

# UNITED NATIONS DEVELOPMENT PROGRAMME



# UNDP

Distr.  
GENERAL

DP/1983/21/Add.1  
13 April 1983

ORIGINAL: English

GOVERNING COUNCIL  
Thirtieth session  
June 1983  
Agenda item 6 (b)

S U P P O R T

## OTHER FUNDS AND PROGRAMMES

### UNITED NATIONS FUND FOR POPULATION ACTIVITIES

#### Report of the Executive Director

on the future role of the United Nations system in family planning research,  
including contraceptive research and development

#### Summary

This report is being submitted to the Governing Council in response to decision 82/20, I, paragraph 6 (e), in order to provide the Council with information on the current status and needs in the field of family planning research in the areas of social research, programme research and biomedical research, and on the role of the United Nations system in family planning research. This report should be read in conjunction with DP/1983/21, in which policy issues relating to UNFPA support of family planning research and future UNFPA funding to the WHO Special Programme of Research, Development and Research Training in Human Reproduction are addressed.

## CONTENTS

- I. Introduction
- II. Family planning research: current status and needs
  - A. Social research
  - B. Programme research
  - C. Biomedical research
- III. Funding to family planning research
- IV. Future role of the United Nations system
- V. Future funding to the WHO Special Programme of Research Development and Research Training in Human Reproduction (WHO/HRP)

## I. INTRODUCTION

1. At its twenty-ninth session, the Governing Council requested the UNFPA Executive Director to prepare, jointly with the Director-General of the World Health Organization (WHO), and in consultation with the International Planned Parenthood Federation (IPPF), a report on the future role of the United Nations system in family planning research, including contraceptive development (Governing Council decision 82/20, I, paragraph 6 (e)). This report was to take into account the recommendations made in the Report of the Executive Director on support to contraceptive research and development (DP/1982/36, presented to the Council at its twenty-ninth session) and was to consider family planning research under way in public, private, and commercial organizations, identify research gaps, and review funding levels and prospects. All of these aspects were to be discussed, bearing in mind the particular needs of developing countries.
2. To obtain the information necessary to respond to the Governing Council's request, UNFPA and WHO circulated letters and questionnaires to 130 countries and 13 United Nations agencies and organizations asking them to describe their research activities in the family planning field, their capability to undertake research, their view of subject areas in need of further research, and their perception of needs in this field. In February 1983, WHO convened two co-ordination meetings of agencies conducting or directly supporting research on family planning; the first, concerned with biomedical research, was attended by representatives of 19 organizations; the second, which addressed programme and psychosocial research, by representatives of 15 organizations. WHO also contacted thirty pharmaceutical firms to obtain information on their current research on fertility regulating methods. All this material was analyzed as were published reports, monographs, the Inventory of Population Projects in Developing Countries Around the World 1980/81, and various documents of the UNFPA, WHO and IPPF, and these analyses have served as the basis for this presentation to the Governing Council.
3. In the preparation of this report, the general area of family planning research was divided into three principal categories of research: social, programme and biomedical. These categories overlap to some extent but the division is useful in describing current research and assigning research areas to executing agencies. The rubric "social research" covered socio-economic, health, legal and other cultural factors in so far as they affect fertility behaviour, family size preferences, and likelihood of adopting family planning. "Programme research" was taken to encompass research on the operational aspects of family planning programmes, e.g., acceptability of programme design and delivery strategy management issues related to the organization and monitoring of a programme, problems attendant on the delivery of contraceptives, and impact evaluation. Under the heading "biomedical research", research on the following topics was reviewed: safety and improvement of current, and development of new, contraceptives and other fertility regulating techniques, infertility, the physiological aspects of reproduction that affect fertility, and reproductive biology.
4. A measure of the importance ascribed to the area of family planning research can be seen in the attention given to this field recently by various national and international groups and conferences. The International Conference on Family Planning in the 1980s, held in Jakarta, Indonesia in April 1981, undertook a global review of the challenges that must be met if contraceptive information and services are to be brought to those who currently lack access to them. The Office of Technology Assessment of the United States Congress conducted a major review of the field and published the results of its findings in February 1982, under the title World Population and Fertility Planning Technologies: The Next Twenty Years. With respect to research, it distinguished between "basic, developmental, and utilization research, the former two relating principally to technology and the latter to service delivery and to cultural, economic and political factors". It concluded that:

Each of these three categories of research serves different purposes. Because of the inadequacies of current fertility planning technologies and the acknowledged increase in need for them in the years ahead, basic and developmental research to develop improved methods is clearly needed. But because of a long lead time in development of new methods, current technologies will have to be used more effectively if population goals are to be met in the next 20 years. Utilization research will thus be of key importance in the immediate future.

The National Research Council of the United States National Academy of Sciences in November 1982 concluded a three-year study on population policy and the determinants of fertility in developing countries. In February 1983, the Karolinska Institute and the University of Uppsala, both located in Sweden, sponsored an International Symposium on Research on the Regulation of Human Fertility which focused on the research needs of developing countries and priorities for the future. The common theme underlying these studies and conferences is the urgent need to clarify understanding of the factors affecting fertility and population growth and to increase research efforts in order to provide more appropriate programmes and technology.

## II. FAMILY PLANNING RESEARCH: CURRENT STATUS AND NEEDS

### A. Social research

5. As it pertains to family planning, social research includes the collection and analysis of data regarding the various socio-economic, health, cultural and legal or political factors that influence fertility behaviour, particularly the decision to practice family planning. Social research is essential to provide a sharper knowledge not only of those factors that directly influence fertility, such as age at first marriage and use of contraceptives, but also of the interaction between these factors, and between them and the prevailing cultural and institutional conditions of a particular society. Such research is often needed by countries to justify their initiation of a family planning policy and/or to bring an ongoing family planning programme into closer alignment with the needs and preferences of the groups for whom the programme is designed. Some topics for social research include the following:

- Modernization and socio-economic conditions: level of economic development; health conditions, e.g. level of infant mortality and prevalence of infertility; educational levels; employment patterns; role and status of women; urbanization; age at marriage; and adolescent fertility;

- Government policies: on population and family planning, including access to family planning information and services, access to abortion, incentives/disincentives; social welfare policies (insurance/pension schemes/child allowances); legal status of women; and legislation pertaining to marriage;

- Cultural factors: religion; ethnicity; value of children; son preference; influence of the family structure and functions of the family; and influence and role of the community. Several of the topics in the category of social research have relevance for the whole spectrum of population research as well as for family planning per se. Many of these topics are often categorized as "determinants of fertility" since they have a bearing on the decision to adopt and practice family planning.

6. Modernization and socio-economic development. A number of studies have addressed the question as to how conditions associated with modernization and socio-economic development - improved levels of health and education, urbanization, employment (particularly of women) in the modern sector, older age at first marriage - have operated to influence fertility preferences and, hence, the disposition to practice family planning. Before the 1974 World Population Conference, there was prolonged debate as to whether socio-economic development or family planning programmes was the most expeditious means of reducing population growth and much of the research of the period focused on this pivotal question. Drawing on evidence from a number of countries, researchers concluded that while there was a reciprocity between both factors, family planning programmes were responsible for a decline in fertility over and above that which could be expected from development alone. Once the efficacy of programmes had been established, attention shifted to sorting out which factors associated with modernization and economic development were most closely identified with the desire to lower fertility and hence with the likelihood of adopting family planning. Considerable work has been done on how women's roles and status, education and employment influence their fertility aspirations and subsequent contraceptive behaviour. Research to date indicates that women's education is often inversely related to fertility and that women with some education are more likely to practice family planning. A number of studies have been undertaken to identify the relationship between health status and fertility levels, particularly whether high levels of infant and child mortality prompt a couple to have a large number of children in the hope that the desired number will survive to adulthood. One finding of social research that is of considerable importance to family planning researchers is the gap between fertility intentions and subsequent behaviour. The World Fertility Survey (WFS) and other inquiries have revealed that many women, despite the fact that they did not want additional children, were not practising contraception. Such findings substantiate the "unmet need" for family planning and thus have relevance for the operational aspects of family planning

programmes . Another social factor of considerable relevance for family planning programmes is the fertility of adolescents. It is recognized that their fertility behaviour differs from that of the adult population and research is needed to gain a better understanding both of the determinants of fertility among adolescents and of suitable programme initiatives.

