



Sustainable Development in Ijebu-Ode, Nigeria: The Role of Social Capital, Participation, and Science and Technology

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| Citation | Mabogunje, Akin L., and Robert W. Kates. "Sustainable Development in Ijebu-Ode, Nigeria: The Role of Social Capital, Participation, and Science and Technology." CID Working Paper Series 2004.102, Harvard University, Cambridge, MA, January 2004. |
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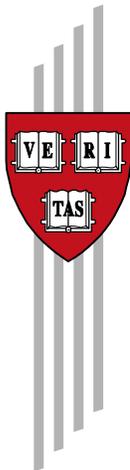
**Sustainable Development in Ijebu-Ode,
Nigeria: The Role of Social Capital,
Participation, and Science and Technology**

Akin L. Mabogunje and Robert W. Kates

CID Working Paper No. 102
January 2004

Sustainable Development Program, CID

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Working Papers

Center for International Development
at Harvard University

Sustainable Development in Ijebu-Ode, Nigeria: The Role of Social Capital, Participation, and Science and Technology

Akin L. Mabogunje and Robert W. Kates

Abstract

Sustainable development as an aspiration is global; as an ongoing process, it is local. A growing number of scientists and technologists share in the aspiration and experiment with the local. Here we report one such effort in Ijebu-Ode, a small city of 200,000 inhabitants in south-west Nigeria, which, by way of a participatory city consultation process chose to reduce poverty through a set of local and sustainable livelihood activities. Now five years into the effort, we describe the setting, the participatory process, the poverty reduction activities, and the impressive results to date. We attribute success to the large stock of social capital, the participatory process that drew upon this stock, and the scientific and technological community that both serve as boundary spanners to link Ijebu-Ode to the national and the global and as a resource for local technologies and advice.

Keywords: Africa, Nigeria, sustainable development, social capital, participation, science and technology.

JEL Codes: H1, I38, N57, Q01, Z13

Citation, Context, and Program Acknowledgements

This paper may be cited as:

Mabogunje, Akin L., and Robert W. Kates. 2004. Sustainable Development in Ijebu-Ode, Nigeria: The Role of Social Capital, Participation, and Science and Technology. CID Working Paper No. 102, Cambridge, MA: Sustainable Development Program, Center for International Development, Harvard University.

It is available at <<http://www.cid.harvard.edu/cidwp/102.htm>>. However, as a work in progress, this does not constitute formal publication, and your comments are especially welcome and may be directed to Robert Kates, email rkates@acadia.net.

This paper was written as part of the Initiative for Science and Technology for Sustainability (ISTS). The Initiative is an international, open-ended network with the goal of enhancing the contribution of knowledge to environmentally sustainable human development around the world. The Initiative was founded in late 2000 by an independent group of scholars and development practitioners gathered at the Friibergh Workshop on Sustainability Science. Since that time, it has worked to strengthen cooperation between two communities: practitioners involved in promoting human development and environmental conservation, and researchers involved in advancing science and technology relevant to sustainability. Membership is open to all interested individuals and institutions. Information on activities and opportunities are available at <<http://sustainabilityscience.org/ists>>. Funding for the Initiative has come from the David and Lucile Packard Foundation and the U.S. National Oceanic and Atmospheric Administration's Office of Global Programs, with additional support from numerous governments and institutions around the world.

Further information on the Initiative and the Sustainable Development Program at Harvard's Center for International Development can be found at <<http://sustainabilityscience.org/ists>> and <<http://www.cid.harvard.edu/sd>> respectively, or by contacting Nancy Dickson at nancy_dickson@harvard.edu.

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Introduction

Sustainable development as an aspiration is global; as an ongoing process, it is local. Deriving from the Brundtland (WCED, 1987) definition of 1987, sustainable development at the global level is now generally understood as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. As such it has broad appeal and little specificity, but some combination of development and environment is found in most attempts to describe it. Many in the scientific community have adopted the notion of a sustainability transition, one in which basic human needs are met, hunger and poverty are reduced, all while maintaining the life support systems of the planet. (NRC-BSD, 1999). More recently, these three generic goals have been given concrete global aspiration (Parris and Kates, 2003) in the forms of the targets of the millennium declaration (UN General Assembly, 2000) which includes the goals of reducing hunger and poverty by half in the world by 2015.

While such universal aspirations may be helpful, they are insufficient, at the local level, to identify local needs, choose meaningful targets, and most important, “harness the energies of local people and organisations and aid development of the local society and economy to change in ways which are conducive to sustainability” (Selman, 1996: 31). This paper focuses on one such local place, the city of Ijebu-Ode and its neighboring settlements, located some 60 miles north-west of Lagos, Nigeria. But the process it describes has wide application. Through the instrumentality of a private policy research institute, the Development Policy Centre, a strategy of mobilization and capacity building was initiated in Ijebu-Ode for purposes of poverty alleviation.

