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# Approaches to Measuring Capacity and Capacity-Building for Policy-Research

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## Introduction

This background paper has been developed by the Center for Policy Studies at the request of the Global Development Network. The paper is part of Phase II of the Bridging Research and Policy project of the Global Development Network.

The objective of the paper is to contribute to a clearer understanding of what capacities are needed to conduct policy-relevant research in the context of developing and transition countries, and to review the relevant experiences on the best approaches for capacity building.

Individual, institutional and societal capacity are prerequisites for public action and thus for meaningful democracy, for the practice of civil rights and of political freedom. Since the 1980s developmental efforts have been directed towards capacity-building initiatives and the creation of partnerships between developed and developing nations. At the same time both in the developed and in the developing world there has been an acknowledgement of the importance of evidence based policy reform and of bridging the gap between research and policy. The purpose of this background paper is to review the literature on capacity-building in research and development in order to assist the Global Development Network (GDN) in its goal to build the capacity for policy research in developing countries.

There are four sections in this paper:

- 1) *Defining capacities needed for policy-research* provides a literature review of capacity-building definitions. It focuses on capacity-building for policy-research and it outlines the three layers where action is needed: the individual, the institutional and the societal levels.
- 2) *Indicators for measuring policy-research capacity* discuss some of the difficulties of measuring capacity and outline the most important methodological issues. It then presents the most significant indicators that have been used in the literature for measuring individual and institutional research capacity.
- 3) *Major capacity-building initiatives in research and development* presents a wide range of initiatives taken from national and international donors and classifies them under the categories of individual, institutional and societal policy-research capacity.
- 4) *The contribution of GDN* assesses the work that GDN has done up to now in relation to the three types of policy-research capacity-building initiatives.

A key point that is made in the paper is that capacity for policy-research is a process and not just an outcome. It should take place at three levels: the individual, the institutional and the societal levels. The two most significant aspects of successful policy-research initiatives are their *sustainability* through time and the *locality* of the action.

# 1. Defining Capacities Needed for Policy-Research

## 1.1. Preliminary Comments

Capacity-building has been an integral part of development strategies for a long time. What vary are the terms that have been used through time to describe that type of activity. Fukuda-Parr, Lopes and Malik (2002: 2-3) in a seminal volume on *Capacity for Development* explain that the main assumption has been that developing countries lacked important skills and abilities and that developed nations could assist by transferring their know-how. This approach has been rightly criticized as a top-down approach that does not value local capacity and the necessity to build upon existing skills and choices (e.g. Fukuda-Parr, Lopes and Malik 2002). The terms that have been used and reflect this shift in understanding are:

- *Development assistance: aid and technical assistance* that is concerned with the transfer of skills.
- *Development co-operation:* to reflect the partnership between developed and developing countries and in particular *technical co-operation* to describe the knowledge transfer for the enhancement of research and development initiatives.
- *Capacity-building and research capacity-building* to underline the necessity of producing research in the developing world that will inspire policy reform. Horton (2002:1) proposes the term *capacity development* which implies an organic process of growth and development rather than the term capacity-building which implies carefully planned and executed activities.

Following Fukuda-Parr, Lopes and Malik (2002: 9) it is proposed that capacity for policy-research in order to be successful needs to address three levels of development and consequently its definition needs to be multi-level:

- *Individual level:* it involves offering individuals the opportunity of continuous learning building upon existing knowledge and skills and developing their capacity to extend their knowledge and skills into new directions.
- *Institutional level:* this is the level that most of the literature refers to. It involves building upon the existing capacities of governmental and non-governmental institutions and encouraging them to grow rather than trying to blindly emulate institutions from abroad.
- *Societal level:* this is the level that is analyzed the least in policy papers. It refers to the capacities of a society as a whole. The development at this level is essential for the other two levels to flourish and for the results of individual

and institutional capacity to be sustainable. In order for individual and institutional capacity to be successful the society as a whole needs to be changed and to value knowledge, research and rationalized policy making.

In this section, first some of the most influential definitions of capacity are offered and second, the more specific definitions of research capacity are analyzed. Definitions have been chosen from a variety of organizations and from different national and international environments, but emphasis has been given to definitions that offer a multi-dimensional understanding of the term. The aim is to identify the capacities that are needed for policy-oriented research at the individual, institutional and societal levels.

### **1.2. Definitions of Capacity**

- Capacity is “the ability of individuals, organizations or societies to meet their needs” (Postnote, 2004: 2). This definition recognizes the necessity to develop all three levels of capacity. The key is to develop *skills* that allow for the identification of *needs* at all three levels and for their fulfillment.
- Capacity is “the ability of individuals and organizations to perform effectively, efficiently, and in a sustainable manner” (Horton, Alexaki, Bennett-Lastey et al., 2003:157). Only the first two levels are mentioned in this definition. The key in this study is the *performance* according to the developmental goal in a satisfactory but also sustainable manner.
- The capacity for developing nations “to identify benefits and opportunities and adapt them to their own needs and constraints, the ability to initiate and engage in research and apply knowledge and technology to essential local problems, moving beyond the mere application of results generated by others” (Morel, 2003: 5). The definition discusses the societal level and emphasizes the *application* of local knowledge.
- Capacity is “the process of putting in place the conditions and infrastructures that are necessary prior to ‘capability building’” (Nair and Menon, 2002: 3). The focus is on the building of *infrastructure* and the *management* of research. The definition suggests that the building of institutions comes first and should lead to individual ‘capability building’.

It can be observed that research is an integral part of even general definitions of capacity.

### **1.3. Definitions of Research Capacity**

Research capacity is often considered to be the same as education capacity and the same initiatives are used to build capacity in both areas. It will be argued here that it is better to distinguish the two in order to build more targeted initiatives. Another variation is the research and development definitions that refer to research in a more

scientific way. Definitions for policy-research capacity are not often encountered. What follows is a selection of the most important and most commonly used definitions.

