and deal with local problems.
- In the face of widespread failures of large projects, and of governments to solve the problems of poverty, unemployment, infrastructure provision and environmental degradation, the success of a number of small, NGO or community-led, local efforts to reduce poverty, upgrade communities and improve the environment have been hailed as the new way forward. At the Rio conference, the need for local

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<sup>7</sup> *ibid*

involvement and action was embodied into the recommendations of Local Agenda 21. As a result, there is an increase in the need for far more effective local response to environmental degradation and to poverty (and, in many countries, to the social impact (of structural adjustment)).

- With the inevitable shift to an urbanised world, with the majority of populations living in urban areas, the role of cities as engines of growth has gained greater acceptance. Cities are far more likely to be able to generate the human and material resources required for development, through the creation of new and expanded employment opportunities. However, this requires a better understanding and implementation of urban development policies and programmes to ensure that the required infrastructure is in place. The role of urban planning as facilitators of development rather than of development control is one that is largely unknown to the profession.
- On the other hand, with the increase in urban populations, there is also the awareness of extent and depth of urban poverty. Up to very recently, the emphasis of anti-poverty and poverty-alleviation aid and assistance had been strictly directed at the rural areas. Our understanding of how to tackle urban poverty and its impact is less well understood, and there are many problems that remain poorly addressed including urban violence, poverty and homelessness, and of the social and economic strategies needed in urban centers or particular city districts that have lost their economic dynamism.
- Over the years, the awareness of the worlds' limited resources and the need to make the most effective use of them has led to calls for sustainable urban development. This calls for a major departure in the way that projects are conceived and devised, in the way that water and energy are used and treated. Decentralisation and more localised intervention often make it easier to develop more sustainable responses. However, the involvement of new and multiple actors into the development process increases the importance of integrating sustainable development issues into public policy on public/private partnerships.
- Increasingly there is a new and greater awareness of gender discrimination and the need for new responses to address this in housing, transport, settlement and environmental policies. Architects and planners have not really been trained to understand how their designs and proposals either fail to identify the needs of women, or address their particular needs. Indeed, the lack of awareness has often led to schemes that in fact increase gender discrimination and make it even more difficult for women to participate fully in shelter and urban development programmes. Such discrimination also fails to capitalise of the considerable resources commanded by women that could be mobilised to advantage in a more gender-aware and sensitised approach.
- With a shift towards a reduction of direct government intervention in the provision of shelter and urban development, and an increase in public-private and public-community partnerships, the whole issue of participation has taken on a new significance. Architects and planners have long been advocates and indeed practitioners of "the consultation process", and the involvement of "the client" in design and other decision-making processes. However, participation calls for more

than mere consultation or being offered a choice of alternatives. There will be increasing demands placed on governments at all levels by non-governmental organizations community-based institutions, women's groups and the private sector for much broader participation in development decisions and actions.

## **The Habitat Agenda**

These new developments have been recognised and formalised by incorporation into the Habitat Agenda and its programme for action, as can be seen from the following sections:

### **4. Human settlements management**

183. Local authorities and others involved in human settlements management need to draw on the skills and resources of a diversity of people and institutions at many levels. The scarcity of suitably qualified personnel and the weakness of institutional systems and technical capacity are amongst the main obstacles to the improvement of human settlements in many countries, particularly in developing countries. Capacity-building and institutional development strategies must form an integral part of human settlements development policies at the national and local levels. In addition, the use of new skills, know-how and technology in all aspects of human settlements planning and management will be necessary. In countries where changes in human settlements patterns are rapid, resulting in socio-economic and environmental challenges, there is a need for Governments and the international community to ensure effective and efficient development and transfer of leadership skills, planning and management expertise, know-how and technology.

