

POPULATION POLICIES, ENVIRONMENT AND SUSTAINABLE DEVELOPMENT
IN THE ECA REGION¹

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I. INTRODUCTION

1. It is common knowledge that, following the second world war, the phenomenon of rapid population growth rates characterized developing countries generally and those in the ECA region in particular. Governmental policies were developed initially, to effect declines in fertility levels. With an improved knowledge base, such policies were broadened to include those about maternal and child health mortality, family formation and status of women, population distribution and urbanization, migration and population structure.

2. Even with the more elaborate contents, it is argued, existing population policies are unlikely to deliver long term improvements in the environment or prospects for sustainable development unless a holistic approach is adopted (in their formulation and implementation) linking issues of population, food security and environment. A holistic approach is the common theme of all the series of United Nations Conferences during the 1990s. Sharing these same concerns, the President of the World Bank Group in his address to the Board of Governors in Hong Kong (China) in September 1997, noted among other things, that the greatest challenge of our time is “the challenge of inclusion”.

3. Elaborating on this, the President observed “there are not two worlds, there is one world. We breath the same air, degrade the same environment and share the same financial system. We have the same health problems. AIDS, crime, terrorism, war and famine are not problems that stop at borders”. Accordingly, he continues, “We must think results – how to get the biggest development return from our scarce resources; we must think sustainability – how to have enduring development impact within an environmentally sustainable framework; we must think equity – how to include the disadvantaged” (Oucho, 1998).

4. Sustainability, as a new economic development approach, emphasizes food security, social development and environmental security. It also provides a framework for the integration of environmental policies and development strategies. The purpose of formulating policies, therefore, is to provide a framework for appropriate programs that ultimately yield sustainable development in many spheres – health, education, housing, life expectancy, income, investment, etc. But much as sustainable development thus appears easy to conceptualize and involves finding a balance between resource and environmental use as well as the satisfaction of human needs, the path to achieving it is not easy to identify. Each country has its own set of population, natural resources, environment and economic development issues which require analysis before a range of possible paths can be identified.

5. The key elements of sustainable development in the ECA region have been identified as population, environment and food security. Although it is well known that a country’s economic performance and the food security of its citizens, in the medium to long term, are closely related to its demographic and educational trends as well as the health of its natural environment, among others, the mutual interdependencies between these variables are not yet

well reflected in the development policies of ECA member States. Among the causal factors for this negligence are the traditional training of national experts in compartmentalized disciplines and the resultant specific fields of responsibility; and the lack of conviction and/or perception on the side of many of the experts that indeed the developments in other sectors do matter for their sectors. However, while emphasizing the inter-linkages between population, environment and food security, the three components should be treated separately in order to optimally exploit them as autonomous areas stressing simultaneously the synergies and linkages existing among them.

6. This paper has four main objectives. The first is to review current population policies in the ECA region highlighting their orientations, contents and constraints. A second objective is to briefly review the regional environmental problems and the present efforts at formulating environmental policies. Because these policies (on population and the environment) have, to date, not been very successful in achieving their objectives and towards ensuring a change in the indicated dimensions of the policies, a third objective is to suggest modalities of a way forward. The fourth objective is to highlight past strategies towards ensuring sustainable development as a prelude to discussing a policy analytic framework being developed by the ECA Food Security and Sustainable Development Division for ensuring food security and sustainable development amongst its member States.

II. POPULATION POLICIES

7. The experiences, lessons learnt and the constraints encountered from existing population policies in the ECA region have been well documented in many reviews [e.g. Ekanem (1988); UNECA (1989); Lacey (1990); Nafis Sadik (1991); UNFPA/CST, Addis Ababa (1996) and Oucho (1998)] – all in the spirit of improving on the framework (the purpose of the policies) for appropriate programs that ultimately should enable ECA member States achieve the goal of harmonizing their population and economic growth rates. Based on common orientations, foci and contents, population policy development in the region is discernible into three phases: the pre-Bucharest [where in 1974, the first global inter-governmental population conference was held] policies; policies developed between Bucharest and Cairo [where in 1994 the third international conference on population and development (ICPD) was held and a Program of Action (ICPD.PA) adopted]; and the post ICPD policies.

The Pre-Bucharest Policies

8. Prior to Bucharest, the view was generally held that rapid population growth rates create strong barriers to economic development. By implication, countries with high birth rates had difficulties creating employment, providing education, raising per capita income and attaining other elements of development. The associated apparent intellectual orthodoxy that family planning programs would lower birth rates through contraception was (at the time) generally promoted by donor agencies. This orthodox model was seriously challenged at Bucharest whence it was argued that instead of being a leading cause of underdevelopment,

rapid population growth itself is a function of lack of development and that until couples experience the benefits of development (e.g. lower infant mortality rate, better education), they will not be motivated to have smaller families.