- Research capacity building for the World Bank “is not research itself (although that is important) but to help create and reinforce appropriate sustainable institutions within developing countries to foster the emergence of well-trained professionals ready to contribute to policy making and teaching at home and compensate for the ‘brain drain’ of professionals from developing countries” (McCarthy, Bader and Pleskovic, 2003: 3). This definition includes initiatives for the development of both institutional and individual capacity.
- The European Union approach to education capacity is the building of research networks among universities and research centres in order to encourage the mobility of researchers across countries (McCarthy, Bader and Pleskovic, 2003: 2). The focus here is on creating and supporting *networks*.
- The review of educational research capacity in Wales defines research capacity “as including an understanding of the size of the system as well as the current expertise of the research community. Critically, capacity also includes both the ability to undertake high quality research and the *ability to utilize it effectively*” (Furlong and White, undated: 7). The emphasis here is on the *existing capacity* and on the *utilization* of research.
- “The institutional capacity to create and evaluate economic policies” (Pleskovic, Aslund, Bader and Campbell, 2002: 6). This definition adds the element of *evaluation*.
- According to the North American Primary Care Research Group Committee (2002: 679-680) there are eight themes that need to be developed in order to build institutional research capacity:
  - *Linkages* between researchers and institutes across the world.
  - Research *infrastructure* such as research centres.
  - Research *training* of professionals.
  - Development of a good *reputation* and of *recognition* of the importance of the research conducted.
  - *Publishing* of the research findings
  - A change of *culture* and an appreciation of the value of research is an integral part of capacity building
  - *Policy-oriented research questions*
  - An increased *funding* budget of research in order to guarantee the sustainability of institutional research capacity

- Capacity building in research and development refers to:
  - Physical research infrastructure (research equipment, building and other facilities),
  - Human capital (researchers, technicians and an overall satisfactory knowledge level of the workforce),
  - Institutional building (legal framework, support mechanisms and environment conducive to innovation) (Siune, 2003: 14).
- Tsipouri and Paraskevopoulou (2003: 161) distinguish different aspects of R&D capacity building:
  - *Commercial R&D capacities*: projects performed within the private sector.
  - *Basic research capacities*: a particular stage of the innovation process in both the private and public sector.
  - *Strategic capacities*: the ability to mobilize and concentrate resources in order to achieve a critical scientific or technological objective (e.g. ‘war against cancer’).
  - *Network capacities*: building of relationships that can maximize spill-overs between complementary resources (e.g. university-industry, civil-military).
  - *Revolutionary capacities*: shift resources from areas of low productivity to areas of high productivity which would normally mean a radical change on the focus of the research. An example would be to stop providing resources for research in social sciences and focus on sciences.

In summary, capacity development is a process and not just an outcome. The capacities that are necessary for policy-research need to be developed at the individual (Ind), institutional (Ins) and societal (S) levels and can be organized in three main categories:

- Building of research infrastructure and continuous funding (Ins and S)
- Development of research and organisational skills (Ind and Ins)
- Building of research networks (Ind, Ins and S)

## 2. Indicators for Measuring Policy-Research Capacity

There are two main approaches to measuring the impact of research and they also reflect the approaches of measuring research capacity (ICSTI, undated: 8):

- a) *the 'input-output' approach* is based on a number of indicators that measure inputs such as funding and outputs such as number of publications. The problem with this approach is that it is based on a linear model that assumes that there is a direct relationship between cause and effect. Its positive aspect is that it can offer concrete and comparable findings.
- b) *the 'throughput' approach* focuses on the actual process of research rather than the products. The problem with this model is that it is more complicated to measure. Its strength is that it provides more sophisticated findings.

Section one demonstrated that research capacity is better understood as a process rather than as an output. This means that the measurement of policy-research capacity and the design of concrete indicators is not an easy task. Horton, Alexaki, Bennett-Lastey et al. (2003:159) provide a definition of indicators in the context of capacity development:

*Indicator: quantitative or qualitative factor or variable that provides a simple and reliable means to measure achievement, to reflect the changes connected to an intervention, or to help assess the performance of a development actor.*

Policy-research capacity cannot be described neither as an achievement nor as the result of the performance of a single development actor. It is a multi-level process and it needs to be evaluated as such. Most of the literature deals with indicators that measure individual or institutional capacity enhancement but there is no much discussion of societal capacity. This is not a fault of the literature but an indication of the complexity of measuring a process. Finally, it is important to note that indicators cannot be built in abstraction. They need to refer to a particular capacity development objective and to make reference to specific actors (Mizrahi, 2004). In this section first some methodological remarks are made and then some of the most significant indicators used in the literature for the measurement of individual and institutional research capacity are reviewed. Indicators for societal research capacity do not exist and their design is not attempted because the development of societal research capacity needs to be analysed using more process-oriented evaluation methods.

Brown, LaFond and Macintyre (2001: 17) propose four capacity components that need to be assessed. Indicators can be designed and collected for:

*Input:* set of resources, including personnel, financial resources, space, policy orientation, that are the raw materials required to perform functions.

*Process:* set of activities or functions by which the resources are utilized in pursuit of the expected results.

*Output:* set of products anticipated through the execution of the functions or activities using the inputs.

*Intermediate Outcomes:* set of short-term results expected to occur as a direct result of the capacity built.

*Ultimate Outcomes:* Long-term results.