The paper is divided into five parts. The first describes the historical, economic, ecological and social context in which poverty has thrived in the city whilst the second outlines the strategy of developing a city consultation process exploiting the well-established social capital of the city. The third part then considers the participatory framework designed for program implementation whilst the fourth examines the knowledge-intensive basis of most activities in the program. The fifth and concluding section considers the lessons to be learned from the Ijebu-Ode experience.

Ijebu-Ode: History, Economy, Ecology, Society

Situated some 60 kilometers north-west of Lagos, the city of Ijebu-Ode had an estimated population in 1999 of 163,000. Its continued physical expansion has also meant that it has virtually merged with neighboring settlements such as Mobalufon, Erinlu, Molipa, Oke Owa, Iwesi, Igbeba and Latogun to give it a population in excess of 200,000.

Ijebu-Ode is a relatively old city dating, it is claimed, from A.D. 900. There was already reference to it in the 16th century by Pereira, who noted that “twelve or thirteen leagues up this river [the Lagos lagoon] is a very large city called Geebuu, surrounded by a great moat. The ruler of this country in our time is called Agusale [Awujale], and the trade is mainly in slaves ...but there is some ivory” (Pereira trans. Kimble, 1937: 123). By the 18th century, statements about the coastal trade of the Ijebu placed greater emphasis on the traffic in craft products. John Barbot (1732: 354), for instance, noted it as a place “where good fine cloths are made and sold by the natives to foreigners, who have a good vent for them at the Gold Coast...”

These historical antecedents suggest that Ijebu-Ode has not always been a city mired in poverty. Colonialism undermined its numerous craft industries and its strategic trade location between the interior and the coast. This provoked for most of the colonial period a massive out-migration of younger elements of the population to the new, colonially-created metropolitan centers such as Lagos, Ibadan, Kano and Port Harcourt to acquire western-type education and engage in new types of modern ventures and trading activities. Political independence enhanced the economic opportunities for citizens of Ijebu-Ode in the cities of their sojourn all over Nigeria, where many of them have become important members of the

emerging middle class. But in Ijebu-Ode itself, this simply created a situation where local poverty was relieved largely through substantial remittances from these sons and daughters abroad.

A study of the city in 1998 (Odugbemi & Oyesiku, 1998) found that less than 20 per cent of the population are wage-earners in the public or private sector; over 60 per cent are engaged in petty trading whilst some 8 per cent are subsistence farmers, whilst the remaining operate in the informal sector as self-employed artisans and providers of a wide variety of services. There are a few small- and medium scale industries in the city and its environs mainly concerned with sawn timber milling, furniture-making, brewing and fruit-juice production and a pharmaceutical industrial establishment. Informal sector activities are usually associated with low productivity and low incomes, and 70 per cent of the household heads earned less than N8,000 (US\$80.00) per annum whilst only 10 per cent earned above N16,000 (US\$160.00) per annum. Consequently, without the remittances from sons and daughters abroad, 90 per cent of the people of Ijebu-Ode lived below the international extreme poverty line of US\$1.00 per day.

Located some 7°N latitude, Ijebu-Ode lies squarely within the tropical lowland rain forest region. The natural vegetation consists of a great variety of species arranged in a complex vertical structure with an emergent layer of large trees (up to 60 meters high) including mahogany (*Khaya entandrophragma*), obeche (*Triplochiton*), afara (*Terminalia*), iroko (*Chlorophora*), african walnut (*Lovoa trichilioides*), and ekki (*Lophira alata*) which form the basis of the major timber industry in the vicinity of the city. The forest structure protects the fragile soils from erosion in the high rainfall regime of the region. Traditional uses of the forest essentially maintain this protective function, by permitting long fallow periods and using mixed cultivation practices in which trees are allowed to remain. Increasing population densities, however, have caused the shortening of fallow periods and are leading to problems of soil erosion in parts of the region (NEST, 1991: 146).

The most significant ecological factor in the city region is, however, the deep, ferralitic soils characterized by friable consistency, low silt content, low base exchange capacity, low pH and generally low content of plant nutrient. Consequently, the region has not been very successful in cocoa production or in cultivation of yams (other than water yam). In traditional terms, therefore, Ijebu-Ode is not situated in a major agriculturally rich region. Kola nut (*Cola nitida*) is grown in parts of the region and the secondary regrowth of oil palms provide very valuable products (palm oil and palm kernels) for export and local commerce.

The introduction of cassava (*Manihot esculenta*) in the 16th century from South America provided the region with a crop whose productivity is remarkable on sandy, sandy loamy, and even exhausted soils unsuitable for other crops.