#### **ACTIONS**

184. To facilitate capacity-building and institutional development for the improvement of human settlements planning and management, Governments at the appropriate levels, including local authorities and their associations, should:

- (i) Support training programmes for administrators and civic officials at all levels, and for all other key actors, as appropriate, to enhance leadership qualities and promote the inclusion of women and young people in staff structures and decision-making;
- (ii) Consider establishing private-public, community sector, business and economic forums to exchange management know-how and experience;
- (iii) Promote comprehensive training, education and human resources development policies and programmes that are gender-sensitive and involve local authorities and their associations/networks, as well as academic, research, training and educational institutions, community-based organizations and the private sector, focusing on:
  - (i) The development of a multisectoral approach to human settlements development that includes the unique contributions and institutions of indigenous and immigrant people;

- (ب) The training of trainers to develop a core capacity for institution strengthening and capacity-building that includes gender awareness and the needs of children, youth and the elderly as integral components;
- (ج) The development of local capacity to define needs and undertake or commission applied research, particularly with regard to age and gender-sensitive analysis, social and environmental impact assessments, shelter strategy formulation, local economic growth and job creation, and to incorporate the findings in management systems;
- (iv) Develop information systems for networking, for accessing resources in a timely manner and for the exchange, transfer and sharing of experience, expertise, know-how and technology in human settlements development;
- (v) When appropriate, encourage, within the context of transparency and accountability, as appropriate, the involvement of private-sector authorities, including non-governmental organizations, in improving public-sector management and administration and the formation of entities that are public in their function, private in their management and public-privately funded;
- (vi) Consider developing mediation programmes to resolve conflicts, including those between competing actors over access to and distribution and use of resources in human settlements and train civil society in their use;
- (vii) Be encouraged to increase their knowledge about eco-cycles involving their cities so as to prevent environmental damage;
- (viii) Integrate gender sensitive policies and standards in each of the categories above, if not already specifically, indicated.

## **5. Metropolitan planning and management**

185. Although the managers of human settlements face many common challenges, those responsible for the management and development of metropolitan areas and mega-cities face unique problems caused by the size and complexity of their tasks and responsibilities. Among the characteristics of metropolitan areas that require special skills are increasing global competitiveness; their ethnically and culturally diverse populations; large concentrations of urban poverty; extensive infrastructure networks and transport and communications systems; their strategic role in national, regional and international production and consumption patterns; economic development, trade and finance; and their potential for severe environmental degradation. Large metropolitan areas and mega-cities also represent the largest potential risks of human, material and production-capacity loss in the case of natural and human made disasters. In some countries, the lack of a metropolitan-wide authority or effective metropolitan-wide co-operation creates difficulties in urban management.

### ACTIONS

186. To address the special needs of metropolitan areas and (the needs of all

people living in those areas, Governments at the appropriate level, including local authorities, should:

- (i) Promote metropolitan-wide and/or regional planning, development and management strategies that address all aspects of urban activities in an integrated manner and that are based on agreed outcomes for the metropolitan area;
- (ii) Incorporate a gender perspective in policy, planning and management strategies;
- (iii) Adopt and apply metropolitan management guidelines in the areas of land, environment and infrastructural management, as well as finance and administration;
- (iv) Monitor and analyze the effectiveness and efficiency of metropolitan structures and administrative systems and incorporate the results in policies for dealing with macroeconomic, social and environmental issues;
- (v) Create a legislative framework and adopt organizational structures that ensure coordinated, efficient and equitable service delivery, resource mobilization and sustainable development throughout metropolitan areas;
- (vi) Strengthen, as appropriate, the capacity and mandates of metropolitan authorities to deal effectively with, or respond to, issues of regional and national importance, such as land and property rights of women, land management, energy and water resources management, environmental management, transport and communications, trade and finance, adequate social services and infrastructure and access to them, and social integration;
- (vii) Develop or, where necessary, create a core of professional staff that includes women, trained in the areas of urban planning, environmental management, engineering, and transportation, communications, social services, development of primary infrastructure, and emergency planning, and with the skills to work together to address major planning issues in an integrated way;
- (viii) Facilitate and promote policy dialogue, both nationally and internationally, and the exchange of experience, expertise, know-how and technology among metropolitan authorities in such areas as transport and communications, water management and waste-water treatment, waste management, energy conservation, environmental management, and social welfare that recognizes women and marginalized groups;
- (ix) Look for value driven solutions to urban problems that extend out of ethnically and culturally diverse populations, rather than relying on new technologies alone.