There are some important methodological questions that need to be addressed before deciding what type of indicators will be used. These issues are mainly relevant to the design of institutional indicators but they can inform the choice of individual and societal indicators (adapted from Lessik and Michener, 2000: 1-6):

- *Type of organization measured:* for example, research centre, university or research-oriented NGO.
- *Comparability across organizations:* measure the same capacity areas for all entities in order to compare them.
- *Comparability over time:* in order to measure change in research capacity it is important to be able to compare across time.
- *Data collection:* for example, questionnaires focus groups, interviews, document searches, and observation. Participatory or non-participatory methods.
- *Objectivity:* measures of capacity are by nature subjective. Using more than one method can guarantee some objectivity.
- *Quantification:* it can be useful when it is recognized that numbers are relative. It is often better to be followed by in depth qualitative data in order to succeed more detailed analysis.
- *Internal versus external assessment:* internal assessment can facilitate better understanding of an organization but it can be biased, while external assessment can be more objective.
- *Practicality:* measurement has to be simple, not too time consuming and not too costly.

## **2.1. Indicators for Individual Research Capacity**

The literature on individual research capacity is limited and not much exists as far as it concerns individual policy-research capacity. What is particularly difficult is to assess whether change or improvement has occurred due to a building research capacity initiative. Gaillard and Zink (2003) in their assessment of the impact of the grants offered by the International Foundation for Science (IFS) to young scientists use the following indicators:

- *Publication outputs*: identification of local and international publications through bibliometric studies.
- *Data on research project completion*: completion of the IFS project and of new projects
- *Individual career*: academic progression, promotion, research mobility, evidence of brain drain or not.

An indicator should be added about the *utilization of the research* (e.g. references in policy documents, invitations of the researcher to policy conferences).

## **2.2. Indicators for Institutional Research Capacity**

The measurement of institutional research capacity and in particular of policy-research capacity is more developed. The focus of the measurement is often the change that has occurred due to a research enhancement initiative.

McCarthy, Bader and Pleskovic (2003: 7) propose the following indicators:

- Evidence of *expansion* of research centers and academic institutions.
- *Data on the graduates* of the supported institutions:
  - Number of graduates that hold high-level positions in the public and private sectors.
  - Regional spread of students and members of staff.
- Improved *amount and quality of research*:
  - Increased number of articles published in international, refereed journals.
  - Production of policy relevant research.
- *Growth of networks* (number of networks and membership).
- *Diversified Funding* (a broader source of funding).

Horton and Mackay (1998: 12) outline the necessity of indicators that measure *research management capacity* (e.g. improvement in managing personnel, strategic or long-term planning and management of research programs).

Furlong and White (undated: 16-34) use six sets of indicators in order to measure educational research capacity in Wales:

- *Data about the Research Assessment Exercise (RAE), the staff and students of education departments in Welsh universities* (e.g. research grading of departments, number of staff involved in education research and number of students working on research projects).
- *Data on funding:* Information on how much money is spent, on what and to what effect.
- *Data on areas of expertise:* Information on the ‘focus’ of expertise and on the range of research projects and publications.
- *Data on the use of research in policy cycle:* Information on how research is used in policy planning, in policy development and in evaluation.
- *Data on practitioner research:* Information on the participation of practitioners in the production of research.

Dyson and Desforges (2002: 4) summarize the indicators that have been used to measure educational research capacity in the UK as:

- Assessments of the *scale of research activity* using metrics such as the RAE (e.g. numbers and proportions of staff entered as ‘research active’, income from research projects etc).
- Assessment of the *weighting of research effort* (e.g. by analyzing project grants and their destination).
- Assessment of the *quality of research outputs* (e.g. by using RAE ratings).
- *Expert opinion* (e.g. senior researchers) or *participant opinion*.

Finally, there are some principal indicators for the measurement of research and development (R&D) capacity development (ICSTI, undated: 12-13):

- *Indicators of R&D expenditures:* which can be distinguished by the sector in which the activity takes place and by sources of finance
- *Human capital indicators:* including employment data on R&D workers and scientists, data on educational attainments and indexes on human capital and its mobility.
- *Bibliometric analysis:* assessment of the quantity, quality and impact of published research
- *Patent analysis:* patent counts and analysis of the economic impact/value of patents.
- *Indicators of the technological intensity of production:* scales activities according to a predefined notion of high-technology.

- *Balance of payments indicators:* measures of the technologic intensity of exports and imports as well as the trade in technological knowledge (e.g. licenses sold).
- *Growth accounting analysis:* separates the technologically driven component of economic growth.
- *Measurement of price and quality changes:* for example measures the impact of new products.

In summary, there are two main difficulties with developing indicators for measuring policy-research capacity. First, that policy-research capacity is a multi-level process and it often cannot be measured and second that indicators cannot be built in abstract. They need to be build in relation to a specific research area, program, organization or initiative. Although this is the case, the most useful indicators for measuring individual and institutional policy-research capacity have been presented here.

### **3. Major Capacity-Building Initiatives**

Having presented the definitions of capacities needed to conduct policy relevant research and the various measures to evaluate these capacities, let us now look at the major capacity-building initiatives for policy research. As the previous sections highlighted, capacities can and need to be developed at various levels. In mapping the existing capacity-building initiatives, our approach is to identify them according to the level of intervention and the main tools applied at each level. The list is by no means exhaustive. What we have tried to do is to bring examples for each category to show the large variety of initiatives implemented in developing and transition countries. In most cases, we have found no clear distinction between capacity-building for policy research and general research capacity building. However, as the latter often leads to policy research, we have chosen to include such initiatives as well.

#### **3.1. Individual level**

The capacity-building initiatives that focus on changing individual researchers' attitudes and behavior as well as on developing their skills and possibilities for sharing knowledge generally apply the tools described below.

