Understanding Regional Research Networks in Africa

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Department for Evaluation and Internal Audit

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Executive Summary

The overall aim of this desk study is to contribute to a better understanding of regional research networks (RRNs) in international development co-operation, with special emphasis on those in Africa. The terms of reference specifies three overall objectives:

- 1. A general review of literature on the concept of research networks and the support to research networks in developing and industrialised countries.
- 2. An inventory and analysis of different types of RRNs in international development co-operation, accompanied by an assessment of the frequency with which networks of different kinds figure in international development co-operation.
- 3. Preliminary analysis of Sida-funded RRNs in terms of the typology devised.

The study is structured according to these three objectives. It starts off with addressing some of the conceptual ambiguities and inconsistencies in the field. The conceptual framework draws attention to that networks emerge and are organised in order to increase communication, co-operation and the use, access and sharing of information and knowledge. As such they are vehicles for voluntary co-operation and the creation of dynamic research and education communities. The network concept should be analytically distinguished from the concept of organisation (i.e. bureaucracy and hierarchy). However, since the two often overlap in the real world, it is useful to think along a continuum, with a formal, hierarchical "organisation", with its own legal identity and bureaucratic structure, at the one end, ranging to an increasingly more decentralised and loosely-structured type of unit, a genuine "network", at the other end.

Education and research networks have existed for a long time, and perform a host of functions. In an increasingly globalised world in combination with the fact that the national education and research systems in the developing world are often extremely weak and small, there is a tendency that regional, interregional and global research networks are becoming increasingly important. International development assistance to RRNs has also increased over time, especially during the 1990s. Many RRNs are donor-driven and sometimes even donor-creations. This can be justified, *inter alia* due to the fact that it is sometimes difficult to find sufficient financing for the networking activities within the region. However, some recent studies show that RRNs may be constrained by the way aid agencies operate.

Regarding the analysis, in chapter three, of different types of RRNs in international development co-operation, the analytical scheme concentrates on three main variables: (i) aims and activities; (ii) membership; and (iii) institutional structure and external relations. A quick reality check, using the analytical scheme, suggests four main types of RRNs – i.e. research associations; research organisations; research centres; and research programmes and projects – which are briefly described.

In the fourth chapter, the analytical scheme is used for analysing Sida-funded RRNs in Africa. Their most typical feature is perhaps that they are all are multifunctional and have a number of different aims and activities that they strive to achieve simultaneously. More or less all the RRNs carry out research production, research networking and education and training in various forms. Most of the RRNs also disseminate information, give grants and awards, and support publication. In many cases it is this combination of various, rather closely related functions that explain much of the dynamism of the RRNs. There are some differences within and across types of RRNs with regard to the relative importance devoted to the various functions. For instance, every single regional research organisation focus on all the functions included in the analysis. It seems that regional research associations

and regional research programmes and projects focus more actively on networking compared to regional research centres which are heavily focused on the production of research and sometimes less explicitly on networking (beyond their own staff). Furthermore, there are also some preliminary indications of that some RRNs have problems carrying out such a multitude of tasks, thus spreading themselves too much.

Many RRNs seek to have influence on policy-formulation in one way or the other. But this varies considerably also within the more distinct types and no pattern can be detected. Furthermore, in spite of the sometimes explicit policy-formulation objectives, policy-makers themselves seem to be less common and influential participants, perhaps with the most notable exception of regional research programmes and projects.

The bulk of the RRNs are multi- or interdisciplinary. There is a clear pattern that regional research associations and regional research organisations, tend to have a more general focus compared with regional research centres and regional research programmes and projects, which pay more attention to specific issues. The "region" serves often as a basis for bringing the members together, even if participants from outside the region, often from the donor countries, are also included (i.e. North-South, or rather, North-South-South research co-operation). It appears as if most RRNs enjoy a relatively high degree of autonomy of decision-making and agenda-setting in their relations with national governments and donor agencies. However, all the RRNs are heavily dependent on foreign aid, and without international development assistance there would be much fewer networks and they would most likely carry out a much more limited set of activities.