9. Although the emerging independent African governments during the period perceived population as a problem caused by rapid growth rates, the concept of population policies was germane in many of them principally due to the poor data situation and the suspicion of the leaders about the former metropolitan powers' projection of population as the greatest threat to national development. Therefore at the time, only Mauritius (1958), Kenya (1967) and Ghana (1969) had formulated national population policies primarily to reduce fertility and ultimately, to harmonize their population and economic growth rates. Other countries such as Tunisia (1964), Egypt, Morocco and Mauritius (1965), Southern Rhodesia, now Zimbabwe (1968), and Benin, Gambia, Ghana (1969) had national family planning programs.

10. The central objective in these policies and programs has not been achieved excepting perhaps in Mauritius, Tunisia, Botswana and Kenya largely due to inadequate official interest in family planning alongside the inadequacy and coverage of the services, the low level of education and extent of female employment in the wage sector of the economy, the level of infant and child mortality. In particular, just as national family planning programs were being set up, a massive debate began (by the early 1970s) about the rationale for the potential viability of these programs as against allocating scarce resources to development program efforts. The central point in the controversy was the implicit assumption that fertility decline was largely a function of social and economic development and that unless some "threshold" of development was achieved, family planning programs could possibly have no more than modest success.

11. The resort to integrated maternal and child health and family planning programs during the 1970s (e.g. Nigeria, Sudan, Tanzania (1970); Algeria, Botswana, Tunisia, Uganda (1971); Liberia, the Democratic Republic of the Congo (1973); Lesotho, Zambia (1974) was therefore understandable. Although these integrated programs fostered the pulling of funds, strengthened supervision and enhanced better use of facilities, they were also handicapped by the lack of infrastructure and personnel, were concentrated on women and located mostly in urban areas.

The 1974-94 policies

12. The second generation of population policies in the ECA region derived considerable impetus and momentum from three major developments during the 1974-94 period: the adoption of the World Population Plan of Action (WPPA) at Bucharest (1974); the adoption of the Kilimanjaro Program of Action at the Second African Population Conference (APC2: Arusha, 1984); and the adoption of the Dakar Ngor Declaration (DND) at the Third African Population Conference (APC3: Dakar, 1992).

13. Around 1971 (First African Population Conference, APC1: Accra, Ghana), the annual rate of population growth for Africa, then estimated as 2.8 per cent was at par with that of South East Asia and Latin America. With the anticipated decline in mortality without a corresponding significant decline in fertility, the African population growth rate was expected to increase slowly reaching 3 per cent at the end of the 1970-80 decade. It was hoped that only in the 1990s would the anticipated fertility decline exceed mortality decline and the annual growth rate would gradually decline to 2.8 per cent by the end of the century. If then, the projection assumptions were realized, Africa would, within a few years, have had the highest rate of population growth among the major world regions and would have remained in that position perhaps well into the twenty first century. There was therefore a real need to sensitize the African Governments about the relevance of the population factor in the development process.

14. It is to be recalled that the Population Program established within ECA as early as 1961 was aimed at providing such sensitization. As a sequel of the Program, the role of other players in the field, and the ramifications of the WPPA, among others, attitudes towards the relevance of population factors in development planning shifted during the 1974-1984 (APC2: Arusha, Tanzania) decade from a relatively laissez-faire position to one that expressed the need to harmonize population and economic growth rates.

15. The year 1974 was observed as world population year in order to engage all concerned in a dialogue about population, increase awareness, promote the development of population policies and programs and encourage the expansion of international cooperation and assistance. The main contributions of the Bucharest Conference were the “formulation of principles and measures of sovereign national population policies with emphasis on changing the international economic system” and the provision of a watershed which marked an important shift in international attitudes as well as a dramatic increase in the energy devoted to population issues. The key issue was the adoption of the WPPA which recognized population as “the inexhaustible source of creativity and a determining factor of progress” (UNECA, 1989). The recognition then that the population factor cannot be isolated from its economic and social context led to the conclusion that purely demographic interventions should be avoided.

16. Since the adoption of the KPA, the scope, orientation, content, etc of population policies in the ECA region have been far more comprehensive than the earlier ones. Both in sub-Saharan African and in the North African Arab countries, the policy measures have tended more to follow the nine major areas of the KPA. Many more countries established integrated MCH/FP programs including Seychelles, Swaziland, Togo (1975); Congo, Guinea Bissau, Senegal (1976); Mozambique, Somalia (1977); and Cape Verde, Central African Republic, Sierra Leone (1978)). By 1988 twelve more countries had established such programs (i.e. Angola, Burkina Faso, Burundi, Cameroon, Chad, Comoros, Cote D'Ivoire, Guinea, Madagascar, Malawi, Mauritania and Niger). Virtually all the North African countries within the Arab region (excepting Libya) have in place, national family planning programs.¹

¹ The Arab region has four geographical sub-regions: The Arabian Peninsular and the Gulf