### **Emerging Needs for Training**

While a few of the above items are directly related to and fall within the competence of architects and urban planners, it is clear that the greater majority do not. The question that raises is: in whose competence do these fall? It is our contention, that

the training and education of architects, and in particular urban planners should be modified and expanded to include and incorporate much of the above area of action. There are two reasons: one, that there is no other professional group equipped and trained to undertake these actions, and that therefore there is a vacuum which needs to be filled. The other reason is that since only a small fraction of the above agenda coincides with the conventional area of concern and competence of the planner, there is a danger of planners losing out their right to be involved in the future development and direction of cities. Unless urban planners take on the new agenda, they will be sidelined by urban managers, a new and up-coming profession that has the potential to extend its competence to encompass the new urban agenda.

In charting a course for the new directions required for the training of architects and urban planners, we need to examine three different aspects. First, the subject matter, secondly the methods of training and third the implementation of the new training proposals.

### **Training Needs for Architects**

However, in order to proceed with an examination of these aspects, we need to redefine or at least clarify our understanding of the terms architect and planner. The traditional architect is someone who is trained to design buildings for a client who is also, by and large the main user of the building. Increasingly, in areas such as housing, this is not the case, especially when considering mass or public housing. Here, the client, that is the person commissioning the architect and paying her fees is unlikely to be the main user of the finished buildings. Not only because of their number, but because the client is in fact acting on behalf of the users either as their agent, or more likely, as a professional responsible for administering or managing the project. Very often, that individual has little or no direct contact or knowledge of the eventual users. In many cases, the actual users are at that point not known other than, perhaps, as a class, type or group.

Another change from the conventional architect is in terms of the contractor. Again, rather than being an organisation or individual responsible for the execution of the architect's project, the implementation of housing projects are as likely to be done through self-help or self-managed processes controlled by the household. The project is more likely to be a process, without a known start or finish date, and perhaps even without a clear idea at the start, of the eventual size and extent of the building.

In reality, it is likely that rather than replacing the conventional architect, we are envisioning something that could be better described as a specialistaion or a variant on the theme. Such a professional may perhaps be better described as a community architect.

All architects need to be better trained to respond to their local environment, both in terms of the physical, and material environment, but also in terms of the socio-cultural environment. We have seen that the current training of architects pays little or no attention to these matters, and that most curricula are based on exogenous models. Thus the training of all architects needs to incorporate a greater focus on the actual conditions they are designing for, including, climate, building materials, construction



technology and the capability and organisation of the construction industry. They need to be much more conscious of the economics and financing of construction, not just the building costs.

Architects need to be trained to design for their own societies and be able to respond to the needs of their own culture. This requires a more ethno-focused approach to the teaching of history of design or the history of architecture. In many instances, this will require an examination of the current state of architecture and building design in their own context. We are not saying that an architect should not be aware of the global history of architecture, but that an architect should be able to start with an understanding of his or her own reality and be able to put that in a global context rather than being taught a history of architecture that starts with the modern movement and finishes with post-modernism, that has to be learnt through books and has little or no relation to the stock of buildings that make up the local environment.

Community architects need to be equipped with a range of new tools and techniques that allow them to better understand and respond to the needs of the community. Perhaps the most critical here is the training that would enable them to communicate with groups rather than individuals. This means an increase and improvement in their understanding of sociology. They would also need to have a better understanding of the coping strategies and mechanisms employed by the poor in society. Community architects would also need to learn to design with their clients instead of for them. This could well include learning to design without drawing, using actual furniture and equipment to help visualise the possibilities. They would have to learn how to design for a flexible, open-ended process instead of a project. They would need to have a better understanding of the mechanisms and the ways people use to finance their housing. They would need to improve their communication skills, learning how to develop consensus, how to arbitrate and mediate and how to motivate and mobilise.