7. Government policies. With regard to government policies, researchers have tried to ascertain the effects of both direct policies (family planning, access to abortion, etc) and indirect policies (e.g., compulsory education to a certain age) on fertility. As would be expected, it has been easier to trace the impact of direct policies than to identify the effects of indirect policies on fertility. Investigations of the latter have been complicated by methodological and measurement problems which make it difficult to separate out the consequences for population growth of policies that had other goals as their primary objectives. Available evidence supports the conclusion that countries in which there is an explicit population policy with full government backing are more likely to experience a decline in fertility than countries where endorsement and commitment by the government is lacking. While there has been some research on the efficacy of government-sponsored incentives/disincentives regarding fertility behaviour, it has not been extensive.

8. Cultural factors. Most of the topics listed under the heading cultural factors have only recently come to the fore as prime research areas. It has gradually been recognized that religious and ethnic values as well as family and community norms might be key factors explaining both fertility preferences and the propensity to practise contraception. More research needs to be done in national settings to try to identify those cultural factors which inhibit the practice of family planning.

9. Another question that should be studied is what happens to prevailing customs and traditions in the face of modernization and how this affects fertility behaviour. In most developing countries, breast-feeding was usually of a fairly long duration bringing with it a period of infecundity. In many societies this protection from conception was reinforced by the traditional abstinence observed during the postpartum period. With the onset of modernization and consequent urbanization and changes in women's roles, research indicates that the period of breast-feeding is reduced and that former practices regarding abstinence are less likely to be observed. Both findings underscore the need for promotion of breast-feeding and for contraceptive protection at an earlier point in the postpartum period than previously existed.

10. All of the recent major surveys of existing research have underscored the need for more work on the cultural factors and social norms which influence fertility behaviour and, in particular, the practice of family planning. Data for several developing countries from the World Fertility Survey indicate that between 12 and 47 per cent of married fecund women wanted no more children, yet only a small percentage of them were practising family planning. This condition has prompted many observers to hypothesize that cultural forces or traditions explain the discrepancy between fertility goals expressed by women and actual behaviour. Cultural norms or religious beliefs related to role and status of women in a society, to the value of children, and to the perceptions of the body and privacy may inhibit behaviour that would lead to limitation of fertility. Many of these cultural factors impose a high psychological cost on the practice of contraception and thus may account for the low levels of practice observed. Further research is needed in order to understand husband/wife communication patterns and to understand better the issues, i.e., resources constraints; value of children; infant mortality; old-age security, etc., that influence fertility decisions at the household level.

11. Future needs in social research. While a considerable amount of research has been done on the various topics that fall under this heading, much of it has been fragmentary and inconclusive and the findings have not been readily amenable to policy application. The record indicates that the array of factors that prompt the use of family planning and hence precipitate a decline in fertility varies widely by setting. Hence, the transferability of findings is extremely limited, making it necessary to conduct country-specific social research. Many countries indicated their interest in additional social research, particularly on topics such as the status of women, adolescent fertility, role of socio-economic development in the fertility transition, and infant mortality. Several countries emphasized that social research findings are useful inputs for designing policy and programme interventions that are consonant with the norms and propensities of particular societies.

12. Responses from many of the countries surveyed in connection with this report underscored the need for a coherent framework which would permit analysis of the linkages between demographic variables per se and broader socio-economic and modernization forces. While it is known with some certainty that modernization is associated with a decreased demand for children, it is still not fully understood how this operates in particular societies and on the household levels. Much remains to be explained as to how a couple's socio-economic status affects its fertility, i.e., how education, income, rural/urban residence, women's employment, migration, social mobility are reflected in a couple's fertility behaviour. Moreover, how do these socio-economic variables of the household interact with larger government policies and programmes

directly related to population growth and distribution education, status of women, provision of basic needs, and to prevailing religious beliefs and cultural norms? A suitable framework is needed for analyzing how these socio-economic, structural and cultural factors interact with the more proximate determinants of fertility behaviour and the propensity to practise contraception.

13. Institution-strengthening. A number of countries, particularly in South and East Asia and Latin America have institutions and human resources capable of carrying out social research with perhaps a minimal level of outside technical assistance to supplement local expertise. In most other regions, there is a critical need for strengthening institutional capacities (e.g., universities, population planning units in government) and building up the number of appropriately trained persons.

14. Organizations involved in social research. A number of governments, United Nations organizations, regional and non-governmental organizations have sponsored or undertaken considerable work in the area of social research. U.S. AID has funded the recently-completed three-year study by the U.S. National Research Council's Panel on Determinants of Fertility and it is underwriting a number of country-level social research projects under the auspices of The Population Council. U.S. AID's recently-approved five-year project, "Demographic Data for Development", includes a component for the processing and analysis of family planning data. WHO, in collaboration with other organizations within the United Nations system, and relevant intergovernmental bodies, is taking a leading role in the assessment of the health situation and trends as they relate to fertility and family planning. WHO is promoting and supporting studies in many areas, such as adolescent fertility, levels of morbidity and mortality and associated behavioural, environmental, social and biological risk factors, fertility patterns, infertility, growth and development of children.

15. The Population Division of the United Nations, in co-operation with WHO, has done extensive work on infant mortality. It has also taken the lead in devising methodologies for measuring the demographic impact of family planning programmes. It has done this in conjunction with many demographers from developing countries and in co-operation with the International Union for the Scientific Study of Population (IUSSP). In formulating these methodologies, the Population Division has given considerable attention to investigating the ways in which fertility determinants affect the level of natural fertility. The United Nations Regional Commissions have undertaken a considerable amount of social research, including work on income levels and fertility, nuptiality and fertility, and analysis of WFS data.

16. The IPPF has sponsored a number of studies dealing with determinants of fertility and correlates of family planning acceptance. Some of these include: Study of Cultural Values and Population (Mexico); Effect of Postponement of Marriage on Fertility (India); Women and the Legal Obstacles to Raising the Status of Women. For the most part, however, IPPF sponsors research more closely linked to operational matters.

17. UNFPA was the principal funder of the work of the International Review Group on Social Science Research for Population and Development and, along with U.S. AID, a major funding source for the World Fertility Survey. In many of its country projects, UNFPA has supported research on determinants of fertility, for example, research on the role of cultural values in fertility behaviour in India and the Philippines.

18. Because the boundaries of social research are fluid, it is difficult to estimate with accuracy the level of financial resources allocated to social research which has direct relevance to family planning. Much social research could be considered basic demographic research,

yet is necessary for family planning research. Likewise, some undertakings labelled "programme research" could be considered social research. For 1982, it is estimated that approximately \$20 million was spent in the area of social research, including substantial expenditures for activities relating to the WFS. U.S. AID and UNFPA are the principal organizations involved in funding social research. Others include IPPF, The Population Council, and the International Development Research Centre (Canada). A number of developing countries themselves also support some efforts in social research.

#### B. Programme research

19. Family planning programme research addresses a range of issues under the following headings:

- Acceptability of, and access to, family planning programme services and fertility regulating methods, including the user and provider perspectives;
- Programme design and delivery strategy, including data necessary for manpower planning, risk approach, community participation, services integration and the role of non-governmental organizations (NGOs);
- Management of the programme, including method introduction, side-effects management and programme monitoring and impact analysis.