17. As at 1996, more than 20 countries in sub-Saharan Africa (e.g. Burkina Faso, Cameroon, Ethiopia, Ghana, Guinea Conakry, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, Tanzania, Uganda, Zambia) and about four in the Arab region (i.e. Algeria, Egypt, Tunisia and Yemen) had an explicit population policy. Since 1996, two more North African Arab countries have sought to formulate an explicit comprehensive, multi-sectoral population policy (i.e. Morocco, and Sudan). In the Nile Valley, Egypt has achieved considerable success in its family planning program; its contraceptive prevalence rate increased to about 50% and its TFR declined to 3.8. Sudan, still experiencing high fertility with a TFR of over 5 and very high mortality, is in the process of formulating an explicit population policy as an integral part of its national development plan. Additionally, Somalia directly or indirectly supports family planning programs while Libya is opposed to such programs other than NGO and private activities (Issa, 1996).

18. In some sub-Saharan and Arab countries, a starting point in the development of these policies is usually the holding of a national conference to reach a consensus on controversial issues as well as on the scope, orientation and contents of the policy. Thence task forces are set up from among the policy makers, local consultants and university experts to prepare sectoral drafts of the policy. These sectoral papers were thereafter presented in seminars and workshops and revised. On the basis of the revised sectoral drafts, the national multi-sectoral population policy and strategy document was usually then finalized. The later was then presented to a national conference to ensure public participation prior to its promulgation into law.

19. Among the favorable factors that have influenced the new policies in sub-Saharan African countries during the two decades following Bucharest have been the findings resulting from analyses of demographic data; the growing availability of trained manpower; the deepening national commitment to population policies and the inclusion of population as a legitimate issue on social, economic, environmental and other development agenda; legal

comprise 7 countries (Saudi Arabia, Yemen, Oman, United Arab Emirates, Qatar, Bahrain, Kuwait) with about 15 % of the total 256 million population for the region; The Fertile Crescent with 5 countries (Iraq, Syria, Jordan, Lebanon and PNA) with 17% of the total population; the Nile Valley and Horn of Africa with 4 countries (Egypt, Sudan, Somalia and Djibouti) containing 39% of the total population; and North Africa comprising 4 countries (Libya, Tunisia, Morocco and Algeria) representing 27% of the total population. If Mauritania is added to this group, then the 5 countries together contain 28% of the total population.

reforms that set the possibilities and the limitations on the success of a national population program; awareness creation programs (e.g. national seminars on population and development) and policy recommendations based on population development research by the international community; availability of relevant guidelines and manuals.

Constraining factors

20. To date, the modus operandi for formulating an explicit population policy is common knowledge within the various countries of the region; the problem is with the implementation of effective strategies to achieve the objectives of policy. Despite the progress thus far made, the process of ensuring effective harmonization of population and economic growth rates is still a problem. Among the barriers to be overcome are the intellectual difficulty of defining integration, the lack of a critical mass of trained human resources for the required analyses, and the inadequacy of data on the linkages between population and development together with the lack of adequate methods for assessing the available data. In particular, for the North African countries, the identified problem areas are inadequate staffing (in number and skills); limited technical backstopping; low placement in government structure and unrealistic work programs. Many of the concerned institutions are often engaged in large-scale field studies and data collection without adequate experience or manpower. The lack of integration of the formulated population policies and plans of action is largely due to weak government commitment or perceived low priority under pressing economic and political concerns (Issa, 1996).

21. If the goal of harmonization is to be achieved, two key conditionalities must be created - a political climate in which population issues are considered to be central to public policy and adequate institutional and technical capacity. What is an adequate structure in sub-Saharan African countries comprises a three-tier typology of institutions: those established at the early stages for formulation of the policy, mostly the Population Planning Unit (PPU) located within a ministry of Planning or Health, to serve as the technical arm of the National Planning Commission (NPC) responsible for overall coordination of the population policy formulation and implementation; those established latter for implementing the policy measures, mostly the Multi-sectoral Committee for Population Policy Implementation (MSCPPI), in collaboration with the PPU and under the general direction of the NPC; and those established at the stage of a desire to decentralize the IPDP process from the national to the sub-national level (mostly a decentralized PPU or its equivalent).

22. In terms of experiences with the PPU's, they have often been established without clearly defined functions, responsibilities and procedures; adequate professional staff; and sufficient resources and institutional linkages. Sometimes, the linkage with the corresponding NPC is weak; consequently, they fail to forge fruitful links with existing Research Institutes. Instead of contributing to a synergistic integration, they contribute to a further marginalization of population concerns. Besides, the PPU is still regarded in most sub-Saharan African countries, as an enviable project with considerable resources. This implies that the enthusiasm

to develop the population policy is in some cases, externally driven. There is need to regard the PPU, not just as another project, but as an essential element in the population development planning strategy thus internalizing the concern to develop a population policy. Similar concerns have been noted with the MCSPP and decentralized PPUs.