As a city, Ijebu-Ode, like most old Yoruba urban centers, has an administrative system that is in part traditional and in part modern. The head of the traditional administration of the city is the Alaiyeluwa, the Awujale, Ogbagba II Oba Sikiru Adetona with his different categories of Chiefs. The city is organized into three wards - Ijasi, Iwade and Porogun. Each ward in turn is organized in quarters or neighborhoods referred to as *Ituns* whose affairs are overseen by the *Olorituns*. Modern expansion of the city has necessitated the demarcation of new *Ituns* which continue to be referred to as suburbs. There are thus presently 36 *Ituns* and 15 suburbs in the city. Modern local government, however, has the city straddling three local government areas (Ijebu-Ode, Odogbolu and Atan). The city itself is a major transportation node in the state and a sizeable commercial centre, mostly informal.

Within this dual structure, traditional basic identities have been preserved to facilitate community-wide coordination and cooperation as well as some degree of group competition within the city. These identities revolve around age, sex, occupation, community organization and rituals of solidarity, which the current traditional ruler has done much to sustain. For instance, he has attempted to preserve the age-grade system in which all individuals born within a three-year interval are encouraged to organise

themselves into an age grade or *egbe*. Members of each age grade are meant to know one another fairly well, to choose a leadership group from among their members, to meet to discuss issues of mutual or communal interest, and be willing to help one another if the need arises. Thus they act in some ways as kin groups. More importantly, the traditional ruler has sought to involve the *regberegbes* (the institution of *egbes*) in the development of the city.

Sex is also a fundamental identity for the division of labor in the city. Women in Ijebu society have always had the prerogative especially of trading and marketing and have, therefore, established quite formidable organisations to this end. As a result, women in the society enjoy a substantial degree of economic independence and have a parallel but complementary institution of governance in the city. Thus, market women operate as occupational associations much like craft guilds. There are also many craft guilds in the city which, on their part, operate as closed professions often with centralized controls and hierarchies of rank and grade usually involving apprentices, journey-men and masters. Masters accept economic and quasi-parental responsibility in the training of apprentices and attempt to inculcate relevant moral codes in the discharge of the obligations of the guild to its clients and to the community.

Community rituals of solidarity have become a critical strategy for building up social capital in the city. Such rituals, tend to occur each year, usually at the beginning of the harvest season. In Ijebu-Ode, the *agemo* festival is perhaps the most notable although there are also the *obinrin ojowu* (the jealous woman) festival and the *Ojude Oba* (the palace square) parade of the age grades which takes place usually after the Islamic festival but which now involves even Christian members of the *egbe*. These various festivals bring the diaspora home for celebrations and thus serve to re-create and strengthen a sense of community solidarity and identity.

However, although the city is virtually almost evenly divided between Christians and Muslims, as among the Yoruba people in general, no serious identity conflict revolves around religion. Indeed, as Laitin (1986: 136, 183) aptly observed, “Yoruba in all walks of life stress the cultural importance of the family which is divided by religion but tied together by blood.....Thus, political calculations based on ancestral city attachments are ‘commonsensical’ in the Yoruba context whilst calculations based on religious adherence are considered fanatic, irrelevant, or out of the realms of calculations”.

Social Capital and the City Consultation Process

Against the background that Ijebu-Ode was a city with a degree of internal cohesion built around its traditional institutions, it was chosen by the Development Policy Centre to try out the City Consultation process as a novel method for pursuing a poverty alleviation strategy. The Development Policy Centre is an independent, non-governmental institution based in Ibadan whose primary goal is to help strengthen national capacity for policy formulation and implementation in Nigeria’s development effort.¹ Working closely with the African Regional Office of the Urban Management Programme (UMP) the Centre set out to demonstrate the viability of the city consultation process as an effective strategy of poverty alleviation.²

The City Consultation Process is a paradigm developed in the course of working out a more effective methodology for initiating a series of social changes in the cities of third world countries. Essentially, it derives from the concept of urban governance as differing from urban government or management. Urban governance is the sum total of the many ways in which individuals and institutions, both public and private, participate in the planning and management of the common affairs of the city. It is a continuing process through which conflicting or diverse interests of citizens are accommodated and cooperative action is actively promoted. It embraces the activities of not only formal institutions but also informal organisations as well as the social capital of citizens. Consequently, for urban governance to be considered good, it must fulfill three basic conditions. First, it must exhibit well decentralised and devolved authority structures (decentralization); second, its decision-making process must be fully participatory and all-inclusive (inclusiveness); and third, its implementation strategies and activities must

be transparent and accountable to the generality of the citizens of the city (accountability). The City Consultation Process has thus been initiated as an experiment in which a fully participatory and all-inclusive strategy of decision-making and implementation is undertaken irrespective of whether this is for improved environmental management, infrastructural development or poverty alleviation.

As a process of civic engagement, the City Consultation Process seeks to bring together all stakeholders in a city as well as the traditional authorities, the local, state and federal government to establish consensus, through sharing of knowledge and experiences on key policy and operational priorities that should influence the design and implementation of poverty reduction programs and projects. The process falls easily into three stages.