20. Acceptability of and access to services. The over-all goal of acceptability research has been to provide programme administrators and biomedical researchers with information needed to modify technology and programmes to fit people, rather than modifying people to fit technology and programmes. The principal programme-related topics in family planning that have been given attention by researchers are access to services and fertility regulating methods, and the user and provider perspectives.

21. Research on access to services includes the sub-issues of physical, informational, financial and psycho-social access. Psycho-social access refers to the attitude of the potential client with regard to methods and/or providers and to social and family norms which influence decisions to accept or continue contraception and the question of which method to accept. The prime research need is to devise new ways to expand the provision of current public services to those who now lack ready access. Specially designed outreach services are needed to reach geographically, economically or socially marginal populations (e.g., migrants, tribal peoples, slum dwellers, those in remote rural areas, adolescents and repeat users of illegal abortion).

22. Access can be defined in terms of costs, discriminating between the costs of access to contraception and cost of use. Costs of access can include time needed to travel to a clinic or wait there; transportation and services costs; and psychological costs from unhelpful or unfriendly clinic staff. Examples of costs of use include social and family pressures, discomfort from physical side-effects and concerns about health, method failure, or failure to regain fecundity when desired. As with the user perspective, this access cost concept remains to be developed and tested. Analysis of the cost of access to services and the cost of use would facilitate the design and testing of new and revised approaches to improved access. Nearly every agency and every respondent consulted for this review placed the general issues of acceptability, analysis of demand and concern for user needs or the general issue of access high on the list of research needs.

23. Access also includes user perspective and provider roles in the provision of services. People's perceptions must increasingly be taken into consideration as regards the safety and effectiveness of contraceptives; the risks and benefits involved; accessibility and availability of services; and the perceived quality of service, in terms of staff attitudes and performance. This implies important changes in programme design and strategy, in programme management and in performance and impact evaluation.

24. Programme design and delivery strategy. The major concern is how best to deliver services, who provides them, where to find them (clinic, depot, home) and with what service point density, who controls resources and local delivery style, what mix of services, and at what cost. Major

themes in the current literature are those of the community's role in providing services and of the integration of family planning services with other social services, especially primary health care; and include:

(a) Research needs in community participation and family planning. The broad context of decentralization and greater community participation in the development process includes as a sub-issue the role of communities in family planning services delivery. This research area incorporates the more strategic, operational aspects of the user perspective. The basic issue needing development and testing is how to include communities in the design and delivery of family planning services. The proximate task is to develop the sub-issues into researchable topics. Smaller, country-level studies are likely to be the best approach. Much useful experience now exists in designing and implementing low-cost, community-based services programmes in the developing countries, for example in primary health care and agriculture. This experience needs to be documented and disseminated more broadly. To a degree that this record is incomplete, local-level experiments are needed. Although this area of research is seldom listed as a top priority, countries and United Nations personnel in all developing regions report this as a research need.

(b) Research needs in integrating family planning with other development interventions. Few issues have been talked about and experimented with as much as integration. Some of the better documented examples include those in Sri Lanka and the Federal Land Development Authority scheme in Malaysia. Unfortunately, few areas are so complex and so difficult to evaluate in terms of the effects of different patterns of integration. The related issues of user perspective and community participation of integration. The related issues of user perspective and community participation only increase the need to seek and evaluate integrated approaches that are effective in given setting. As with community participation, the research need is to initiate empirical research in countries where this has not been done in order to complete the record on the cost-effectiveness of various integrated approaches and, generally, to provide the basis for broader replication. All parties agree that this issue has high priority on the research needs agenda. It is now recognized that implementable policy in these two related areas can only be developed through a series of empirical, country-specific case studies, followed by compilation and over-all review. Studies now being initiated under U.S. AID sponsorship should help begin the needed assessment of country experience on what approaches seem to work under what conditions.

(c) The risk approach. This approach allows countries to quantify their major health and fertility problems, analyze the functioning and management of their FP/MCH care system and plan and evaluate modified strategies, based on attributable risks and analyses of local resources. One aspect of this approach that is beginning to receive increasing attention is the attempt to improve targeting of potential acceptors through identification of those at risk of unwanted pregnancies. One approach, now being developed in Indonesia, is to use a woman's open birth interval to identify potential acceptors for services and as target groups for carefully prepared family planning communication approaches. In Thailand, mini-surveys are being employed to identify at-risk women as potential acceptors. A review of current research agendas and completed studies indicates a concern for two particular risk groups in many parts of the world: sexually active adolescents and women who utilize illegal abortion services, especially poor women, including those who seek abortion repeatedly. Studies of adolescents have shown that problems of adolescents have shown that problems of adolescent pregnancy and sexually-transmitted diseases are becoming increasingly acute in some developing countries as well as in the industrial countries. Other high-risk groups which have been the subject of study are migrant populations and those who are new to urban areas.

(d) Use of voluntary and commercial sectors. Another major concept which has been sporadically reflected in ongoing work is how to utilize the voluntary and commercial sectors in the delivery of information and services. Results from community-based distribution approach (now found in most countries with a major family planning effort) and from "social marketing" schemes (e.g., Bangladesh, Colombia, Jamaica, Nepal) have been encouraging.

(e) General research needs in programme design and delivery strategy. Researchable sub-areas include evaluative and operations research to assess the cost and effectiveness of existing approaches (e.g., outreach, cost recovery, use of health personnel, integration) and



pilot studies to test and adapt new, innovative approaches for inclusion into programme design. This research may also offer potential approaches to expanding access to services. Community-based approaches are one avenue to expanded access to services, as are the use of various innovative approaches such as social marketing and the use of change agents from other development sectors. Other potential approaches to be developed and evaluated include expansion of the commercial, NGO and private practitioner network to include those now under-served. In order to do this, legal, administrative and financial constraints to such expansion must be identified and moderated.

25. Programme management. Variations on earlier attempts to evaluate over-all programme impact continue. More recent studies tend to adopt a country-specific focus and are increasingly addressed to specific operational or policy concerns of family planning programme leadership. Specific functional areas of family planning programmes that have begun to attract researchers over the past few years include:

(a) Management information. Initially concerned only with acceptance levels and characteristics of acceptors, the more general term, management information system (MIS), is now seen to include whatever information programme managers and workers need to carry out their tasks. Although this approach has been much discussed, it has seldom been the subject of serious study and has rarely been fully implemented.

(b) Personnel and training. This broad and crucial area includes such sub-issues as supervision and the deployment of various categories of health personnel. Like management information, this area has been more talked and written about than studied. The most fully documented aspect of personnel and training is the experience with health workers in clinic, field delivery and communication/motivation roles. This literature has no doubt stimulated the increasingly widespread use of non-physicians even for relatively complex clinical tasks.

(c) Communications. Research on family planning support communications has documented the success of these efforts in spreading knowledge about family planning, but has less conclusively established the link between knowledge and contraceptive practice. The major communication research has been the KAP (knowledge, attitudes, practice) study. Newer efforts to more effectively target delivery services to a variety of population sub-groups, plus the emerging integration and community orientations, are beginning to use market research and impact approaches developed originally for commercial applications. The programmes of the Republic of Korea and Thailand have been experimenting with these approaches.

(d) Management of contraceptive technologies. The principal issues in this area are how to introduce new technologies into a programme, decisions about method mix and the management of side effects.

(e) Studies to improve programme efficiency. As the cost of programmes rises, the concern about efficiency increases. It is not surprising to find more country-level cost-effectiveness analysis undertaken in recent years. These studies may be expected to influence programme design and management approaches through better deployment and utilization of service staff and better method mix.