23. In North Africa, an NPC was established in Egypt, Tunisia, and Sudan to formulate the policies, monitor their implementation and coordinate all programs and activities. Although they have been effective in raising the level of awareness regarding population problems and in policy formulation, they have been less successful in coordinating the programs and activities of the various sectors as well as various donors and integrating them into development plans. The other institutions (e.g. Population Units, Population Studies and Research Units, Manpower Planning Units, Population and Human Resources Development Units), established either in Ministries of Planning or in the Central Statistical Offices, have more diversified functions than the NPCs. They have been reasonably successful in promoting a better understanding of the vital role of population in development planning and of the population development linkages; they have been less successful in achieving the integration of population policies in development plans (Issa, 1996).

24. Besides the limitations of the institutional arrangements, most existing explicit population policies in the ECA region generally have too many sectoral implementation strategies and often are without either a focus or a sufficiently effective body responsible for overall coordination of the implementation process at the national level. It is also known that the 1980-decade witnessed a deterioration of socio-economic conditions in many countries; the sequel was the institution of structural adjustment programs (SAPs) by the international monetary fund. It is well known that orthodox SAPs have had adverse effects on population policy development. Overall, the review of the implementation of the KPA recommendations at APC3 revealed, inter alia, that:

25. “Despite the increased number of explicit population policies formulated since its adoption, fertility was (and is) still high in most African countries. There were and still are problems as well, with effecting desired declines in mortality levels and rural-urban migration rates, ensuring effective roles of women in development, implementing programs affecting children and youths, providing adequate data and information for the development of population policies, ensuring increased role of NGOs in the development of such policies, and putting in place, needed national focal points for the collation and dissemination of population information to operationalize the process of harmonizing population and economic growth rates” (UNECA, 1994).

III. ENVIRONMENTAL POLICIES

26. Historically, before colonization, the semblance of environmental policy reflected the traditional beliefs and practices of different communities across the region. Knowledge of biodiversity, for instance, was imparted in the form of oral history down to generations; this ensured that resources were managed on a sustainable basis. Community sanctions were

instituted against offenders. With colonization and the policy of protectionism, resources such as land, game and forests, hitherto accessible to local populations, were governed by laws. Environment, as a key element in the development process, was not an issue and where any policies existed, they were scattered and limited to a few selected resources (e.g. forests and water). Following independence, African economies depended heavily on natural resources capital to generate income.

27. The United Nations Conference on the Human Environment (Stockholm, 1972) signified a major turning point in the global and regional environment movement. Countries, at least some of them, then implemented one of its key recommendations - the establishment of national institutions with direct responsibility for the environment. By the 1980s, countries adopted national conservation strategies; tropical forestry action plans; plans of action to combat desertification and other related sectoral activities. The watershed was reached in 1992 (UNCED, Rio de Janeiro) whence bio-diversity loss, global warming, ozone layer depletion and fresh water management, etc. became priority issues and have since then influenced considerably, environmental policy development in the ECA region. It is to be recalled that the ECA, using as frameworks, the Kampala Agenda on Environment (1989) and the African Common Position at Rio, developed African Strategies for implementing Agenda 21; this was adopted by the ECA Conference of Ministers in 1993.

28. According to UNEP, land degradation and food insecurity, deforestation, biological diversity loss, water scarcity and pollution, and atmospheric pollution are among the major environmental problems in the ECA region. By far the most serious of these is land degradation. Although details of sub-regional and national variations in land degradation have been amply documented in various publications of UNEP (see for example, UNEP's Global Environment Outlook Report, 1998), it is particularly acute in the desert fringes of Algeria, the Rift and High Atlas regions in Morocco and the mountainous regions of Tunisia. In the last half century, about one half billion hectares of land in the ECA region have been degraded. Indications are that if the present rates in cropland degradation continue, crop yields will be halved in less than four decades.

29. Additionally, the major ecosystems are under serious threat despite the numerous interventions. The activities of farmers, grazers, poachers, timber concession, etc. are increasing with consequent present alarming rate of deforestation and desertification in many sub-regions. Bio-diversity loss is increasing and some species of flora and fauna are known to be endangered or extinct. Surface and underground water resources needed for domestic and agricultural use are already under severe threat in many sub-regions particularly in the savannahs and semi-arid zones. Although the urbanization process is on the increase in northern, western and southern sub-regions, the infrastructural supply of facilities do not match the demand. The resulting severe environmental, social and economic problems are undermining the political, social and economic fabric of many societies.

30. Following UNCED and towards implementing the environment agenda purporting to address the indicated environmental problems, many ECA member States have established

national institutions. Zaire (the Democratic Republic of Congo), established the first Ministry of Environment in sub-Saharan Africa. Within the framework of national environmental action plans (NEAPs) intended to provide a framework for integrating environmental considerations into the national social and economic development process, many of these States have also enacted sectoral legislation to incorporate natural resource and environmental considerations. Madagascar (1987) initiated the first NEAP in the region. Because environmental issues are generally cross sectoral, the ministries and institutions are usually coordinating in nature and function. For example, the Ministry of Environment is combined with Forestry in Cameroon, with Water Resources in Burkina Faso and with Science and Technology in Ghana. The Egyptian Environmental Affairs Agency has established eight regional branches to ensure proper coverage of environmental regulations. In Zimbabwe, ten ministries administer about twenty environment-related laws and in Botswana, eight ministries administer thirty-three laws.