The pre-Consultation stage included the preparation of a report providing a poverty profile of the city, opportunities for job creation, and particularly an institutional audit of the main actors in the socio-economic life and governance of the city. Based on this report, especially its institutional audit, a series of mini-consultative meetings with the major stakeholders is undertaken. In the Ijebu-Ode case, the stakeholders included, apart from the local authorities both traditional and modern, local branches of state and federal ministries and prostates, the local Chamber of Commerce, other private sector organizations, various informal trade and artisan occupational groups, cooperatives, non-governmental and community-based organizations, religious bodies, bilateral, multilateral and donor agencies, and university and research institutions (Odugbemi and Oyesiku, 1998). The objectives of the mini-consultations are to foster an appreciation of interdependence in the process of poverty reduction, enhance the feeling of ownership of the initiative and, thereby, guarantee effective development and implementation of the Plan of Action.

The second stage, the City Consultation Proper, brought together representatives of the various stakeholders to a three-day meeting from March 22-24, 1999. Although the initial expectation was for some 100-150 participants, the novelty of the strategy attracted over 350 participants. The Awujale of Ijebuland took a strong leadership role in the consultative process supported by the other local authorities, both traditional and modern. This gave maximum political, professional and community support to the process. Although the long-term objective of the City Consultation process was to strengthen the capacity of the local government for poverty reduction, it soon became clear that the formal local government did not have the influence or the credibility of the traditional local authorities. Consequently, it was the Awujale who provided the venue for the consultation in his palace Heritage Hall.

The first day of the consultation, which was chaired by the Awujale, was comprised of plenary sessions in which papers were presented on the poverty situation in the town, the local resources and various constraints of development. Participants were then divided into four working groups to discuss and make recommendations on each of the following topics: the socio-economic situation in the city, the natural resources that could be developed, the human and cultural resources, and governance and infrastructural situation. Each working group had a Chairman, a Deputy Chairman, a knowledgeable resource person and a rapporteur. The third day meeting was again plenary. The reports and recommendations of the various working groups were discussed, amended and later adopted. A Follow-Up Committee of sixteen individuals comprising the four officials of each of the working groups was then mandated to draw up an Action Plan based on the adopted set of recommendations.

The third stage comprising the post-consultation activities entailed the production of an Action Plan for Poverty Reduction in Ijebu-Ode. The 39-page Action Plan was divided into eight parts:

- Provision of Basic Infrastructure and Social Overheads
- Enterprise Development
- Employment Generation and Skill Enhancement
- Promoting Traditional Arts and Craft

Promoting Tourism
Attitudinal Change and Cultural Renaissance
Intensification of Cooperative Activities
Institutional Building

The Plan noted the poor state of infrastructure (potable water, roads, health-care centers, waste disposal, security) in the city generally but especially in those areas where the informal sector operators concentrate, such as markets and the mechanic village. But the real emphasis of the Action Plan was on enterprise development. For animal production the city could specialize easily in the production of delicacies such as snails, rabbitry, aquaculture and small-scale poultry; for crop production it could concentrate on pineapple to supply two fruit-processing factories in the vicinity as well as on cassava for industrial use; for industrial production the city could concentrate on cassava processing and industrial honey for regional pharmaceutical industries. These enterprises were to form the basis for not only increased income-generation but also new employment opportunities and skill enhancement. Traditional arts and crafts were also to be revived and the various rituals and celebrations better organized to promote tourism to the city. All this was meant to require significant changes in attitude especially with respect to deepening cooperative organization and culture among the people.

In short, the Action Plan provided a vision of how the City, through coordinated and complementary actions, intends to raise the living conditions of the poor and vulnerable groups in the population. It indicated a policy framework and strategy through which the city expected to effectively harness its resources towards improving the quality of life among the urban population.

Designing a Participatory Framework for Programme Implementation

The issue of an appropriate framework for the implementation of the various recommendations of the Action Plan was thoroughly discussed both at the City Consultation itself and in the Follow-Up Committee. It was recognized that the ideal institution to promote and coordinate the implementation of the recommendation is the Local Government. Indeed, Local Governments assume this responsibility in similar city consultations held in other cities in Africa. However, in the Ijebu-Ode case, the consensus was that the needed institution, while giving a prominent role to the Local Government, should be made to reflect the diversity of stakeholders. This was not only to ensure that the community had a strong sense of really owning the program but also to guarantee its long-term sustainability and protect it from the vagaries of electoral democracy and the three-year tenure of Local Government chairmen.