(f) Supply management. Until recently, this important programme support area was largely ignored by researchers. Only in the last few years have studies - almost exclusively of the small, quick-feedback, operations research variety, begun to focus on design and problem solving in this area. Researchable supply management sub-issues includes procurement strategy, warehousing, transport/distribution and inventory management.

(g) General research needs in programme management. In the probable absence of an early availability of a greatly improved contraceptive method, the best near-term investment of funds and effort is likely to be in the area of improved programme performance, an area in which research on programme management will necessarily play a major role. Researchable management functions include programme management, testing and adaptation of improved management information systems, personnel systems (especially training, supervision and staff motivation), programme support communications and supply management. In utilizing existing fertility regulating technology, the major researchable issues are concerned with the introduction and manage-

ment of this technology so as to mitigate and deal with side-effects and with method mixes which are socially and medically appropriate for varying target groups.

26. Although family planning research and data gathering methodology has gaps, most respondents to the questionnaire were emphatic that the problems lie primarily in the under-utilization of existing methodology at the country level. Thus, the most important task in the short-term is to facilitate the application of existing methodology at the country level.

27. Institution-strengthening, including research training: A major obstacle at present to programme research in most developing countries is the shortage of trained personnel to carry it out. A mix of disciplines is needed that is not readily available: operations research and management sciences, epidemiology, sociology, demography, anthropology, economics, obstetrics and gynaecology, community medicine, psychology, and statistics. Sometimes expertise in certain of these disciplines is missing. More often it is difficult to bring together specialists willing to apply their skills to the practical issues that face family planning administrators. There is an urgent need to build up research nuclei in institutional settings such as the research and evaluation units of national family planning programmes, in management institutes, and in schools of public health or other academic centres, in order to pull together the required mix of disciplines.

28. Another problem is the shortage of institutions capable of providing appropriate training to developing country specialists. Training scientists who are to tackle the programme issues of developing countries in institutions in industrialized countries is at best a makeshift solution. A large effort is essential to build up the training capabilities in developing countries for programme research.

29. The major cost in institution-strengthening for programme research will be for research training, at both the senior and supporting staff levels. Until such expertise is widely available in developing countries, considerable technical assistance will be required, particularly for the design of research projects and their analysis, and for some development of methodology. The physical facilities required for programme research consist principally of data processing equipment and transport for which foreign exchange may be needed by the developing countries.

30. Funding and main organizations involved. Estimates of funding to programme research directed to the needs of developing countries are difficult to derive. The boundaries between programme research and provision of services are not often clearcut, nor are those between programme research and certain aspects of social research. In 1982, roughly \$12 to \$15 million was devoted to programme research.

31. U.S. AID and UNFPA together account for about three-fourths of the funding to this area of research. Other agencies with major activities include the United Nations Population Division, WHO, the International Development Research Centre (Canada), IPPF, The Population Council and Program for the Introduction and Adaptation of Contraceptive Technology (PIACT). Several developing country governments have also extensively promoted and given support to the programme research, for example those of Colombia, India, Indonesia, Mexico, Pakistan, the Philippines and the Republic of Korea.

### C. Biomedical research

32. Biomedical research in family planning is considered in this paper under four main headings;

- . research and development of contraceptives and other fertility regulating methods;
- . research on infertility,
- . research on physiological aspects of reproduction affecting fertility;
- . research in reproductive biology relevant to fertility regulation

33. Research and development of contraceptives and other fertility regulating methods. Methods currently available. In the context of the needs of developing countries, research on current methods is conducted because most birth control methods have been tested mainly in developed countries. The health status of men and women in developing countries, diet and reproductive patterns differ extensively from those of developed countries so that it is difficult to extrapolate data from one to the other, or to determine which preparations or devices, from among those available, are best suited to different populations. Certain problems, particularly those relating to long-term effects, such as cancer, are of concern to developed as well as to developing countries.
34. National family planning programmes currently include some or all of the following methods; daily pill, intrauterine device (IUD), female and male sterilization, termination of pregnancy, injectable contraceptives, barrier methods (condoms, spermicides, diaphragms and caps) and natural family planning.
35. The major current topics of research on the safety and effectiveness of these various methods are:
- (a) daily pill - relative merits of different preparations; metabolic effects in different populations; risks of cardiovascular disease; effects on lactation; risks of cancer; tolerance in women with parasitic infestations;
  - (b) intrauterine device - relative merits of different IUDs; risks of pelvic infection and ectopic pregnancy;
  - (c) female sterilization - risks of subsequent menstrual disorders;
  - (d) male sterilization - risks of cardiovascular disease;
  - (e) injectables - relative merits of different preparations; effectiveness of reduced dosages; metabolic effects in different populations; effects on progeny, exposed through breast milk or in utero; risks of cancer; return of fertility after cessation of use;
  - (f) barrier methods - relative effectiveness of different products.
36. Funds going into research on current methods conducted in developing countries amounted in 1982 to approximately \$5 million. Of this sum, about \$2 million was expended through WHO/HRP; over \$1.7 million through Family Health International (FHI), and the remainder mainly through IPPF, the Indian Council of Medical Research, the Government of the People's Republic of China, and the International Development Research Centre (Canada). The pharmaceutical industry conducts very little such research in developing countries, but does provide drugs and devices at no or low cost for such studies. The figures above do not include the funds expended in developed countries on research on current methods, in which the United States is the most active, investing about \$5 million a year on these problems studied in American women and men. A total of about \$1 to \$2 million is spent in the other developed countries, mainly through their medical research councils.
37. Most studies on the safety and effectiveness of current methods yield results within two to four years. Studies of long-term effects, for instance, risk of cancer or effects on subsequent generations, take many more years. Given the millions of individuals using birth control methods, rare side effects are likely to manifest themselves in substantial numbers, making it even more important to set up monitoring systems than it is for other drugs. Such systems are virtually non-existent in developing countries. There is also a need to examine whether the beneficial effects on health of some contraceptive methods, documented in developed countries, are also found in developing countries.
39. Improved and new methods. Research and development on new technology seeks either to improve existing methods of birth control or develop entirely new methods in order to avoid the

side-effects of current methods (e.g, pain and bleeding from IUDs), or to reduce their inconvenience (e.g, daily pill taking). Another aim is to make available birth control modalities entirely lacking today, such as pills for men, or simple kits for detecting the fertile period for users of natural family planning methods.

40. Efforts are mainly directed at present to improving or developing the following kinds of contraceptives and other fertility regulating methods:

- (a) daily pills - new preparations with fewer metabolic and cardiovascular side effects
- (b) IUDs - new devices that reduce bleeding and pain;
- (c) female sterilization - non-surgical methods;
- (d) male sterilization - reversible methods;
- (e) termination of pregnancy - non-surgical methods, administered orally or by the vaginal route, or by injection
- (f) injectables and implants for women - with duration of action of 1 month, 2-3 months, 6 months, or 1-5 years.
- (g) vaginal rings - self-insertable devices that can remain in place for 1 month, 3 months or 12 months;
- (h) once-a-month pills for women - to be taken at a fixed time during each menstrual cycle;
- (i) post-coital pills - to be taken only after intercourse;
- (j) menses-inducers - to be taken if menses are delayed by a few days or regularly once each cycle;
- (k) natural family planning methods - kits and devices for easy prediction of fertile period;
- (l) drugs for men - pills or injectables;
- (m) birth control vaccines for men and women - with duration of action of one or several years;
- (n) barrier method - more effective spermicides and devices.

41. Research is also being undertaken to determine whether, from the large number of plants with alleged fertility-regulating properties, demonstrably safe and effective products can be developed. Main emphasis at present is on their use as menses-inducers, post-coital pills, oral abortifacients and male methods.