31. Consequent upon the emerging environmental policies and programs in the region during the last decade and half, there has been an appreciable increase in environmental awareness among decision-makers and the public. However, in terms of addressing the challenges, existing environmental policies have had both positive and negative impacts. The negative impacts are mainly due to the fact that the respective policies are often formulated by governments without the participation of the majority of the stakeholders who have direct interests in and concerns for the environment. The most common causal factors of the negative impacts are related to poverty, inadequate financing, political instability, and lukewarm commitment to such policies.

32. Vast gaps and weaknesses still exist in the knowledge of environmental issues within the region. Land and other natural resource related policies have been difficult to implement in spite of the tremendous developments made in many countries largely because official central government legislations are often incompatible with traditional customary laws and land use practices. Modern policies and laws cannot change entrenched traditional beliefs and practices within a short period of time and the present resource issues are therefore likely to persist into the foreseeable future.

IV. TOWARDS ENSURING EFFECTIVENESS OF THE POLICIES: SUGGESTIONS

33. In effect, the population and development field has undergone many changes. The 1950s and 1960s witnessed the emergence of neo-Malthusian concerns that too many people reproducing too rapidly retards economic growth, destroys the environment, over stretches social services, exacerbates poverty and fuels conflict. Consequently, the field promoted public understanding and support for birth control, the development of better contraceptive technologies and family planning programs around the world. The Bucharest debate (with the North asserting that family planning programs should be the primary means of population control; and the South asserting that development is the best contraceptive) partly reflected and partly strengthened the emergent understanding of the relationships among advances in education, the status of women and human fertility.

34. By the 1980s, despite the chilling effect of the USA Government's position at the International Conference on Population and Development in Mexico City (1984), that population growth is a "neutral" phenomenon, integrated MCH and family planning activities had expanded throughout the developing world. Simultaneously, dissatisfaction with vertical contraceptive delivery systems designed to achieve demographic goals became widespread. The United Nations Decade for Women, the Child Survival Movement and the Safe Motherhood Initiative brought new actors into the debate towards promoting the integration of family planning with broader programs for health and women's advancement

35. Paradoxically, the 1980s also witnessed shifts in the development policies of the 1970s of poverty alleviation and meeting basic needs toward macroeconomic policies that emphasized economic growth, fiscal responsibility and the reduction of state provided social services. The 1990s focussed public and political attention on population, environment and development inter-linkages. The STD, HIV and AIDS pandemics, international economic crises, deterioration in social services, widespread infringements of human rights, environmental degradation and a resurgence of conservatism that opposes modern fertility regulation and women's advancement, all are powerfully affecting peoples' lives. Amidst these conflicting viewpoints, a reconsideration of population policies is urgently needed in order to re-establish a strong consensus for public action. Two dimensions have been proposed towards a way forward in this regard.

Methodological considerations for deriving effective population policy measures

36. The methodology that has been developed (Ekanem and Zewoldi, 1996) for deriving effective population policy measures enables a planner to empirically determine the "critical socio-economic variable" that can be manipulated by policy to trigger off the onset of fertility decline; identify the mechanisms through which such a variable will in fact, initiate such "onset"; and, use such identified key variable and mechanisms as bases for deriving the key sectors (macro level) of the population policy.

37. A first step is to assemble the data from a population census or survey on indices of socio-economic development for the country (macro level). Then the interrelationships between these indices should be determined using the multiple regression model. For this purpose, the computer software, the Time Series Processor (TSP), has been found to be readily applicable. The iterative feature of the latter enables the planner to compare the "observed" and "expected" values of some indices that are usually generated from such analysis until a point is reached where both sets of values are, to the extent possible, identical. At such a point (*designated as the "point of harmony"*), the critical values of the derived indices are assumed (by the method) to provide the bases for selecting the correlates of fertility levels and changes. An index of population growth [e.g. values of total fertility rate) could be used as a criterion variable while other socio-economic variables [e.g. proportion urban; infant mortality rate; proportion literate; and, female labour force participation rate; etc. could be used as explanatory variables.

38. The '*point of harmony*' is attained when (i) the derived R^2 and associated F statistic are statistically significant; (ii) the signs of the derived coefficients per explanatory variable are consistent with expectations on the basis of the tenets of orthodox demographic transition theory; (iii) the 2-Tail- significance level (per explanatory variable) is at most 0.10 in value²; and, (iv) the absolute value of the derived coefficient (per explanatory variable) is at least twice that of the associated standard error of estimate. At the "*point of harmony*", (i) the explanatory variable that most highly correlates with the criterion should signal the "*development threshold*" for identifying the ideal focus of the population policy; and, (ii) the partial correlation coefficients between the criterion and the independent variable so identified, should indicate *the mechanisms through which the identified key sector can be operationalized*.