Consequently, an institution, the Ijebu-Ode Development Board for Poverty Reduction (IDBPR), was agreed upon which incorporated the two major players in the governance of the city, namely the Local Government Council and the Traditional Authority. The composition of this 30-person Board thus reflected the diversity among stakeholders in the city. Thus, apart from the 16 members of the Follow-Up committee, there were to be four nominees of the traditional ruler, two representatives of the Local Government, two representatives of Ijebu-Ode Development Association, two representatives of market women, one representative of cooperatives, one representative of the artisans, one representative of the local Chamber of Commerce and one representative of the National Association of Small-Scale Industrialists (NASSI). For chairman of the Board, the stakeholders chose a highly respected, retired civil servant who was well known in the community for his integrity, fair-mindedness and diligence, and the Local Government Chairman was made the Vice Chairman of the Board. The Awujale surprised everyone by his nominees. The expectation was that he would choose from among his Chiefs. Instead, he chose young men who live in Lagos but who were successful bankers, insurance executives, and managers.

The Ijebu-Ode Development Board for Poverty Reduction was inaugurated on July 29, 1999 by the Awujale. With the inauguration, the Development Policy Centre gradually withdrew its active participation and became more of an advising and monitoring institution for the process. Not

unexpectedly, the first challenge of the Board was finding the resources to prosecute its task of poverty reduction. A small, seed capital for summoning meetings and supporting a staff member was provided from the project fund of the Development Policy Centre. Although it was understood that an outside donors' conference would be convened by the Urban Management Programme, the City also appreciated that this would depend on what it can be seen to have done for itself.

Consequently, one of the first activities of the Board was to launch its Action Plan and to use the occasion to raise funds from sons and daughters of the City from far and wide. The Awujale led the way here by making available to the Board a furnished 4-room office suite within the Palace Complex. It was in the context of raising funds that the social capital of the City was made to yield the necessary dividend. The *regberegbes* taxed themselves for each *egbe* to contribute a given sum. Neighborhood associations (*ituns*), through their heads (*Olorituns*) made donations. Wealthy individual sons and daughters both at home and abroad also made substantial donations. In all, some N10 million (US\$100,000) was raised with the Ijebu-Ode Local Government alone having contributed some N4 million. The Development Policy Centre contributed the computer and printer in which much of the data and information collected during the pre-Consultation activities had been entered. Other individuals made donations in kind, providing photocopier, fax and office furniture, office equipment and stationery.

With some initial financial resources guaranteed, the Board constituted itself into a number of Committees that have operated with considerable sense of commitment. Their titles are evidence of the breadth of activity:

- Project Implementation Committee
- Project Monitoring and Evaluation Committee
- Fund Raising and Fund Management Committee
- Mobilization and Enlightenment Committee
- Formation of Cooperative Groups Committee
- Training Committee
- Loans Committee
- Medical and Health Committee
- Library and Archival-Related Committee

The Knowledge-intensive Basis of Activities

From the very beginning, the Board acknowledged that effective poverty reduction must be based on enhancing the knowledge and skills of the people. Consequently, most of its activities began with training the poor. And to ensure that the training was valued, some modest charges were made for securing application forms and for attendance at the workshops. Such attendance was a pre-requisite for securing individual credit to engage in particular activities. To ensure that securing and repaying credit was also part of a learning process, the Board deposited its funds in the local Imowo Community Bank and offered itself as a guarantee for the Bank to lend to approved individuals. Each individual receiving credit was expected to open and maintain an account with the Bank.

The basic strategy for promoting activities among the poor and the stakeholders was encouraging them to form cooperatives. This strategy was particularly important to take account of gender issues in poverty alleviation. In Ijebu-Ode, women are pre-eminently the traders in the four principal markets in the city, albeit petty traders operating with rather limited capital. Their need for micro-credit was championed by the traditional ruler himself who also got the Board to waive the usual payment for application forms for training in how to participate successfully in microcredit schemes. The training for the women was remarkably successful and the women organized themselves both on the basis of the commodities that they sell, as well as their location in the four markets, each of which has representation on the board.

When faced with devising the details of the microcredit schemes, the Board deferred to the women's intimate knowledge of their own and different needs for credit.

Presently, there are over 90 cooperative societies registered with the Board. These comprise cooperative societies of not only market women but also pineapple growers, bee-keepers, aquaculturists, cassava cultivators, welders, carpenters, seamstresses, motor-cycle transporters and so on. Each society has a bank account, determines the loan requirements of its individual members, sees to their monthly repayment of the amount due and ensures total recovery of the loans taken before a subsequent application can be made. Apart from an administrative charge of up to 5 per cent on major projects (excluding the micro-credit scheme of the market women), an interest rate of 24 per cent per annum or 2 per cent per month is charged on loans. A moratorium period of between two weeks (for market women) and eighteen months (for agricultural projects) is generally allowed on the loans. As of the middle of 2002, some N4,167 million (US\$41,670) has been disbursed as loans to beneficiaries but this is far from adequate to meet the demand. Among the market-women for whom the microcredit was the primary means of poverty reduction, the repayment rate has been over 98 per cent.