42. In one sense, practically all research and development on improved and new methods, whether conducted in developed or developing countries, is relevant to the needs of developing countries, since the larger the number of birth control methods available to a family planning programme, the greater its chances for success. On the other hand, the relative priority given to research on different techniques with their own populations or markets and organizations or industry primarily concerned with the needs of developing countries. The former may, for example, put greater emphasis on improving the daily pill, the latter more on long-acting injectables and implants. For many methods, however, such as birth control drugs for men, the product is of equal interest to both developed and developing countries.

43. Approximately \$40 million were spent worldwide in 1982 on research and development of new and improved methods, with about an equal amount of expenditure by industry and the public sector and non-governmental organizations. The break-down of funding of research and development by the public sector and NGOs shows that about \$4.5 million of the \$20 million is invested in research on once-a-month pills, post-coital drugs and menses inducers; about \$2.5 million on injectables and implants for women; about \$2 million on drugs for men; \$1.3 million each on vaccines and new barrier methods; \$1 million each on vaginal rings and IUDs.

44. The largest source of funding for contraceptive development (over \$9 million) is the Center for Population Research (CPR) of the United States National Institutes of Health, (NIH) accounting for nearly half of expenditures outside the pharmaceutical industry. The next largest sources of funds are The Population Council and the WHO/HRP with about \$3 million each, followed by IDRC with \$1.2 million. The Ford Foundation, FHI and the Program for Applied Research in Fertility Regulation (PARFR) together accounted for about \$2 million. The other major efforts are those of China, India and the Medical Research Council of the United Kingdom.

45. Most pharmaceutical firms have been reluctant to provide a breakdown of expenditures. It would seem that greatest investment is being made in refinements of the daily pill, post-coital drugs and menses-inducers, and drugs for men.

46. Research and development of fertility regulating methods, even more than the development of other drugs or devices is a high-risk enterprise. Elaborate toxicological and human testing requirements have to be met over a number of years, and only a small proportion of leads ever reach the product stage. Estimates of cost for development of a new product range from \$20 million to \$50 million, and the time required could take up to 20 years from the time of original concept to product for general use. Some of the leads listed in paragraph 40 are at an advanced stage of testing, such as the improved IUDs, a non-surgical method of termination of pregnancy and the one-and the three-month vaginal rings. The likelihood of their completing the development process is high, but they will go only a small way towards meeting the demand for new methods.

47. Products that are likely to have a much greater impact in developing countries, such as pills for men, a birth control vaccine, or once-a-month pills for women are at a much earlier stage of development and therefore have a much higher chance of failure in the development process. Paucity of funds is such that only a few leads, for instance, a birth control vaccine, are being pursued. To ensure a statistical likelihood of success, many more should be explored simultaneously. Too often shortage of funds causes, within research on one lead, failure to replicate studies to validate results. This may well cause premature abandonment, on the basis of one set of negative results, of an otherwise promising line of research.

48. Unlike research on current methods, higher levels of funding can immediately absorbed, particularly in developed countries, in the development of products suitable for developing countries. Good use could be made once of \$100 million a year by all organizations involved. It has also been suggested that industry could be stimulated to greater activity through government subsidy and by changes in drug regulatory requirements.

49. Research on infertility: The prevention and treatment of infertility is an integral part of family planning care. In some developing countries, up to one-third of either family planning or other gynaecological consultations relate to complaints of infertility. Epidemiological research in this field attempts to determine more precisely in developing countries the magnitude of the problem of infertility and the distribution of causes in different communities, prevention being so much more efficacious in this case than cure. Research is addressed to these questions and is also directed at devising simpler methods of diagnosis and better methods of cure, suited to primary health care.

50. Research on infertility is funded at a lower level than research on methods of birth control and is conducted by fewer agencies. About \$4 million out of the \$6 million spent in 1982 by the public sector was devoted to research into unexplained causes of infertility, and most of that was conducted by the Center for Population Research in the United States. WHO's expenditures on infertility research amounted to about \$900,000 in 1982. Industry's interest lies in developing diagnostic procedures and new drugs for treatment, but not necessarily with the primary health care context in mind.

51. Greatest demand for increased research on infertility has come from Sub-Saharan African countries. Higher priority in this region was given to infertility research than to research on other aspects of fertility regulation at a WHO consultative meeting on research in human reproduction at Yaounde, United Republic of Cameroon, in December 1978. A number of countries in the Middle East (e.g., Kuwait and Saudi Arabia) and in Latin America (e.g., Argentina) also ascribe higher importance to it.

52. Extension of epidemiological studies on the magnitude and causes of the problem would make available the data essential for the setting up of preventive and curative services. Present diagnostic and therapeutic techniques are complex and have a low rate of success. Their simplification and improvement through research would help integrate some services for infertile couples in the primary health care context. Increased funding to research on infertility on the order of \$2-4 million a year, over a period of 5-7 years, should bring solutions to many of these questions. For the 2 to 3 per cent of couples with causes of infertility not presently understood, the solution lies in more basic research at the level of reproductive biology.

53. Research on physiological aspects of reproduction affecting fertility

Certain physiological aspects of reproduction, such as lactation and reproductive maturation, affect fertility and are therefore relevant to research in family planning. Studies on the relationship of lactation and fertility seek to establish the circumstances and settings in which breast-feeding can be promoted and supported as an effective means of birth spacing, and at which point during the postpartum period it would be appropriate and necessary to introduce alternative fertility regulating methods in order to avoid an unwanted pregnancy without having adverse effects on lactation or on the breast-feeding infant.

54. The timing of reproductive maturation has an obvious potential effect on fertility, depending on marital patterns and sexual behaviour. Increasingly, authorities in both developed and developing countries are becoming aware of the growing problems of adolescent pregnancy and abortion. Contraception during this period of life has several special aspects, e.g., fertility is lower during puberty for physiological reasons, and contraceptive methods present a different set of problems when used before a woman has attained physiological maturity. Biomedical research on reproductive maturation would provide the basis for identifying fertility regulating methods that are suitable or adaptable to the physiological and psycho-social needs of the sexually active adolescent.

55. Research on the physiological aspects of reproduction which affect fertility has not received wide attention until recent years. Much of the research relating either to lactation or reproductive maturation to fertility has been of a demographic or epidemiological nature. In developed countries, about \$2 million a year has been allocated to such research. WHO has studied these aspects in the Collaborative Studies on the Patterns of Breast-feeding supported by UNFPA and the Swedish International Development Authority. Also with the support of UNFPA, WHO has conducted studies on reproductive maturation.

56. Research in reproductive biology relevant to fertility regulation. Development of new methods of fertility regulation, understanding of side-effects and effectiveness of current methods, and progress in the treatment of infertility depend on advances in fundamental knowledge about reproductive processes, such as the formation, maturation, release and transport of eggs and sperm, fertilization and the development of the fertilized egg. Such research is undertaken from the level of the molecule to the whole organism, and encompasses studies in many species.

57. Practically all research on reproductive biology relevant to fertility regulation is conducted in academic institutions and supported by national research councils and by private foundations. Expenditures in this area are around \$60 million a year, with close to 80 per cent of this figure being expended in the United States. In the developing countries, the major research activity is in China and India. A recent trend has been to increase research on male reproductive processes. In response to the demand to develop male methods of fertility control, approximately 50 per cent of the research effort world-wide is now devoted to the male reproductive process.

58. In spite of the fact that reproduction is at the core of life and health, knowledge about its basic mechanisms remain deficient and there is a lack of new ideas regarding reproductive processes that would lend themselves to regulation. This is particularly the case for male methods. Understanding of reproduction is also deficient in other animal species. This affects adversely the development of methods, in which testing in animals is of paramount importance. Better comprehension of animal reproduction would allow selection of more appropriate species for testing and might considerably reduce the duration and cost of toxicological testing. The much larger investment required in reproductive biology will probably need to come mainly from national authorities in developed countries.