### **Training Needs for Planners**

As with architects, while there will continue to be the need of urban planners concerned with the design and layout of new settlements, there is the need to have planners that focus on the planning and development of local areas. Like community architects, they would be more geared to developing community, both as a local area and as the group of people occupying or using it.

As with architects, there are subjects that all planners need to be more concerned with and trained in, alongside the traditional curricula. There needs to be a new emphasis on the management of settlements in addition to the planning and preparation of new capital projects. This also needs to include a greater emphasis on the operation and maintenance of existing infrastructure and other assets. Issues of sustainability need to be incorporated and included in the training of planners. Perhaps there needs to be a stronger emphasis on the needs of people, particularly of the poor, rather than on the needs of the car. Transport needs to be looked at both as a means of enabling people to get from one place to another, and in terms of the employment it generates and the effect it has on the economy as a whole. Employment and income generation need to become far more central to the concerns of a planner than they are currently. The use of incremental development needs to be built in as a development process instead of assuming a project-based solution. Planners need to take into account cost recovery

and financing mechanisms for both public and community works. Planners also need to be made more gender aware as well as taking into account the needs of disadvantaged sections of the population.

For developing community, planners need to have better communication skills, and to be trained in participatory techniques for the whole of the planning and development process. The financial implications, in terms of both costs and the likely returns from urban development or upgrading should be an integral part of the training. Recognising and dealing with political organisations and processes, as well as the ability to organise and motivate community groups needs to be included in the curriculum. Understanding and being able to generate and mobilise collective, co-operative and partnership ventures is another essential area for planners. Community planners should also be taught how to enable communities to exercise greater choice and control over their own environment.

### **Responding to the Emerging Training Needs**

In terms of training methods, there are a number of new initiatives and approaches that have been successfully tried for both professional (academic) and in-service training. These can be developed and used to deliver training that is more appropriate for architects and planners that responds more effectively to the future trends and directions. Amongst these innovative and effective training methods are:

- Courses that are designed in response to demand rather than delivering a content that is based on the needs or capacities of the staff of the training institution. The current practice is for academic institutions to offer either “traditional” courses based on an established curriculum, or to offer “new” courses that reflect the interests of one or more members of the faculty. These are likely to include some of the issues that are topical, but by the time the course has been adjusted to meet academic criteria, its relevance and perhaps even topicality usually diminishes. This is particularly true for “degree” courses, which are also bound by length and timing, as well as entrance qualifications and examinations. However, there is scope in many of the rules and regulations even of the staidest of academic institutions that would permit a much more flexible approach. For example, it is possible to modify course lengths and attendance criteria so that the participants do not have to leave their work places for a year at a stretch. It is also possible to put together a modular package that cuts across normal course and discipline boundaries to suit particular needs. More importantly, it is possible to tailor-make courses specific to the exact and particular needs, if not of a student, then certainly that of an institution or a country. Perhaps the only constraints being that of ensuring that sufficient numbers take up the tailor-made course to make it financially viable.
- Courses that are designed around the actual work-content of participants. Thus, instead of the current practice, where trainees are required to leave their work place, and come to the classroom and work on “case study” material based on historical data, the course can

go to the field and use the actual problems and issues confronting the trainees. These can then be used as the case study. This requires a greater flexibility on the part of the teaching faculty, but forces them to update and make their teaching directly relevant to the needs of the students. Such courses also make it easier for housing and urban institutions to allow their staff to participate both because the students are carrying on working on the institution's agenda, and because of the lesser adjustment required by the trainees to relate their training to the situation on-the-ground.