39. Once the focus and key sectors of a population policy have been identified, the next main task for the policy maker is to set achievable targets to be attained per sector during the plan period as an integral part of an action plan for implementing the policy strategies. Although the methodology enables a policy maker to determine the focus of a population policy as well as the mechanisms for operationalizing such a focus, it does not enable him/her to ascertain, *a priori*, the quantitative impact of such intervention on the desired fertility target.

Ethical considerations: a human development approach

40. Besides methodological considerations, three major themes challenge the fundamental premises of current population policies namely ethics, human rights and human development; women's empowerment; and reproductive and sexual health (Sen ET al, 1994). Together these themes present a new approach to population policies based on a solid ethical foundation aimed at sustainable human development. Specifically the key issues of concern relate to the extent to which existing population policies can contribute to achieving the objectives of economic growth (i.e. reduction of poverty, unemployment and unequal income distribution)? ; How they can be transformed in order to maximize their contributions to human well-being?; and how they can be translated into effective program strategies?

41. The co-authors further contend that in these areas, available ethical standards argue against use of incentives and disincentives, forced abortion, compulsory sterilization, other kinds of coercion and pressures on clients; these violate human freedom, justice and welfare. Accordingly, it has been suggested that countries using pressures or coercion should offer an explicit ethical rationale for their practices; donor agencies should issue ethical guidelines for the work in family planning programs that they fund; and an international code of ethics covering the implementation of population programs should be provided.

42. Additionally, they raise many pertinent questions: First, in what circumstances can the state override individual interest in reproduction? Second, should policy makers be trusted to define the social interest or women's biological and social positioning in reproduction give primacy to their choices and also their voices in the definition of rights and responsibilities and how can abuses be redressed?. Finally what (a) do deciding freely and responsibly mean?; (b)

² This implies $\frac{1}{2}\alpha$ value of 0.05.

if the pro-natalist behavior is driven by dependence on child labor for survival or old age security or by women's need to produce sons in a patriarchal society that values boys over girls?; (c) is the appropriate and ethically acceptable balance between the quantity and the quality of services?; (d) are an individual's rights and responsibilities vis-à-vis his or her sexual partner and society?; and (e) are men's responsibilities regarding reproduction, transmission of diseases and their children's well being?

43. These and other issues, which are at the heart of current population policies and family planning programs have often either been glossed over or ignored. It has therefore been suggested that these policies should be reformulated based on unqualified respect for individual human rights and gender equity. In this regard, Sen, Germain and Chen suggest that such new policies should directly aim at advancing peoples' well-being and freedom and should foster enabling conditions both on their own merit and as a means to achieve human development. The resulting individual's control over their reproduction and sexuality, gender equity and freedom and empowerment should complement and strengthen the narrower focus of human development programs on health, education and income. Policies that build on popular participation and directly address human development needs have both moral value and efficacy. They provide a basis on which environmentalists and women's health activists can build alliances for strategies that promote secure livelihoods, basic needs and gender equity rather than just economic development.

44. Towards changing the foregoing ethical dimensions of current population policies, the co-authors suggest a seven-tier strategy: a redefinition of the objectives, expansion of scope and improvements in the quality of sexual and reproductive health services to serve all those in need; assurance of healthful, voluntary reproduction as well as the prevention and control of STDs, HIV and AIDS; a reduction of gender based violence and the promotion of mutually caring and responsible sexual relationships; broader formation and services for women, programs to encourage men's responsibility for their own sexual behavior and research and action to promote healthful and equitable sexuality and gender relations; a redefinition of family planning program objectives to focus on the human well-being rather than on demographic targets; ensuring that the young and unmarried have access to reproductive and sexual health services; and significant changes in conventional population education and family life education programs to ensure that they are relevant to the lives of the young people.

45. Additionally, the new policies should include (a) increased attention to through encouraging their own participation in and responsibility for fertility regulation, disease prevention and child rearing; a woman-centered research based on collaboration among women's health activists, scientists and policy makers; and the empowerment of the women.

V. SUSTAINABLE DEVELOPMENT: A HOLISTIC APPROACH

46. The message from all these is the need for "sustainability". Even before the adoption of the DND and the ICPD.PA, there has been a gradual shift in development paradigm. The feeling since the mid-1980s has been that unless there is integrated planning of population,

environment and technological application, the renewable resources (i.e. land, water, air, etc) of a nation are likely to be misused. When such “misuse” is combined with mineral depletion (i.e. non-renewable resource), underdevelopment is bound to be the dominant end result. Accordingly, at UNCED (1992), the concept of sustainable development was emphasized.