##### **3.1.1. Degree educational programs**

Educational programs, especially at graduate level, are widely considered to be an essential tool for building individual capacity for research (including policy research). Practically, the government of every developed country supports student exchange programs for individuals from developing and transition countries. Similarly, the number of educational programs funded by private donors is also large. However, the approaches may vary considerably. For instance, the program funded by the Royal Danish Ministry of Foreign Affairs entitled Enhancing Research Capacity (ENRECA) provides PhD and MSc scholarships to researchers from developing countries at their home universities, allowing for shorter stays in Denmark. The Norwegian Agency for Development Cooperation (NORAD), on the other hand, supports MA and PhD fellowships for developing country researchers at Norwegian institutions. Nevertheless, in trying to ensure higher return rates after studies, candidates are required to have institutional links and do field work in their home countries. The Department for International Development (DFID) Shared Scholarship Scheme also offers grants for master's level education away from home country, at UK universities, to individuals from developing Commonwealth countries. The eligible fields relate to the economic and social development of candidates' home countries and grantees need to certify in writing that they would return to their home countries after graduation. The Australian Development Scholarships is a similar program for countries in the Pacific region. The German Academic Exchange Service (DAAD) offers scholarships in Germany, usually for PhD research, to individuals from developing countries that have previously made use of the existing education possibilities in their countries. The Central European University Fellowship Program

is unique in the sense that it enables individuals from democratizing and transition countries to do MA and/or PhD level education in Hungary.

### **3.1.2. Training programs**

Important training activities include seminars, short term research study exchange visits and internships. Training in policy-research is provided, for instance, by the Salzburg Seminar, and by the workshops and seminars on research capacity-building organized by the Commission for Research with Developing Countries of the Council of Swiss Scientific Academies. The Third World Academy of Sciences (TWAS) and UNESCO Associateship Scheme is for researchers in the South and is unique in the sense that while researchers retain their institutional affiliation in their home countries, they are provided with the opportunity to visit centers of excellence, also in the South, twice a year for a three-year period. The International Association (INTAS) Fellowship applications need to be submitted jointly by a young scientist enrolled in PhD or postdoctoral research, the Newly Independent State (NIS) institution, and the INTAS Member State supervisor from the host institution. The research projects need to be carried out at NIS institutions, with a European supervising partner, and researchers are required to participate in two working and training visits at the European supervisor's institute. The International Monetary Fund (IMF) Internships, lasting 10-13 weeks, are offered to graduate students to carry out a research project under the supervision of an experienced economist. The program encourages applications from the Southern Hemisphere. A special approach is adopted by the Asian Development Bank (ADB) Internship Program, which only accepts applications based on institutional recommendation. These research-oriented, two-month positions are open to applicants from ADB member countries.

### **3.1.3. Incentive programs**

The most common incentive programs are research grants, certain fellowship programs, and research prizes. Individual research grants are offered, for instance, by IFS to young researchers for basic tools for conducting research, supplies and literature. While IFS expects researchers to be paid by the institution where they carry out their research, the International Policy Fellowship Program (IPF) of the Open Society Institute wishes to ensure total independence of the researchers for the period of the grant. Therefore, in addition to the benefits offered by IFS, the IPF grant includes a monthly stipend, training sessions to conducting policy-research, and conference participation costs. Both research grants may be renewed and imply grantees' guidance by senior researchers.

Fellowship programs are relatively common for individuals from developing and transition countries, but few name policy relevance of the research as a top priority. The Contemporary Issues Fellowship Program of the International Research and Exchanges Board (IREX) provides four-month fellowships to professionals from Eurasia for independent policy oriented research related to the development of democracy, free markets, and civil society at US institutions. The Woodrow Wilson Center offers fellowships (usually for nine months) for researchers and academics from all over the world to carry out research on topics related to public policy at the Center, participate in Work-in-Progress seminars, and hold formal presentations to the public. The TWAS Fellowships for Postdoctoral Research and Advanced Training

enable young researchers in developing countries to spend six to twelve months at a research institution based in another developing country.

The number of awards in policy-research seems to be very limited. Two such initiatives include the IFS/DANIDA Awards Scheme and the Islamic Development Bank (IDB) Prize in Islamic Economies. The former recognizes outstanding achievements of young agricultural and natural resources researchers among IFS grantees in Sub-Saharan Africa, while the latter awards, among others, research work in Islamic economics.

#### **3.1.4. Communication enhancement**

It is common to the majority of capacity-building initiatives to include elements meant to facilitate the communication among individual researchers as well as the dissemination of research results through paper and electronic means. Many of the initiatives mentioned above create a network of grantees that seeks to maintain communication among researchers also after their completion of the program. In addition, there are initiatives that focus particularly on communication enhancement. The African Energy Policy Research Network (AFREPREN) that brings together researchers and policy-makers from 19 African countries to improve the link between energy research and policy. Another example is the joint initiative of the Swedish International Development Cooperation Agency (SIDA), NORAD, the Swedish Agency for Development and Cooperation (SDC), and DFID called Eldis Gateway to Development Information. ELDIS is an electronic resource accessible free of charge, providing summaries, links to online documents, a directory of websites, databases, library catalogues and email discussion lists. Policy makers and development researchers are mentioned as forming part of the main target groups. The case of facilitating the dissemination of research results is similar, i.e. in addition to its being facilitated within given programs, there are a few separate initiatives that focus particularly on this. For instance, the World Bank's Policy Research Working Paper Series, which publishes findings of work in progress.

### **3.2. Institutional level**

A key capacity-building strategy is to contribute to enhancing the performance of research institutions and to enable them to function on continuous basis. The main tools are presented below.

#### **3.2.1. Institution creation**

Developing and transition countries often lack academic or other research institutions. Recognizing this shortcoming, some donors choose to contribute to the setting up and financing of such institutions. Academic institutions established in this way include, among others, the West African Institute of Post-Graduate Management Studies in Dakar and the Central European University in Budapest. The World Bank supported the establishment of research centers and networks dedicated to economic education and research capacity building all over the world. The main role of these organizations has been to contribute to the ability of economists to conduct and disseminate economic research in their country and region. The Inter-American Development Bank (IDB), in partnership with DFID, set up a special Trust Fund

(Fund for Capacity Building for Local Institutions in Central America) to support the capacity building efforts of local development institutions.