Since its inauguration, the Board has also organized some seven training workshops (Table 1). These have been on pineapple production, bee-keeping, small-scale poultry farming, seri-culture, aquaculture, dry-season vegetable production and cassava production and processing. Each training workshop registers more than 100 participants and is usually conducted by well-trained scientists and technologists knowledgeable in the field. These have come from the Ogun State Agricultural Development Programme (OGADEP), the nearby Olabisi Onabanjo State University, and the University of Ibadan, but the Board has also used the internet to search for the most up-to-date information about each of these areas. For example, answers to questions about bee-keeping were received from New Zealand.

One of the major constraints facing the Board has been having enough funds to finance the activities of those who have successfully undertaken its courses. For those engaged in agricultural production, the expectation is that they will operate on their own or their family farm. The Board's strategy is to procure and develop multiplication centers for improved planting materials especially of pineapple suckers, cassava plants and vegetable seedlings for sale distribution to accredited participants in a particular program. For the aquaculture program, the Board also successfully negotiated and got the Ogun State Government's approval for the lease of 50 hectares of land from the Eriwe fish farm near Ijebu-Ode. The land was then demarcated and allotted to many of the prospective participants who are interested in crop farming, pineapple and cassava cultivation, and fish farming.

An exciting but secondary development of the program is the promotion of local technological initiatives among the artisans and technologically-oriented operators in the city. So far, seven major technological inputs have been successfully developed by local welders. These include honey pressers, bee smokers, bee-honey practitioners' outfits, beehive stands, bee honey settling tanks, locally-fabricated poultry cages and equipment, and a fish feed milling and pelleting machine. Much cooperation has developed between local agro-industrial enterprises and local technicians and engineers especially in the provision of such systems as the fish-feed milling and pelleting machine and the locally fabricated poultry cages. Application of such local knowledge is starting to have real impact on the poverty reduction processes through creating additional employment opportunities and developing new technical skills.

While focusing primarily on creating new enterprises for poverty reduction, the Board has not neglected infrastructure or other aspects of development. The Board has agreed to the development of at least six community-managed borehole and water point/toilets water projects in collaboration with relevant community partners. In prosecuting its health project, the Board relied on the proposals of a team of medical professionals from among the sons and daughters of the city living in other metropolitan centers who offered their services free of charge. One of their major decisions was to attempt the renovation of

the 230-bed State Hospital in the city to serve the city and six other local governments. An estimated total project cost of N100 million (US\$10 million) is to be expended on this initiative which is expected to help provide the city with the much needed ultra-modern referral centre for the many Primary Health Care (PHC) facilities in the catchment area of the hospital. A total of N5 million was raised at the launching of the first phase of the renovation program on February 5, 2002 and construction work on the first phase of the renovation has been completed.

The same group of professionals put the Board in touch with the Association of Nigerian Physicians in America (ANPA). Some 27 members of the Association paid a one-week working visit to the City Hospital on August 18-25, 2002 during which they undertook some 95 general surgery operations for both children and adults, 45 gynecological operations, 49 cataract operations, 86 dental procedures and 3,500 medical outpatient consultations. This intervention by sons and daughters of the city in the diaspora together with the provision of free drugs and equipment has resulted in a major improvement in access to health-care for the many poor beneficiaries.

The Board is in the process of developing a special program for youths in the city. The Ijebu-Ode Local Government offered the Board its under-utilized Youth Centre. This has been renovated and part of it is now being used for skill acquisition programs, youth counseling, in-door games and recreational activities, as well as for information dissemination and other social engagements.

To date, the impact of the poverty reduction activities of the Board has not been easy to measure in quantitative terms. Since its inception, the Board has held two annual general meetings involving most of its beneficiaries with 140 registered representatives of stakeholders attending in 2001 and 240 representatives in 2002. The Annual General Meeting provides an opportunity for presenting the Annual Report of the activities of the Board, as well as its audited financial statements. The Annual Report, however, provides useful data only about the primary activities of the Board such as how many people attended the various training sessions, how many have been able to be funded directly by the Board, what is the rate of repayment of loans and so on. Data on the number of people engaged in secondary activities deriving from the activities of direct beneficiaries are not available in the report. Thus, there would be little data on the number of welders engaged in supplying needed inputs for direct beneficiaries engaged in poultry-keeping, bee-keeping, and so on, although one can see enhanced activities among these groups in the city. The Board, however, has indicated that it intends to begin collecting some of these data and to subject its programs to external and independent evaluation in the very near future.