59. Institution-strengthening, including research training. The expansion of national family planning programmes in the past 15 years has led to increasing demand by developing countries to have their own capabilities to conduct biomedical research in this area. This has been reinforced by realization of the fundamental part research plays in development and the generalized call for developing or reinforcing local capabilities. Priority is usually given to strengthening human resources and facilities to conduct clinical and epidemiological

research, but a number of developing countries, such as China, India and Mexico have also placed emphasis on establishing capabilities for more basic research and for development of new fertility regulating methods.

60. Until the early 1970s, The Ford and Rockefeller Foundations were active in assisting developing countries in these efforts. In the past decade, WHO/HRP has become the major agency involved in technical and financial co-operation with developing countries in institution-strengthening for biomedical research, including acting as executing agency for some projects funded by UNFPA. WHO/HRP's expenditure in this area in 1982 amounted to about \$3.5 million.

61. Only about 20 developing countries have national capabilities for conducting biomedical research in family planning. About 10 others are developing such resources. In many instances, the capability may not extend beyond a single research group, with expertise in clinical but not necessarily in epidemiological research. Even in countries where there are several groups, the manpower and facilities are inadequate in relation to total population, size and diversity of the country. Few developing countries currently have resources for basic research or for product development.

62. To meet the desire of those countries that wish to develop or strengthen local research capabilities, a major effort is needed over the next 20 years. For a single institution to reach self-reliance, a 5 to-15 year build-up may be essential, depending upon the initial level of expertise and facilities, commitment, and level of investment. Both a greatly increased local commitment and an infusion of international co-operation and funding are required.

63. Governmental agencies. By far the largest government programme of biomedical research is that of the Center for Population Research of the United States National Institutes of Health. Practically all of its activities and expenditures (approximately \$70 million in 1982) take place within the United States but it also engages in technical and financial collaboration with WHO/HRP in a number of research areas, as well as with other agencies.

64. In 1982, U.S. AID also provided about \$8 million to biomedical research through two U.S.-based non-governmental organizations of which it is the principal source of funds - FHI and PARFR - and through The Population Council.

65. China is investing considerable sums in building up a number of major research institutes devoted entirely to biomedical research in family planning. Some of this work is being done in collaboration with WHO/HRP and with some UNFPA funding. Basic research in reproduction is also carried out by the Chinese academies of medicine and science.

66. The Government of India's support to biomedical research in family planning is mainly through the Indian Council of Medical Research (\$725,000 in 1982) but it also supports work in its universities and other research institutes. There is fairly extensive technical and financial collaboration with WHO/HRP, and with other agencies.

67. Among the European medical research councils, that of the United Kingdom has the largest programme of applied and basic biomedical research in family planning, followed by Medical Research Councils of the Federal Republic of Germany, France, and Sweden, in all of which basic research predominates.

68. Non-governmental organizations. The most active non-governmental organization in biomedical research in family planning oriented to the needs of developing countries is The Population Council and its International Committee for Contraceptive Research. In 1982, the Council had a budget of about \$3.3 million for contraceptive research and development, and over \$1 million for more basic research. Its support is derived primarily from the United States Government through NIH or U.S. AID, from private foundations in the United States and from IDRC.

69. Reference has already been made to FHI and PARFR, U.S.-based non-governmental organizations, the budgets of which are almost entirely funded by U.S. AID. The former had a budget of

\$2.3 million for contraceptive research and development, and the latter of about \$650,000 devoted primarily to work on new methods.

70. Three private foundations in the United States - Ford, Mellon, and Rockefeller - had a combined programme of support of about \$8 million in 1982 for basic research in reproductive biology oriented to contraceptive development. The Ford and Rockefeller Foundations also provided support to The Population Council for research and development on new methods. The Ford Foundation has indicated that after September 1983 it will not support any new projects in this area.

71. The Program for the Introduction and Adaptation of Contraceptive Technology (PIACT), largely funded by U.S. AID, UNFPA and United States foundations, restricts itself essentially, in biomedical research, to the manufacturing stages of the contraceptive development process.

72. The Canadian International Development Research Centre (IDRC) had a budget of about \$1.5 million in 1982, and also made a substantial grant to The Population Council.

73. The pharmaceutical industry. The active role of the pharmaceutical industry in the development of birth control methods decreased considerably in the 1970s. Reasons given for this were preoccupation with not harming the large markets already achieved for products developed by industry in the previous decade, the increasingly stringent requirements for toxicological testing, and the absence of new ideas from basic research. A number of companies did, however, collaborate throughout the 1970s with many of the agencies mentioned in this paper. Firms are reluctant to provide information on their current investments in contraceptive and infertility research, but it would seem that, in the last two or three years, there has been a reawakening of interest in the development of new methods. According to certain industry spokesmen, this renewal of research and development efforts could be directed to the needs of developing countries by provision of appropriate government subsidies. Another potential resource is state-owned industry in countries that have high priority to family planning.

74. The United Nations System. For the past 15 years, the United Nations system has played an important role in biomedical research in family planning, oriented exclusively towards the needs of developing countries and primarily through the activities of WHO in both research and institution-strengthening. WHO expenditures in these areas in 1982 amounted to over \$10 million.

### III. FUNDING TO FAMILY PLANNING RESEARCH

75. A considerable effort has been made to obtain estimates of global funding to family planning research of relevance to developing countries. Sources consulted include governmental agencies in both developed and developing countries (technical assistance agencies, national research councils, ministries, etc.), non-governmental organizations, the commercial sector and United Nations agencies. Funding estimates have been given at the end of sub-section of the preceding chapter. They are of necessity approximations since most organizations involved in family planning research do not break down financial data along the lines followed in this paper.

76. Global funding to family planning research of relevance to developing countries in 1982 was between \$72 to \$77 million, or roughly about \$75 million. These figures exclude agency technical and administrative costs, and double-counting of funds granted by one agency to another has also been eliminated. This \$75 million represents the equivalent of about 15 per cent of the global funding of population activities in developing countries, estimated at \$500 million, including contributions of both developing and developed countries. If one subtracts from the \$75 million the \$20 million invested by industry and the \$10 million spent by medical research councils on contraceptive technology for developed countries populations, but which might be of use to developing countries as well, the percentage of funds allocated to research drops to 9 per cent of total funding to the population sector.

77. The \$72 to \$77 million for family planning research in 1982 comprise roughly \$20 million for social research, \$10 million to \$15 million for programme research, \$40 million



for research and development on contraceptives and other fertility regulating methods and \$2 million for research on infertility. In comparing the amounts allocated to these areas, it should be noted that biomedical research is by far the most expensive, particularly for the development of new technology. Not only are costly physical facilities involved, but extensive animal and human testing is required. Another reservation in interpreting these figures arises from the difficulty of demarcating precisely the boundaries between expenditures for social and for programme research, and, within social research on population, of determining the part that applies specifically to family planning issues.

78. Funding for the strengthening of institutions in developing countries for research in family planning, including research training, amounted in 1982 to approximately \$7 to \$8 million, divided into \$2 to \$2.5 million for social research, \$1 to \$1.5 for programme research, and \$4 million for biomedical research. Strengthening of social and programme research was in the form mainly of research training, whereas for biomedical research it was equally divided between research training and the building up of physical facilities.

#### IV. FUTURE ROLE OF THE UNITED NATIONS SYSTEM

79. The United Nations system has for years made family planning research an important feature of its over-all development programme. The United Nations system has played a leading role internationally in this area, including identification of research needs; promotion and co-ordination of research, conduct of research, funding of research, assisting research by providing technical expertise, strengthening of national and regional research institutions, including research training, and dissemination of research results and information.