### **3.2.2. Infrastructure development**

Infrastructure development is usually provided within the framework of research grants for institutions, i.e. the costs of necessary equipment to carry out the proposed research are covered by the grants. Just to mention a few examples, the Netherlands Development Assistance Research Council (RAWOO) supports the construction, equipping and renovation of laboratories and buildings, and provides telecommunication equipment to institutions in developing countries; the Norwegian NUFU program offers infrastructural assistance to Southern research institutions; ENRECA provides support for laboratory and field research equipment as well as communication facilities; and the Japan International Cooperation Agency (JICA), through its Technical Cooperation Project, provides equipment and materials to implementing organizations in developing countries. INTAS's Infrastructure Action is an exception to the general rule, as it offers separate grants for the maintenance or the establishment of scientific infrastructure in NIS.

### **3.2.3. Institutional resource development**

Institutional resource development is a much preferred capacity-building strategy. While a part of donors focus on universities, and creating units of excellence within them, another group of donors choose to develop the capacity of research centers. NORAD, in financing long-term research collaborations among universities, supports – among others – personnel training, human resource development, and administrative and planning costs. TWAS sustains units of scientific excellence in the least developed countries over a three-year period by supporting their training programs and allowing them to invite foreign experts. The Local Government and Public Service Reform Initiative's Public Policy Initiative seeks to strengthen the capacity to conduct policy analyses of Eastern European think tanks and research institutes through training seminars on institutional management, fostering partnerships, and assistance in procuring funds.

### **3.2.4. Partnership**

Many donors seek to enhance the sharing of knowledge to developing countries and to create ownership on both sides through encouraging partnership activities. Generally, policy-research grants require the involvement of at least one developing or transition country partner. Furthermore, there are programs that require the latter to be the initiators of the research project or ex-ante evidence that the research will directly contribute to the alleviation of development challenges in their country.

The CORUS program of the French Development Agency seeks to contribute to long-term development research capacity through joint research projects between at least one institution from the South and one from the North. ENRECA identifies partnership between Danish and developing country research institutions as a requirement to supporting multi-year research projects. However, it also facilitates the establishment of such partnerships by providing "initiative pool grants" to cover travel and communication related costs to potential partners to develop their joint research-

projects. The World Bank approach implies that the Bank itself joins ‘flexible partnerships’ (i.e. adapting to different country needs) with various universities in developing countries to enhance their research capacity.

### **3.2.5. Networking programs**

It is a widely shared view that networking among institutions is an essential component of capacity building. The types of networking vary according to the target groups and fields. The South Asia Watch on Trade, Economics & Environment (SAWTEE), for instance, is a network of institutions that conduct policy-research. Being a local initiative, SAWTEE has established linkages with academia and other research institutions at national, regional and international levels, builds the capacity of its member institutions through training workshops, monthly forums, information dissemination and internship programs as well as conducts policy-research and advocacy programs. The University Science, Humanities & Engineering Partnerships in Africa (USHEPiA) is a research capacity network involving several universities in East and South Africa with the aim of enhancing the capacity of university staff through fellowships. IDB supports a series of networks to facilitate the interaction between academic research and policy and to strengthen the research capacity of institutions in Latin America and the Caribbean, such as the Research Center Network, the Europe-Latin America Cooperation Network, the Latin American and Caribbean Economic Association, and the Network on Inequality and Poverty.

### **3.3. Societal level**

The most complex capacity-building initiatives aim to develop a supportive policy framework or to enhance the national knowledge systems that define the formal and informal relationships in which individuals and organizations work and interact. These programs suppose collaboration from the part of the transition or developing countries and most often apply one or more of the following tools.

#### **3.3.1. Regulatory and legislative process enhancement**

In countries in which the regulatory and legislative framework does favor policy-research, capacity building at individual or institutional level is much less effective. Therefore, a number of international initiatives target the development of the national system. UN organizations, for instance, conduct and share research and policy analysis to enhance the policy capacity of policy-makers in developing and transition countries. One of them, the Food and Agriculture Organisation (FAO) contributes by developing frameworks and methodologies to guide national policy, program and project assistance. Another example is the Organisation for Economic Co-operation and Development (OECD) Directorate for Science Technology and Industry, which works directly with ministries towards enhancing national policies. OECD regularly organizes inter-ministerial meetings on various topics linked to the role of research in the policy process. It also conducts research and analysis available to governments, such as the new volume on *Governance of Public Research: Towards Better Practices*. Several collaborative efforts of UN institutions and major donor organizations regard capacity-building to implement reforms in developing and transition countries (e.g. the CIS-7 Initiative for low-income Commonwealth of Independent States).

### **3.3.2. Policy know-how transfer**

Learning from the experience of evidence-based policy practice is considered to be an effective way to adopt sustainable solutions to societal problems. Some initiatives are carried out at a smaller scale: the Overseas Development Institute (ODI), for instance, sends young postgraduate economists to work, on two-year contracts, for governments in Africa, the Caribbean and the Pacific, taking part in policy development, formulation and implementation. Nevertheless, there are wide-scale initiatives as well, such as UNESCO's Management of Social Transformations program, which – among others – seeks to improve developing and transition countries' capacity to design "research-anchored policy". For this purpose, the program measures the impact of research on policy, conducts policy-relevant case studies, shares information, and provides expertise in development initiatives. The number of participating countries in the projects is over 100, and the program also incorporates 17 research networks.