Lessons Learned

Has poverty been reduced in Ijebu-Ode? Almost surely for the market women and the artisans providing services. But for most, it is still too early to tell. We plan to revisit the city as the pineapples, eggs, and honey products reach market, the new cassava, vegetable and aquaculture initiatives get underway, the boreholes get built, the hospital gets refurbished, and the youth programs get started. Has a realistic and inclusive poverty reduction strategy been developed? Surely so! We attribute the success to date to the large stock of social capital, the participatory process that drew upon this stock, and the scientific and technological community that serve both as boundary spanners to link Ijebu-Ode to the national and the global and as a resource for local technologies and advice.

Social capital is “generally defined as the information, trust, and norms of reciprocity inhering in one's social networks” and as Woolcock notes (Woolcock, 1998:153) more social capital is not always better. At one stage of a community's economic development it may be very beneficial, providing access to information, other forms of capital, and trusted leadership, but it may become limiting at another stage, when there is need for access to information, trust and reciprocity from beyond the social network of the community.

Ijebu-Ode's stock of social capital seems particularly rich, including traditional ethnic authority, government, neighborhood and occupational organization, and an engaged Diaspora, while at the same time bridging such potentially divisive identity gaps as gender, class, and religion or the inherent tension between traditional leadership and elected political officials. Much of the credit for bridging these identity gaps can be found in the transparent, participatory process that the community engaged in which enabled it to share information, create trust, and utilize its internal norms of reciprocity.

The scientific and technological community in support of the poverty reduction goals and part of the participatory process was also particularly rich and included three elements: the local experts in agriculture and other productive skills, the national institution of the Development Policy Center, and the global diaspora, especially in health. Thus this community was part of the Ijebu-Ode's social capital but also partly exogenous, serving as both trusted sources and as boundary spanners linking Ijebu-Ode beyond its normal reach and avoiding the restraints of an exclusionary, inwardly focused social capital.

Since its inception three years ago, the project of poverty reduction in Ijebu-Ode based on the strategy of city consultation has attracted attention locally, nationally and internationally. Locally, the attention has been due to its impact as well as its positive contrasts with earlier, less successful attempts to tackle the problem of poverty. That impact has been due largely to the knowledge-intensive orientation of the strategy and its openness to scientific and technological enhancement for its results.

On the national scene, the Nigerian government has adopted the World Bank/IMF-initiated PRSP (Poverty Reduction Strategy Paper) with its emphasis on a bottom-up approach to poverty reduction (NDI, 2002). The new initiative is designed to address poverty issues through four approaches. These are: youth empowerment, rural infrastructural development, social welfare services and national resources development. The modalities for implementing these various approaches are far from being well articulated and the impressive track record of the Ijebu-Ode Development Board for Poverty Reduction even within its short term of life was such that it had recently received significant funding of some N15 million (US\$150,000) from the National Secretariat, more than matching the locally-raised funds that launched the Program.

At the international level, the participatory emphasis of the City Consultation, the operations of the Ijebu-Ode Development Board for Poverty Reduction, and the role played by science and technology are very much in consonance with the requirements of NEPAD (the New Partnership for African Development, 2003) for poverty eradication on the continent. Consequently, over the last two years the initiative has been receiving a number of international visitors to investigate the manner and progress of the project. Recently, it was judged an outstanding initiative and presented a Best Practice Certificate from the Dubai International Award for Best Practices and the United Nations Human Settlements Programme.

The Ijebu-Ode experience also has significance for the emerging efforts to create a sustainability science and technology (Kates et al. 2001 ICSU, 2002). The authors serve as co-conveners of the international Initiative for Science and Technology for Sustainability, which seeks to marshal science and technology to address real problems of environment and development—suggesting solutions and needed actions. Central to such efforts is the notion that the problems need to be identified by stakeholders in particular places and the needed knowledge should be “co-produced” through close collaboration between scientists, technologists, and practitioners. The Ijebu-Ode experience provides one model of how such problem identification and co-production should take place. Central to this model are trusted scientists and technologist with local linkages who—regardless of location—are part of the place-based social capital. (Mabogunje's family has strong ties to Ijebu-Ode.) But though unusually rich in social capital, Africa is not unique. In a recent extensive study of greenhouse gas emissions in four localities in the United States, local action to reduce such emissions was clearly facilitated by local scientists and university faculty providing trusted sources of information (Kates and Wilbanks, 2003). Thus what is

needed most is that we scientists and technologists use our universal skills and knowledge to act locally in the service of our global aspirations to meet human needs, reduce hunger and poverty, while preserving the life support systems of the planet.