- Courses that allow open-ended learning. Instead of a student attending a course of training that has a fixed, prescribed curriculum or at least a training path and concludes with an "examination" of some form of assessment, an open-ended course would be determined by the student. The student, with advice if necessary, would choose and design his or her own learning route in response to self-set criteria of what needs to be learnt. The actual process of learning will in itself determine the eventual pathways. The student would decide when to end the particular learning course, without an externally set examination. The proof of having acquired a satisfactory education would be based on performance upon return to work.
- Courses that reduce the time taken off work, and that can be completed at a pace and to a timetable that fits in with the trainees' work commitments. Currently, the length and timings when a course starts and finishes are determined by the course organisers, and are unlikely to mesh with the work patterns of most professionals. However, with the opportunities offered by the new media, including the internet, CDs and e-mail, it is possible to design a variety of distance-learning courses that would permit self-paced study and yet allow for interaction between student and teacher, and also between students.
- For-the-job training that equips students to be better trained and prepared for a particular work situation. This would extend the principle of on-the-job training by building in additional routines that allow the trainee to better contextualise and conceptualise not just what the job is and how it should be done, but also why it needs to be done in a particular way using particular tools and techniques.
- Courses that incorporate behavioural and attitudinal change rather than being limited to transferring knowledge. Increasingly, it is being confirmed, that the greatest contributor to successful projects and programmes is not just the technical and material resources made available, but the role, performance and actions of individuals. By changing the mind-sets of professionals, new and more innovative ways of operating and performing are opened up which enable them to make better and more effective use of the resources at their disposal. In some ways, the architectural schools that focus on getting their students to evolve a problem-solving mentality, were on the right track. However, in practice most schools severely curtail the potential of such

an approach by straightjacketing it to conform to academic criteria. For example, students are asked to design houses rather than tackling the housing problem, or design hospitals rather than looking at the health problem. Architectural schools limit innovation because they have decided that students must produce a building as a solution, thus limiting other, non-building based responses.

- Courses that are part of institutional capacity-building. Currently most training courses are directed at individuals and their training needs. In many cases the training institution has little or no idea of where the trainees will work and what their functions and responsibilities will be. Often, a trainee sent to an institution will choose a learning path that may well reflect his or her own preferences, but do not necessarily meet the needs of their employing institution or organisation. If training courses were designed and offered as an integral part of a capacity-building exercise, the staff of the training institution would be more aware of the needs, the employing institution would be better able to place the trainees upon their return, and more importantly, adjustments will have been made in the work environment and working procedures and processes that could make use of the improved skills and perceptions of the trainees. For example, a trainee who returns with a different approach to, say the identification of community needs, may find herself unable to put these into practice if the institution's own procedures and practices are rigid and do not allow alternative approaches to be tried.
- Courses that allow students to experience at first hand the application and use of new or alternative approaches and procedures. Currently, most training is done either in-country or where the training institution is based. Neither location may have suitable examples of successful innovations, or indeed be able to provide an appropriate learning opportunity. For example, study tours to a developing country rarely provide examples that have direct relevance for the trainee's own situations. The so-called South-South visits, where participants are able not only to see and experience but also interact with their counterparts in order to learn what they did as well as how they did it, needs to be extended to cover more training activities. Even study tours would become more effective if undertaken as part of an organised training activity. This needs, amongst other things, the presence of someone that understands both contexts and is able to fill in the gaps in the understanding of both hosts and visitors in order to make both explanation and comprehension more meaningful.
- Training that enables and is based on both learning-by-doing and doing-by-learning. Currently, most courses rely on learning-by-learning, requiring participants to learn by reference to the literature rather than through their own experience. Even where there is learning-by-doing, the trainees are not taught how to learn from that experience in order to put that learning into practice. There is a need for building-in monitoring, evaluation and feedback procedures into

the work practices of professionals so that they are able to learn and build upon their experience, including failures.