### **3.3.3. Training for public officials**

In order to develop capacity at societal level, some initiatives start with providing training to public officials. OECD, the World Bank, the United Nations Development Programme (UNDP), IMF, and the Arab Monetary Fund organize key short term training programs and seminars for public officials and decision-makers on state-of-the-art research techniques. The two latter institutions, for instance, hold courses and seminars on macroeconomic management and financial, fiscal, and external sector policymaking. Based on government-to-government cooperation agreements, JICA offers scholarships to government officials from developing countries in the field of international development.

### **3.3.4. Collaboration enhancement**

Collaboration is considered to be a prerequisite for capacity-building at societal level. The framework for capacity-building actions at national level is generally strengthened through bilateral collaboration, inter-governmental and multilateral programs. SIDA, for instance, supports national research development through bilateral research co-operation. The European Union's International Research Co-operation with Developing Countries (INCO-DEV) creates the framework in which researchers from the EU and developing countries work together towards finding solutions to developmental problems. Both put special emphasis on contributing to the creation of national institutions and the building of national support mechanisms for research. The International Development Research Center through its Trade, Employment, and Competitiveness Program Initiative supports a variety of policy-research networks in Africa, Asia, Latin America, the Caribbean and the MENA regions to enhance national level policy analysis. For instance, the Agricultural Policy Research Network for West and Central Africa works towards the enhancement of the regulatory and institutional frameworks for agricultural policy, by promoting policy dialog.

## **4. The contribution of the Global Development Network**

After presenting some of the major capacity-building initiatives, in this section we will discuss how the Global Development Network (GDN) has contributed to capacity-building in the area of policy-research since its creation in 1999. We propose to discuss the initiatives launched by GDN based on the level of intervention and the main tools applied, in an attempt to position them among other existing initiatives.

At the individual and institutional levels, GDN capacity-building for policy-research activities comprise incentive and communication enhancement programs. These include the Regional Research Competition (RRC), Global Research Projects (GRP), and the Global Development Awards (GDA). The RRC follows a similar pattern to many initiatives of this kind, offering small research grants to individuals or research groups based and working in developing and transition countries. Grants are managed by the researchers' organizations. The program does not have a training component, but allows the purchasing of equipment necessary to carry out the research and offers some remuneration to researchers. In comparison to other programs, GDN allows researchers full freedom in identifying research topics, the only condition being that research should have a demonstrated policy-relevance. Projects are usually one-year long, with a possible extension of six more months.

In terms of communication enhancement and networking, GDN has been running a series of GRPs to generate high-quality research. The method applied is that of partnership between researchers from developed, developing and transition countries. The main projects include Explaining Growth (looking at various national and regional experiences with growth), Understanding Reform (seeking to provide understanding on the successes and failures of reform), Bridging Research and Policy (evaluating the experiences of researchers working in different national environments). With this approach, GDN seems to share the view of other donors that the involvement of researchers from developing and transition countries into larger international research activities does not only lead to building on both national/regional experiences and on specific national experiences, but it also contributes to the sense of common ownership of research results. Still, in the case of GRPs, it seems that the leadership role in identifying the research topics is retained by developed country researchers.

We have seen that there are only a very limited number of award programs that recognize best practice and quality policy-research on development issues. In addition to the ones mentioned in the previous section, GDN has established the Global Development Awards. In contrast to other initiatives, GDN welcomes self-nominations. Similarly to other awards on development issues, the competition is open only to scholars and practitioners from developing and transition countries. Awards are large compared to other similar award schemes. Particular to the GDA is that in addition to research, it also provides awards to the best development projects.

At the institutional and societal levels, GDN adopts a network approach to capacity-building and runs GDNet and the Research and Policy Network (RAPNet). In line with most donors, GDN promotes networking as a cornerstone to capacity-building. Similar to ELDIS, for instance, GDNet is web-based and provides an interface to

various organizations and researchers, while allowing access to resources necessary to conduct research. The activities of GDN include a searchable database of researchers (with personal profile) and research organizations, a repository of research papers, funding opportunities news, access to journals and scholarly information, and access to data and research toolkits. Furthermore, the regional partners offer regionally focused websites, and thus, GDN is also able to strengthen South-South research collaboration.

GDN's RAPNet program seeks to establish a global community of scholars and practitioners. Like other similar initiatives, the RAPNet through its web-page provides regular news and publishes a quarterly electronic newsletter, resources and training opportunities. Also, it publishes case-study materials, various e-discussions, provides links to related literature, research projects, and contacts. There are seminars organized to enhance the capacity of researchers based in low and middle-income countries to engage in knowledge transfer activities. Peculiar to these activities is that the activities occur in a global context.

In order to create a forum for exchanging ideas on development and the challenges of poverty alleviation, GDN organizes annual global conferences. Each conference has a different topic and participants include researchers, government officials, representatives of international organizations, and sponsors of research. These meetings offer the opportunity to development stakeholders from all over the globe to share ideas. More than 2,500 scholars from over 100 countries have attended the five annual conferences organized since 1999.

The holistic approach to research capacity-building proposed by UNDP is only partly applied by GDN. This involves interventions at all three levels and close coordination of the various tools available at each level. Instead, GDN seems to concentrate on creating opportunities to qualified individuals already working on various research projects. In this way, GDN's preoccupation is dual, in the sense that, on the one hand, it contributes to the retaining of already gained capacity, and on the other, it further enhances existing capacity through creating access to resources, enhancing communication opportunities and involving researchers in various research projects.

## Conclusions

International and national organizations use a variety of definitions for capacity, capacity building, development and policy-research. Different organizations have different perceptions of their role, the type of capacities they should enhance and the instruments to be used to achieve their goals. This is partly explained by the peculiar national context of donor organizations and that of the target region in which they implement their capacity-building initiatives.