47. The ICPD marks a turning point in population policy development for all member States of the United Nations family. It has provided the opportunity for reformulation and/or reorientation of previous policies that were devoid of sustainable development considerations. For countries where no explicit policy existed, ICPD.PA has provided an opportunity to formulate new policies conceived as reinforcing sustainable development.

48. Policies developed following the ICPD.PA are expected to bear the title: “Population policies for sustainable development”. In this context, sustainable development implies, inter alia, “long term sustainability in production and consumption relating to all economic activities, including industry, energy, agriculture, forestry, fisheries, transport, tourism and infrastructure, in order to optimize ecologically sound resource use and minimize waste. Towards operationalizing this ICPD.PA dictum, the ideal situation would be one in which ECA member States formulate population policies and development strategies which are conceptually more people centered; institutionally aimed at establishing NPCs with vertical and horizontal linkages capable of instituting effective decentralization; and strategically and operationally based on relevance, effectiveness and sustainability of population and development activities. Besides, such policies and strategies should include core activities as advocacy, assessment of capacity at national and sub-national levels, mobilization of resources and various forms of support. Additionally, they should be integrated in the overall socio economic framework and provide support for research, analysis and monitoring and evaluation of the implementation (UNFPA/CST: Addis Ababa, 1996; Oucho, 1998).

Earlier strategies

49. Besides adopting the DND, APC3 also provided conditions for ensuring sustainable relationship between population, environment and development. It noted that the key prerequisites in the strategy are an improvement in a country’s terms of trade; fostering economic integration between and among countries to build strong collective bargaining power and overcome the small market constraint; the establishment of a peaceful and enabling environment; effective management of the economy under democratic governance; the formulation and implementation of National Population Programs simultaneously with programs aimed at addressing environmental degradation and other social concerns such as health and education; and taking actions concurrently at the national, sub-regional and regional levels of development in order to alleviate poverty and therefore minimize environmental degradation.

50. At the national level, APC3 directed that African countries should establish and strengthen institutions responsible for their environmental matters; update and implement environmental legislation; establish and strengthen NGOs as well as youth/women’s

organizations for conserving the environment; incorporate environmental dimensions in the school curricula; and integrate environmental issues in macroeconomic planning. This calls for integrated physical planning and social cost-benefit analysis of development projects, as well as keeping in view the environmental consequences of fiscal measures.

51. At the sub-regional level, as stressed in the Kampala Declaration (1989), the various intergovernmental organizations which have been established to coordinate environmental management (i.e. the Permanent Inter-State Committee for Drought Control in the Sahel (CILSS), the Intergovernmental Authority for Drought and Development (IGADD), the Southern African Development community (SADC) and the Ministerial Conference on Drought and Desertification (COMIDES)) should be fully utilized. They should be called upon to implement relevant components of major programs of action (e.g., the Cairo Program of Action, 1985); act as focal point agencies in the coordination of activities of international and regional organizations and donor agencies that are active in their respective sub-regions; and serve, as appropriate, on the main organs of regional conferences and sub-regional organizations.

52. At the regional level and deriving again from the Kampala Declaration, a country's transition from self-reliant development (as explicit in the KPA) to sustainable development (as explicit in the DND and the ICPD.PA) requires food self-sufficiency and food security; efficient and equitable use of water resources; greater energy self-sufficiency; optimal industrial production; maintenance of species and ecosystems; prevention and reversal of desertification; and better management of demographic change and pressures. It is to be recalled that the twenty eight chapters of the African Common position at UNCED (1992) were categorized into these seven strategic areas otherwise designated as African Strategies for implementing Agenda 21 as approved by the ECA Conference of Ministers at their 19th Session in 1993. Furthermore, the Ministers called on each ECA Member State government to utilize these strategies as bases for formulating its policies, programs and projects towards ensuring sustainable development.

Consensus re the Nexus Approach

53. Inspired by the series of United Nations Conferences and strategies on sustainable development, the ECA has been holding various consultations since 1995 to tackle the inter-linked problems of rapid population growth, environmental degradation and poor agricultural productivity. The dilemma has been whether the issues should be approached sectorally particularly as government ministries in member States are arranged in sectors or whether a holistic and integrated approach should be adopted.

54. The emergent consensus is that ECA should encourage its member States to conceptualize nexus issues holistically while maintaining the present sectoral arrangements to optimally exploit activities in each sector (i.e. population, environment and agriculture). This consensus is in line with recent thinking within one of ECA's partners, the World Bank Group. The Bank Group is of the view that it is almost impossible to design a nexus-related program for a

State at the national or even district level. What appears feasible is for the State to develop a community-based program (i.e. a bottom-up approach) where the people and not the government, can decide for themselves. Because of the popular participation and local ownership, the people will not be divided.