- Training as a continuous process. This needs to be done at two levels. First in the form of Professional or Continuing Education whereby professionals are required to return to the class room to update their knowledge and acquire new skills, either in response to new developments or to better equip them for their own changing roles and responsibilities. This would improve the quality and the performance of the professionals and therefore the performance of the organisation. Secondly, there is a need for the training to be built into the project cycle, so that it is possible to find out the problems in implementing a project or programme and to use the training as an opportunity to revise or redesign the programme or project. This is particularly necessary where new or changed policy, approaches or procedures are being developed. This is often done at a higher level and then implemented by staff at a lower level who are reluctant to report problems for fear of being thought of as incompetent or inadequate. Instead of being rectified, problems increase, often leading to a “failure” of the policy or programme.

### **Implementing the New Training Agenda**

All of the above approaches have been tried and tested and succeeded in improving the skills and competence levels of the trainees<sup>8</sup>. However, such innovation is limited to a very few institutions and even there, to a few instances rather than being incorporated into the general and on-going operations and activities.

In order for such innovative approaches and others like them to be developed and put into general practice for the training and education of architects and urban planners, the following sorts of actions will need to be taken:

- Countries will need to adopt and agree to implement the Habitat Agenda and plan for action. This would create and increase the demand for professionals trained in the skills and approaches outlined and indicated above. That in turn will increase the demand for appropriate training.
- Institutions responsible for the implementation of the Habitat Agenda, and in particular local government organisations and institutions, will need to become more performance oriented. This does not necessarily mean that they or their functions should be privatised, but rather that their resources and rewards should be based on performance. This will put a greater premium on performance and that in turn will increase the demand for suitably trained and qualified professional staff.

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<sup>8</sup> The Development Planning Unit of University College London has developed and applied the aforementioned training innovations in a number of developing countries. Other training institutions actively involved in similar innovative training ventures are the Institute of Housing Studies, Rotterdam, Holland, the Asian Institute of Technology, Bangkok, Thailand amongst others.

- Implementing organisations should enter into agreements and arrangements with training institutions to help develop and design courses that are more suitable and appropriate for their needs. As has been suggested above, this should be done as part of a capacity-building exercise. The operational department should initiate and maintain an interest in the design of training programmes and curricula in exchange for medium to long-term agreements for funding or training contracts.
- The provision for training should be incorporated into project and programme design. However, the training component should not be limited to project-related needs but should also help in the development of longer-term requirements.
- Regional organisations and institutions should take a lead role in supporting and sustaining training efforts, particularly in those areas where the numbers in any one country would not justify the establishment of training institutions or a demand for tailor-made training.
- The establishment of regional training networks would also allow member institutions to afford the services of specialists to meet their needs. For example, a school of architecture may be unable to have a specialist in climatic design or history of architecture, but a region could have such a specialist who could be based in one country but be able to provide inputs to other schools in the region.
- The establishment of regional networks can facilitate exchanges and visits both to provide training opportunities and to exchange information and knowledge.
- Training institutions in the developed countries should be asked to enter into twinning arrangements with training or operational institutions in developing countries for capacity-building programmes.
- The provision of appropriate rewards and incentives for training. This means the hiring of staff, and their advancement and promotions should take into account their performance and capabilities. This would require setting performance targets and objectives and having clearly defined terms of reference for each post and position, as well as a regular review and evaluation mechanism. Provision would also have to be made for scholarships and/or loans to enable individuals to undertake appropriate training.

## **Conclusion**

With a greater emphasis and willingness to implement the Habitat Agenda, the need for professional that can respond to the new and emerging trends will increase. Whether architects and urban planners, who ought to be at the forefront of meeting

these new trends and emerging challenges, will probably depend upon their ability to acquire and master the new skills, perceptions and approaches. Despite the relatively poor record of previous training and education, there is reason to believe that this could be successfully undertaken, provided that the needs can be translated into demand, through a combination of appropriate funding and numbers. The training methodologies and modalities exist and have been tested, and there is no reason why the training institutions should not be able to respond with appropriate training. International and regional organisations and networks can help the process by supporting both implementing agencies and organisations and training institutions to develop and deliver the right training through increased funding as well as through organisational and scaling-up support.