80. United Nations Population Division. The Population Division is the major research arm of the United Nations system in the area of social research on family planning, particularly with regard to determining the conditions of fertility change and the prevalence of birth regulation as well as the factors and conditions that influence decisions and behaviour regarding regulation. Activities of the Division include the comparative analysis of World Fertility Survey data. Ten members of the professional staff of the Division collect, analyse and publish information on government policies towards family planning. Programme research has concentrated on methods of measuring the impact of family planning programmes on fertility by applying various methods of evaluation to national data to determine the most appropriate evaluation methods. It has developed means of measuring programme impact when the programme is integrated with other development sectors. Funds allocated to this research were \$1 million in 1982. UNFPA's share of funding has averaged 48 per cent. The balance is funded from the United Nations regular budget.

81. United Nations Department of Technical Co-operation for Development. UNDTCD, together with the Statistical Office of the United Nations Department of International Economic and Social Affairs, provides technical support to social and programme research projects conducted in developing countries.

82. United Nations Regional Commissions. All the Regional Commissions have conducted social research related to family planning, in different degrees and in relation to the priority given to family planning by the countries of their regions. The Economic and Social Commission for Asia and the Pacific (ESCAP), for example, has carried out several comparative analyses of WFS data such as those on levels and trends of fertility in the ESCAP region and age at first marital union and fertility. It has studied differentials in urban-rural fertility in the countries of the region and determinants of recent declines in fertility in the region. ESCAP has done considerable methodological and empirical work on management of family planning programmes and on the integration of family planning with health and other development initiatives. Its work also includes research on the communication components of family planning. The Economic Commission for Latin America (ECLA) through The Latin American Demographic Centre (CELADE) has made comparative analyses of WFS data and studied the effects of declining fertility on infant mortality. Some of the projects of the Population Division of the Economic Commission for Africa (ECA) have had a family planning research component. ECA plans to intensify its comparative analyses of WFS data as they become available.

83. The Regional Commissions have conducted some programme research, especially ESCAP

and ECLA/CELADE. CELADE's programme research has been performed to fill gaps in information available about family planning services. This research is of a methodological nature related to programme design, management issues and long-term impact evaluation of programmes. ESCAP has completed studies on the impact of family planning programmes on fertility change in a number of countries and has convened several seminars and regional meetings to bring the results of these studies to governments and social scientists of the region.

84. International Labour Organisation. The ILO mandate pays special regard to questions of employment in development. The major family planning research areas in which the ILO has been active include: fertility determinants, the impact of population education activities, and women and adolescents. The ILO has published or will soon publish seven books primarily on fertility and nine books with major sections devoted to fertility, in addition to numerous working papers and articles. Some ten country technical co-operation projects deal with issues of fertility and female work, rural fertility and fertility behaviour including KAP studies with proximate and broader socio-economic determinants. The ILO also conducts research on non-formal education messages and incentives and disincentives influencing reproductive behaviour in support of ILO operational activities. There are approximately twenty ILO staff members in headquarters and field assignments who can and do carry out research on fertility.

85. Food and Agriculture Organization of the United Nations. FAO has a mandate to work in the general area of rural development, including community development, the status of women and population-related issues, as well as food and agriculture. Although FAO itself has very little family planning research infrastructure, the agency has included aspects of such research in its research on rural development programmes and in its programmes relating to community action for rural women. Other work, for example, on socio-economic indicators of rural development, has potential links to family planning research. Thus, although FAO does engage in research related to family planning, relatively little of it can be isolated from the regular FAO rural development research budget.

86. United Nations Educational, Scientific and Cultural Organization. With regard to family planning research, UNESCO projects have focused on the communication, education, and motivation aspects of family planning, and on the relationships between education and fertility. UNESCO has a number of staff in Headquarters and in the field qualified to provide technical assistance on the social and programme aspects of family planning research.

87. World Health Organization. Since the mid-1960s, WHO has had a broad mandate and active programme of research in family planning and related institution-strengthening for such research in developing countries. The main instrument with WHO for such activities is the WHO Special Programme of Research, Development and Research Training in Human Reproduction (WHO/HRP). Its programme research activities aim to devise improved approaches to the delivery of family planning care in the primary health care context, including the psychosocial aspects. Major current lines of research include: use, training and supervision of community worker and health personnel; community participation; integration of family planning with other services; service and psychosocial factors affecting family planning practice; field trials of family planning methods new to a programme; and needs for services in countries considering setting up family planning services, including services for infertility.

88. WHO/HRP's biomedical research activities are concerned with the assessment of the safety and efficacy of current methods of fertility regulation in different populations, with developing new birth control technology, and with generating the knowledge and technology required for the prevention and treatment of infertility.

89. Another major objective of WHO/HRP is to promote national self-reliance for programme, psychosocial and biomedical research in family planning. This consists of collaborating with national authorities in building up manpower and facilities that will enable developing countries to carry out research, adapt technology and contribute to the advancement and application of science.

90. WHO/HRP synthesizes and actively disseminates results of research to policy-makers, administrators, programme providers, scientists and the public. Its mandate also includes

co-ordinating the research and institution-strengthening activities of governmental, international and non-governmental agencies in the areas in which it is working. One mechanism for achieving this is by convening, every 12 to 18 months, meetings of agencies conducting or supporting programme, psychosocial and biomedical research in family planning. For the former two subjects, the meetings are jointly organized with the WHO Division of Family Health.

91. In 1982, 73 countries were involved in WHO/HRP, of which 46 were developing countries. The Programme is a collaborative one, with scientists and administrators from over 40 countries taking part in its strategy-making and peer review committees. Over 20 professional full-time staff represent a wide range of disciplines, including data processing.

92. The research activities mentioned above are extended by other programmes in WHO, namely by the WHO Division of Family Health in certain specific areas of social, programme and biomedical research. The risk approach for MCH/FP care has been developed as a managerial tool in programme research to develop locally suited strategies for increased coverage and efficiency of family planning services. Studies are also underway on adolescent fertility, reproductive health and contraception, and on the relationship among breast-feeding, lactation and fertility and the implications of these for programmes in promoting breast-feeding and other fertility regulating practices. Other projects are concerned with community participation in family health care and with health education aspects of family planning. In 1982, this research involved 24 countries. Staff from different disciplines in MCH/FP devote part of their time to research, amounting in 1982 to 5 person-years. WHO Regional Offices are also becoming involved in family planning research.

93. The total funds for WHO's activities in family planning research amounted in 1982 to \$15.1 million, of which \$14.3 were administered through WHO/HRP. The funds are derived principally from voluntary contributions from Member States and from UNFPA.

94. United Nations Fund for Population Activities. Since 1969, recipients of the largest amounts of UNFPA funding for family planning research are the WHO/HRP, the United Nations Population Division, the Government of China and PIACT. Many programmes of developing countries have received UNFPA funds for family planning research, usually as part of assistance to a government's family planning programme as a whole rather than as grants for specific research. UNFPA Needs Assessments include review of research needs of the country, though this has not been emphasized as much in the past as it will be in the future when guidelines for analysis of research needs, prepared with WHO, will be incorporated into instructions for Needs Assessments.

95. Interagency co-ordination in the United Nations system. The United Nations system has many and varied mechanisms which it uses to effect a regular exchange of views and information of both a scientific and administrative nature. These have been used effectively for co-ordination on family planning and population matters, including research. Needs Assessment Missions, carried out in 42 priority countries by the UNFPA with assistance from the United Nations specialized agencies, is another co-ordinating device at the country level which can be utilized more in the future. In the areas of programme and psychosocial research, and of biomedical research, co-ordination meetings are convened by WHO every 12-18 months to share information on activities and funding levels, identify unmet needs for research, and discuss areas of collaboration.