As it was shown the measurement of capacity and capacity-building for policy-research is not an easy task because it is often a non linear process where a number of different actors participate and perform different roles. When attempting to measure capacity and capacity-building it is essential to focus on a reflexive methodology and on a multi-level definition of policy-research capacity.

There are a large number of initiatives that seek to alleviate development challenges in developing and transitions countries through implementing capacity-building instruments. Still, the initiatives whose objective is to improve development through policy-research capacity-building are limited, and often not clearly distinguished from other similar initiatives, e.g. programs of capacity-building.

Reviewing the major capacity-building initiatives, we have found the following:

- To address the multidimensional aspect of capacity-building, most donors seek to enhance capacity at more than one level. As we have seen, there are donors that operate programs to build individual and institutional capacity, others focus on institutional and societal capacity-building, while some others have programs at all three levels.
- Capacity-building for policy-research initiatives use a large variety of tools to achieve their objectives. The selection of tools adopted is determined by several factors including the donors' priorities, perception about the effectiveness of different tools, and the context in which they work. In some cases, the same tools may be used for intervention at different levels (e.g. networking).
- Although the context varies in different countries, there are some common challenges that capacity-building initiatives need to tackle, i.e. how to make research for development relevant for the policy process, how to enhance the quality of research, and how to alleviate the many constraints that hamper the use of acquired research skills.
- There are a very large number of individual fellowship and grant programs worldwide, and it appears that there is a need for a more coordinated approach to such programs from the part of donors so that individual capacity-building can be integrated more successfully into various efforts of institutional and societal capacity-building.

- Partnerships and common implementation of research projects attract an increasing attention, as they imply mutual advantages to multiple stakeholders and create ownership on both sides. Obviously, besides the many opportunities, there are also many pitfalls that need to be tackled (e.g. building partnerships takes time, difficulties might emerge from different managerial cultures, etc).
- Networking, bringing various stakeholders together, is considered to largely contribute to sharing ideas and knowledge, and thus, is a very common capacity-building initiative, occurring under various forms.
- The most effective research capacity initiatives seem to be the ones that focus on capacity-building at individual, institutional, and societal levels, and are implemented with the involvement of local counterparts.

The above make us believe that there is a need for a better communication and collaboration among national policy makers, researchers and foreign donors to reduce the incentive incompatibilities that occur due to poor planning and implementation of capacity-building measures. At the same time, this would contribute to creating a more favorable perception about the importance of policy-research among decision makers in developing and transition countries. An ideal case would be the joint planning of the national institutional system that provides an enabling background for capacity-building initiatives for policy-research. Organizations such as GDN could have a major contribution in facilitating this process. By assuming strategic leadership in various aspects related to capacity-building for policy-research initiatives, GDN could become an advocate to draw attention to the need to coordinate various efforts, and could also contribute to the quality assurance of programs.

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Appendix – List of reviewed organization mentioned in the text of the paper

Table 1  
*Bilateral Organizations Reviewed*

1.	Austrian Development Agency (ADA)	<a href="http://www.bmaa.gv.at">http://www.bmaa.gv.at</a>
2.	French Development Agency (AFD)	<a href="http://www.afd.fr">www.afd.fr</a>
3.	Spanish Agency for International Cooperation (AECI)	<a href="http://www.aeci.es">www.aeci.es</a>
4.	Australian Agency for International Development (AusAID)	<a href="http://www.ausaid.gov.au">http://www.ausaid.gov.au</a>
5.	Belgian Technical Co-operation (BTC)	<a href="http://www.btcctb.org">http://www.btcctb.org</a>
6.	Canadian International Development Agency (CIDA)	<a href="http://www.acdi-cida.gc.ca">http://www.acdi-cida.gc.ca</a>
7.	Royal Danish Ministry of Foreign Affairs (DANIDA)	<a href="http://www.um.dk">http://www.um.dk</a>
8.	Development Cooperation Ireland (DCI)	<a href="http://www.dci.gov.ie">http://www.dci.gov.ie</a>
9.	Department for International Development, UK (DFID)	<a href="http://www.dfid.gov.uk">http://www.dfid.gov.uk</a>
10.	Belgian Development Cooperation (DGDC)	<a href="http://www.dgic.be">http://www.dgic.be</a>
11.	Directorate General for Development Cooperation Italy (DGCS)	<a href="http://www.esteri.it">http://www.esteri.it</a>
12.	Finish Aid (FINNIDA)	<a href="http://global.finland.fi">http://global.finland.fi</a>
13.	Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ)	<a href="http://www.gtz.de">http://www.gtz.de</a>
14.	International Development Cooperation Department Greece (HELLENIC-AID)	<a href="http://www.mfa.gr/english/foreign_policy/cooperation">http://www.mfa.gr/english/foreign_policy/cooperation</a>
15.	The Icelandic International Development Agency (ICEIDA)	<a href="http://www.iceida.is/english">http://www.iceida.is/english</a>
16.	Japan International Cooperation Agency (JICA)	<a href="http://jica.ific.or.jp">http://jica.ific.or.jp</a>
17.	Luxemburg Agency for Cooperation and Development (LUX-Development S.A.)	<a href="http://www.lux-development.lu">http://www.lux-development.lu</a>
18.	The Norwegian Agency for Development Cooperation (NORAD)	<a href="http://www.norad.no">www.norad.no</a>
19.	New Zealand's International Aid & Development Agency (NZAID)	<a href="http://www.nzaid.govt.nz">http://www.nzaid.govt.nz</a>
20.	Portuguese Development Cooperation Institute	<a href="http://www.ipad.mne.gov.pt">http://www.ipad.mne.gov.pt</a>
21.	Swiss Agency for Development and Cooperation (SDC)	<a href="http://www.deza.ch">http://www.deza.ch</a>
22.	Swedish International Development Cooperation Agency (SIDA)	<a href="http://www.sida.se">http://www.sida.se</a>
23.	U.S. Agency for International Development (USAID)	<a href="http://www.info.usaid.gov">www.info.usaid.gov</a>