Table 1

IJEBU-ODE DEVELOPMENT BOARD ON POVERTY REDUCTION
 Number of Activities, Trainees, and Beneficiaries since Inception of IDBPR

| S/N | Activity | Number of Trainees | | Loan Beneficiaries |
|-----|--|-------------------------|-------------------------|---|
| | | 1 st session | 2 nd session | |
| 1. | Pineapple production and Bee-keeping - 30 th to 31 st August, 2000 | 30 | 99 | Bee-keepers:26 Pineapple growers: 19 |
| 2. | Poultry production and Cassava utilization - 25 th to 26 th October, 2000 | 130 | - | Poultry farmers: 15 |
| 3. | One day Workshop in Micro-credit for women in the markets and business | 695 | | 378 |
| 4. | Aquaculture and Snailery - 23 rd August, 2001 | 160 | 99 | - |
| 5. | Sericulture, Aquaculture, Bee-keeping and Dry Season Vegetable Growing - 11 th to 12 th December, 2002 | 99 | 99 | - |

References

- Barbot, John. 1732. *A description of the Coasts of North and South Guinea, Book 4* (London).
- Cash, D. W., W. C. Clark, F. Alcock, N. M. Dickson, N. Eckley, D. H. Guston, J. Jäger, and R. B. Mitchell. 2003. Knowledge Systems for Sustainable Development. *Proceedings of the National Academies of Sciences USA* 100 (14) (8 July 2003).
- International Council for Science (ICSU). 2002. *Report of the Scientific and Technological Community to the World Summit on Sustainable Development*. (ICSU, Paris)
<<http://www.icsu.org/Library/WSSDRep/Vol1.pdf>>.
- Kates, R. W., W. C. Clark, R. Corell, J. M. Hall, C.C. Jaeger, I. Lowe, J. J. McCarthy, H. J. Schellnhuber, B. Bolin, N. M. Dickson, S. Faucheux, G. C. Gallopin, A. Gruebler, B. Huntley, J. Jäger, N. S. Jodha, R. E. Kasperson, A. Mabogunje, P. Matson, H. Mooney, B. Moore III, T. O’Riordan, and U. Svedin. 2001. Sustainability science. *Science* 292, 641-2.
- Kates, R.W. and T. Wilbanks. 2003. Making the Global Local: Responding to Climate Change Concerns from the Bottom Up. *Environment* April 45(3):12-23.
- Laitin, David D. 1986. *Hegemony and Culture: Politics and Religious Change among the Yoruba*, Chicago: University of Chicago Press.
- National Democratic Institute for International Affairs. 2002. Nigerian National Assembly Strengthening: Supporting Legislative Involvement in Poverty Reduction.
<http://www.ndi.org/worldwide/cewa/nigeria/nigeria_leg/nigeria_leg.asp>.
- National Research Council, Board on Sustainable Development. 1999. *Our Common Journey: A Transition Toward Sustainability*. National Academy Press: Washington, DC.
- NEPAD (New Partnership for Africa’s Development). 2003. Communiqué Issued at the End of the Sixth Summit of the Heads of State and Government Implementation Committee of the New Partnership for Africa’s Development, Abuja, Sunday, 09 March 2003. <<http://www.avmedia.at/nepad/indexgb.html>>.
- NEST (Nigerian Environmental Study/Action Team). 1991. *Nigeria’s Threatened Environment: A National Profile*. Ibadan: NEST.
- Odugbemi, O. O. and O. O. Oyesiku. 1998. *Socio-Economic Survey and Poverty Study of Ijebu-Ode: Final Report*. Ago-Iwoye: Ogun State University, Department of Geography.
- Parris, T. M. and R. W. Kates. 2003. Characterizing a Sustainability Transition: Goals, Targets, Trends, and Driving Forces. *Proceedings of the National Academies of Sciences USA* 100(14)(8 July): 8068-8073.
- Pereira, Duarte Pacheco. 1937. *Esmeraldo de Situ Orbis, 1505-1508*. Translated and edited by G.H.T.Kimble for the Hakluyt Society, London.
- Selman, Paul. 1996. *Local Sustainability: Managing and Planning Ecologically Sound Places*. New York: St.Martin’s Press.
- United Nations General Assembly. 2000. *United Nations Millennium Declaration, A/RES/55/2*. United Nations: New York.

Woolcock, Michael. 1998. Social Capital and Economic Development: Toward a Theoretical Synthesis and Policy Framework. In *Theory and Society*, vol 27(2), pp 151-208.

WCED (World Commission on Environment and Development). 1987. *Our Common Future*. New York: Oxford University Press (Brundtland Report).

Endnotes

¹ Akin L. Mabogunje was then the Chairman of the Centre. He has since February 2003 retired from the position. He also hails from Ijebu-Ode. The Development Policy Centre, in collaboration with two non-governmental organizations, has also been experimenting with the city consultation process in a number of urban centres in Nigeria as a mechanism for effectively dealing with poverty reduction (Ijebu-Ode and Minna), with environmental degradation (Ibadan) and urban service delivery (Kano and Lagos).

² The Urban Management Programme dates from 1978 and is jointly sponsored by the United Nations Development Programme (UNDP), the United Nations Centre for Human Settlement (UNCHS), the World Bank and a number of bilateral donor agencies.