96. Priority needs and the role of the United Nations system in meeting these needs. The United Nations system has certain unique qualifications which justify its traditionally strong role in family planning research in support of developing countries. The most obvious strength enjoyed by the United Nations is its acceptability by all countries. This permits the United Nations system to assist in a number of sensitive areas. This acceptability derives from the fact that, in a very basic sense, the countries themselves govern and oversee United Nations development policies and the way that it allocates its funds. Another powerful advantage of the system is its ability to draw upon a global network of expertise including from the developing countries themselves, non-governmental organizations and from commercial sources. This is an especially important requirement in family planning research in view of the numerous disciplines, and multi-disciplinary combinations, which are required to conduct and assist research in this broad area. Furthermore, the existence of a United Nations presence in nearly

every developing country enables it to programme and monitor projects in a way not possible for development agencies whose programmes are limited to a smaller number of developing countries.

97. The need for increased social, programme and biomedical research in family planning has emerged clearly from the survey carried out in the preparation of this paper, from recent conferences, and from the specific requests from governments received by the United Nations agencies. The priority ranking given by different countries to these three broad areas of research, as well as to topics within them, varies considerably in different parts of the world. In recent years, countries have accorded increasingly high priority to programme research, especially on the management aspects. In some countries, interest centres around the question as to how to initiate culturally acceptable family planning services, in others, how to manage programmes, in yet others, how to improve the performances of services. In most countries an important issue is the safety in local populations of family planning technology and the development of more appropriate methods. High priority is also consistently given by developing countries to the need to strengthen their own capabilities for such research. Keeping this in mind, and mindful also of the capabilities of the United Nations system, the following priority substantive areas for UNFPA support through the appropriate agencies and organizations of the United Nations system are suggested:

(a) Programme research: All major aspects of programme research identified earlier in this paper, i.e., acceptability of programmes and methods; programme design and delivery strategy; and management of programmes including monitoring and impact evaluation. Although programme research is highly country or community-specific, many questions are common to a number of countries. The United Nations system has an important role in technical support and backstopping in country projects, and has also provided a valuable service in devising and testing new approaches to family planning care, such as the risk approach, which should be continued. During the past eight years, UNFPA has supported WHO in the development of the concept and methodology for the risk approach, related research training and the testing of the approach now under way in 12 countries. Future intercountry support for this activity will focus on the application of this methodology in countries which are not yet committed to the need for family planning or where the national programme needs to be strengthened. In the area of adolescent fertility, further work is needed at the intercountry level in view of the increased need in the developing countries, the need for alternate service approaches and the sensitivity of the topic.

(b) Biomedical research: Contraceptive development and safety testing, the improvement and adaptation of current methods to local conditions, and research on infertility. Recognizing the critical need for new and improved contraceptive methods, the Governing Council has instructed the UNFPA to support WHO/HRP. The Fund will also support, to the extent possible, activities of other organizations engaged in contraceptive development and adaptation.

(c) Social research: Determinants of fertility affecting the acceptance of family planning. The United Nations system should provide technical backstopping to research projects and for developing new methodology when needed.

98. Institution-strengthening including research training: It is necessary to expand research training and strengthening national capabilities for research, in programme, biomedical and social research, to enable each country to have sufficient capability to meet its own local research needs. An effort will be made to increase programming of this type of activity in UNFPA country projects. Recognizing that participating in collaborative research is an important part of institution-strengthening, some support for these activities will also continue to be provided at the intercountry level.

99. The above list of priorities has been drawn up, keeping in mind the over-all scarcity of resources, the subsidiary role of research relative to action programmes, the needs of population areas other than family planning, and the Governing Council directive that UNFPA allocate not more than 25 per cent of its resources to intercountry activities. In meeting these needs, the technical collaboration between countries and the United Nations system may be complemented by non-governmental organizations and private and commercial organizations.

100. Proposed UNFPA funding to family planning research of United Nations agencies. In applying these priorities, the bulk of UNFPA funds available for support to family planning research should be provided to the World Health Organization and to the United Nations Population Division and the Regional Commissions.

101. WHO's activities in social and programme research, when funded by UNFPA, should be primarily at the country level and should emphasize service research and improvement of delivery systems. A large proportion of UNFPA funding to WHO's biomedical research will be at the intercountry level. It should however be noted that a large portion of WHO/HRP funds are expended in developing countries.

102. The United Nations Population Division's social research in comparative analysis of data on fertility and determinants of fertility should be supported at the intercountry level. Similar research at the country level should receive technical assistance from the Regional Commissions, which should receive adequate funding to backstop these projects. Programme research into demographic effectiveness of family planning programmes should be undertaken by the Commissions.

V. FUTURE FUNDING TO THE WHO SPECIAL PROGRAMME OF RESEARCH,  
DEVELOPMENT AND RESEARCH TRAINING IN HUMAN REPRODUCTION (WHO/HRP)

103. As directed by the Governing Council at its twenty-ninth session, UNFPA has allocated \$2 million to WHO/HRP as its contribution for 1983. Although WHO/HRP clearly needs in 1983 the additional \$0.5 million from UNFPA referred to in Section I, paragraph 6 (c) of decision 82/20, over-all funding constraints and the 25 per cent limit set for intercountry programmes preclude UNFPA's providing this additional contribution. An attempt, however, is being made to identify opportunities for transferring the funding of some WHO/HRP projects to UNFPA-funded country projects. This would allow continuation of WHO/HRP projects which might otherwise have to be terminated or reduced for lack of funds.

104. Consultation between UNFPA and WHO during the past year has resulted in agreement on the process and mechanisms for consultation between the Fund and WHO/HRP in identifying research needs and priorities, development of research projects and associated institution-strengthening for research, and funding through UNFPA country or interregional activities.

105. The second five-yearly over-all assessment of WHO/HRP, conducted during 1982 by representatives of the donors to the Programme and other experts, commended the Programme on the high quality of its scientific work and the impact of its institution-strengthening activities. It concluded that this major international effort in human reproduction research was best continued within the present WHO/HRP structure, but recommended some managerial changes to enhance interaction with donors and other agencies. These recommendations are being implemented. The membership of the WHO/HRP Meeting of Interested Agencies has been considerably enlarged to include greater representation of developing countries. A number of procedures are being established to give a more formal structure to the Meeting. A Preparatory Intersessional Committee has been set up and will meet several times before the next meeting. UNFPA is a member of the Committee.

106. Also during 1982, the Swedish Agency for Research Co-operation with Developing Countries (SAREC) completed its review of WHO/HRP; the report will not be reviewed by the SAREC Board until the spring of 1983. Sweden's pledge to WHO/HRP for 1983 was at the same level as in the previous year (over \$4 million), making Sweden the largest contributor to the Programme. A recommendation as to the level of Sweden's future commitment to WHO/HRP will be made at the time of the SAREC Board Meeting. At the International Symposium on Research on Fertility Regulation, held in Stockholm, Sweden, in February 1983, the representatives of the developing countries expressed strong support for the Programme's activities in research and institution-strengthening.

107. One of the recommendations of the 1982 assessment of WHO/HRP was that funding to the Programme should be increased, and that multi-year commitments be obtained. This echoed the Governing Council's decision 82/20, I, paragraph 6 (b) endorsing the need for the Fund to increase long-term support to contraceptive research and development through WHO/HRP. However, the

Executive Director anticipates that, considering the limitation of 25 per cent of programmable resources for intercountry activities and the likely future contributions to the Fund, the total amount available for all intercountry activities will decline in 1984 and subsequent years. Despite this decline, the Executive Director proposes that UNFPA contribute \$2 million a year to WHO/HRP for 1984 and the subsequent three years provided that over-all contributions to the Fund remain at the present level. In addition, UNFPA will give priority to requests from governments for research in family planning to be executed by WHO, including WHO/HRP.