Table 2  
*Financial Development Institutions Reviewed*

1.	Asian Development Bank	<a href="http://www.adb.org">http://www.adb.org</a>
2.	The African Development Bank	<a href="http://afdb.org">http://afdb.org</a>
3.	European Bank for Development and Reconstruction	<a href="http://www.ebrd.org">www.ebrd.org</a>
4.	International Monetary Fund	<a href="http://www.imf.org">http://www.imf.org</a>
5.	Inter-American Development Bank	<a href="http://www.iadb.org">http://www.iadb.org</a>
6.	World Bank	<a href="http://www.worldbank.org">http://www.worldbank.org</a>
7.	The European Investment Bank	<a href="http://eib.eu.int">http://eib.eu.int</a>
8.	International Fund for Agricultural Development	<a href="http://www.ifad.org">http://www.ifad.org</a>
9.	The Islamic Development Bank	<a href="http://www.isdb.org">http://www.isdb.org</a>
10.	Nordic Development Fund	<a href="http://www.ndf.fi">http://www.ndf.fi</a>
11.	The OPEC Fund for International Development	<a href="http://www.opecfund.org">http://www.opecfund.org</a>
12.	Caribbean Development Bank	<a href="http://www.caribank.org">http://www.caribank.org</a>
13.	Central American Bank for Economic Integration	<a href="http://www.bcie.org">http://www.bcie.org</a>
14.	East African Development Bank	<a href="http://www.bcie.org">http://www.bcie.org</a>
15.	West African Development Bank	<a href="http://www.boad.org">http://www.boad.org</a>

Table 3  
*UN Agencies Reviewed*

1.	Food and Agriculture Organization of the United Nations (FAO)	<a href="http://www.fao.org">http://www.fao.org</a>
2.	UNAIDS – The Jointed United Nations Programme on HIV/AIDS	<a href="http://www.unaids.org">http://www.unaids.org</a>
3.	UNCTAD – United Nations Conference on Trade and Development	<a href="http://www.unctad.org">http://www.unctad.org</a>
4.	UNDP – United Nations Development Project	<a href="http://www.undp.org">http://www.undp.org</a>
5.	UNECA – Economic Commission for Africa	<a href="http://www.uneca.org">http://www.uneca.org</a>
6.	UNEP – United Nations Environmental Program	<a href="http://www.unep.org">http://www.unep.org</a>
7.	UNESCO – United Nations Educational, Scientific and Cultural Organization	<a href="http://www.unesco.org">http://www.unesco.org</a>
8.	UNFPA – United Nations Population Fund	<a href="http://www.unfpa.org">http://www.unfpa.org</a>
9.	UNICEF – United Nations Children Fund	<a href="http://www.unicef.org">http://www.unicef.org</a>
10.	UNIDO – United Nations Industrial Development Organization	<a href="http://www.unido.org">http://www.unido.org</a>
11.	UNIFEM – United Nations Development for Women	<a href="http://www.unifem.org">http://www.unifem.org</a>
12.	UNRISD – United Nations Research Institute for Social Development, Geneva, Switzerland	<a href="http://www.unrisd.org">http://www.unrisd.org</a>
13.	United Nations University	<a href="http://www.unu.edu">http://www.unu.edu</a>
14.	WTO – World Trade Organization	<a href="http://www.wto.org">http://www.wto.org</a>

Table 4  
*Other Institutions Reviewed*

1.	KFPE – Commission for Research with Developing Countries – a commission of the Council of Swiss Scientific Academies	<a href="http://www.kfpe.ch">http://www.kfpe.ch</a>
2.	IFS – International Foundation for Science	<a href="http://www.ifs.se">www.ifs.se</a>
3.	TWAS – Third World Academy of Sciences	<a href="http://www.ictp.trieste.it">http://www.ictp.trieste.it</a>
4.	ECDPM - European Centre for Development Policy Management	<a href="http://www.ecdpm.org">http://www.ecdpm.org</a>
5.	IDS - Institute of Development Studies	<a href="http://www.ids.ac.uk/ids">http://www.ids.ac.uk/ids</a>
6.	IRD (ex ORSTOM) - Institut de Recherche pour le développement	<a href="http://www.ird.fr">http://www.ird.fr</a>
7.	International Centre for Science and High Technology	<a href="http://www.ics.trieste.it">http://www.ics.trieste.it</a>
8.	AAS - The African Academy of Sciences	<a href="http://www.aasciences.org">http://www.aasciences.org</a>
9.	AERC - African Economic Research Consortium	<a href="http://www.aercafrica.org">http://www.aercafrica.org</a>
10.	CODESRIA - Council for the Development of Social Science Research in Africa	<a href="http://www.codesria.org">http://www.codesria.org</a>
11.	Community of Science	<a href="http://www.cos.com">http://www.cos.com</a>
12.	INAPS- International Network for the Availability of Scientific Publications	<a href="http://www.inasp.org.uk">http://www.inasp.org.uk</a>
13.	INTAS - A bridge to East-West partnership in research	<a href="http://www.intas.be">http://www.intas.be</a>
14.	SFIAR – Swiss Forum for International Agricultural Research -	<a href="http://www.sfiar.ch">http://www.sfiar.ch</a>
15.	The Social Science Research Council	<a href="http://www.ssrc.org">http://www.ssrc.org</a>
16.	Bertelsmann Group for Policy Research	<a href="http://www.cap.uni-muenchen.de/bertelsmann">http://www.cap.uni-muenchen.de/bertelsmann</a>
17.	Japanese Bank for International Cooperation	<a href="http://www.jbic.go.jp">http://www.jbic.go.jp</a>