A Suggested Framework

55. In order to operationalize the indicated consensus, the ECA has taken steps to merge its former sectoral programs in agriculture, population, environment, science and technology, human settlements and water. Effective January 1997, the ECA has set up the Food Security and Sustainable Development Division (FSSDD) to address in a holistic and integrated manner, Africa's urgent nexus - population, environment and agriculture. The overriding goal of FSSDD is to assist ECA member States with the planning of a critical program for sensitizing their policy makers to the urgency of food, population and environmental concerns and offering feasible solutions based on best practices within Africa and around the world.

56. The challenge of FSSDD in agriculture is to ensure a transition from poor to high performing agriculture that can achieve an annual food production growth target of at least 4 per cent. On population, FSSDD will assist member States to formulate and effectively implement policies and strategies, including reproductive health and family planning programs that are capable of facilitating, at a faster pace, the demographic transition to smaller family size in the continent. FSSDD's environmental program is two-pronged: to advocate for environmental awareness among policy makers so that environmental concerns are factored into all development plans, and to assist member States in their efforts to reform their management of the environment.

57. In order to build human and institutional capacities needed for the development of programs to manage the three transitions, an initial step being suggested by the FSSDD is for the ECA member States to develop objectives and operational activities with clearly defined goals and objectives for each of the three indicated transitions. Towards assisting its member States in this direction, the initial focus of FSSDD is to determine the nature of the inter-linkages between the three core areas of food security, population and environment. The knowledge will be used in developing a powerful advocacy tool (i.e. a computer simulation model) for the management of the linkages between population, environment and agriculture. The model will be a prototype of the PDE (i.e. population, development and environment) model developed for Mauritius by the International Institute for Applied Systems Analysis (IIASA). The set of initial activities of FSSDD is presented in Box 1.

58. At the time of preparing this paper, FSSDD was still in the process of developing the computer simulation model for use in comprehending the inter-linkages between population change (P), environment factors (E), socio-economic development (D) and agriculture (A) or PEDDA for use in raising policy-makers' awareness (in ECA member States) about the urgency to achieve poverty reduction in their national development plans. What follows therefore, are suggestions for the development of such a framework. The thrust of the framework is to foster food security and sustainable development in the ECA region. Undoubtedly, population has to be

the centre of the trinity (i.e. population, environment and agriculture) because food security and the environment are crucially related to the spatial wellbeing of the human factor.

59. Considering population by such individual characteristics as sex (male vs female); place of residence (urban vs rural); education (literacy vs illiteracy); and food security status (food secure vs food insecure), a 4 by 8 matrix can readily be generated as in Schema 1. It is easy to comprehend the fact that the population cell with a combination of female rural residents, illiterates and food insecure (i.e. F-R- IL- FI) constitutes the worst-off population group relative to the other 7 combinations and hence would experience a combination of high fertility and mortality. Towards survival, this population segment will exploit the national resources without due regard to the natural cycles of regeneration leading to deforestation or desertification and/or land degradation. The dominant end result of this apparently simplistic linkage is low agricultural productivity attributable partly as well to the poor and/or inadequate rural infrastructure; the vicious circle of poverty then repeats itself all over again (see Figure 1). There are several possible options out of the vicious circle.

Schema 1: A 4 by 8 matrix showing sex, residence, literacy and food security status

M	U	L	FS	M	U	L	FI
F	R	IL	FS	F	R	IL	FI
M	U	L	FS	M	U	L	FI
F	R	IL	FS	F	R	IL	FI

Where U = urban; R = rural; L = literate; IL = Illiterate
FS = Food secure; FI = Food insecure; M = male; F = female.

Box 1: FSSDD's future activities

Besides advocacy, FSSDD's future activities will be geared, among others, to

Fostering interaction among sector experts and specialists at ECA and in member States to undertake integrated analysis of the interrelated issues of food security, population dynamics and environmental sustainability;

Raising policy-makers' awareness of the urgency to achieve poverty reduction by integrating population, food security and environmental concerns in national development plans;

Assisting member States in the context of their overall national development planning in building the human and institutional capacities that will be needed to manage the nexus

issues;

Identifying and promoting best practices in the management of nexus issues;

Strengthening co-operation among member States for equitable utilization of water resources and fostering the establishment of dispute settlement mechanisms on Trans-boundary river basins; and

Promoting the awareness and commitment of member States to apply science and technology to ensure food security and sustainable growth.

60. One of these is to formulate rural development policies (i.e. building the needed infrastructure.... roads, storage, markets, communication facilities, etc.). This would improve the food distribution chain and alter the food chain equation. A second option involves agricultural intensification using fertilizer, pesticides, implements, irrigation equipments, etc. All things being equal, this should positively affect agricultural productivity. A third option comprises the application of external political factors (e.g. food aid, food for work, etc.) aimed at influencing the food distribution. There is also the option of formulating and implementing effective population policies as integral parts of overall development planning in the country along the lines of the new vision suggested in section III. This should ensure the attainment of the goal of integrating population factors in the development planning process, namely the harmonization of population and economic growth rates in the ECA member States.

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