The differences with regard to various types of institutional structures should also be taken into consideration. The regional research centres are the most hierarchical and bureaucratic structures, followed in order by regional research organisations, regional research associations, and finally the most informal, and decentralised type of RRNs, the regional research programmes and projects. Regional research organisations can perhaps be understood as "network organisations". Regional research associations are more decentralised and "flat", and are thus more "network-like" compared with research organisations and research centres, but still less so than regional research programmes and projects. This order – regional research centre; organisation; association; programme and project – also seems to picture, from large to small, the comprehensiveness, size and budget of the RRNs.

The study reveals the great pluralism of RRNs and networking strategies, with both similarities and differences, fulfilling a host of functions and trying to build various types of research capacities. Future research and evaluations in the field should recognize that we have limited general knowledge of the dynamics, effectiveness and viability of RRNs. This study has sought to provide a more solid base from which to build further knowledge. A host of interesting questions and hypotheses can be generated from the analysis. One obvious issue that deserves future attention relates to whether a particular type of RRN is more efficient than another at performing a particular function. Although different types of RRNs rely on different strategies, it is unlikely that all strategies are equally effective. A quite natural starting point is to try to assess if and why a particular type of RRN, let us say a regional research organisation, is better and more efficient at networking and facilitating communication compared to a different type, such as a more informal and loosely structured regional research project and programme, or compared with a regional research centre. The different RRNs need to be compared also with regard to other functions, especially research production. Perhaps some of the RRNs would be more efficient if they tighten up their operations and concentrate on some "core" activities? Furthermore, considering the gigantic size of research centres, it is challenging to try to assess whether these are cost efficient compared to smaller and dramatically less costly structure, for

instance a research programme and project. It may also be worthwhile to try to learn whether there is an optimal number of members in certain types of networks. At this stage the questions are many but the answers remain few. Comparisons of these and similar matters are of course also called for *within* as well as *between* the more distinct types.

We also need to place the RRNs more firmly within the overall context of research capacity building. It is important to try to uncover what types of RRNs (i.e. regional research association; organisation; centre; programme) are promoting synergy effects between research capacity building at different levels of research capacity (i.e. individual, institutional; national; regional; international). Perhaps some RRNs, for instance regional research centres, have only limited impact on national research capacities, but instead have a very large effect on individual and regional research capacities? Or perhaps a regional research organisation is very good at enhancing national research capacity building whereas a regional research programme and project mainly contributes to individual research capacity building?

1 INTRODUCTION

In spite of the rapid proliferation of research and education networks all over the world, we have limited knowledge of their functioning, dynamics, costs and benefits, and consequently how they should be understood and evaluated. This is particularly the case with those operating at the regional level and known as regional research networks (RRNs). The overall aim of this desk study is to contribute to a better understanding of such RRNs, with special emphasis on those in Africa.

The terms of reference specifies three overall objectives:

- 1. A general review of literature on the concept of research networks and the support given to research networks in developing and industrialised countries.
- 2. An inventory and analysis of different types of RRN in international development co-operation, accompanied by an assessment of the frequency with which networks of different kinds figure in international development co-operation.
- 3. Preliminary analysis of Sida-funded RRNs in terms of the typology devised.

The study is structured according to these three objectives. There is a more or less natural order whereby each section can be seen as a building block for the next. Given the diversity of the study's objectives, various methodological considerations will be further described in each chapter.

The next chapter is best understood as a conceptual framework. In order to address the most pressing overlaps, ambiguities and contradictions in the field, it concentrates on fundamental concepts and definitions, such as networks, networking, organisations, the role of RRNs in a globalised world, and finally, the relationship between international development co-operation and RRNs. The concepts and strategies need also to be further problematised and more closely related to one another.

With regard to the second overall objective, dealt with in chapter 3, the methodology of ideal type construction draws attention to the need for comprehensive and detailed understanding of the phenomena being studied in order to capture their most fundamental characteristics with a limited set of variables. Building on organisation theory, the analytical scheme developed concentrates on three main variables: (i) aims and activities; (ii) membership; and (iii) institutional and organisational structure (including external relations). A quick reality check, using the analytical scheme, suggests the existence of at least four main types of RRN in international development co-operation, research associations; research organisations; research centres; and research programmes and projects. These four types are briefly described at the end of the chapter.

The fourth chapter concentrates specifically on the Sida-funded RRNs in Africa. The method is thus already defined, and here the main analytical problem relates to the extreme time pressure for the comprehensive task at hand, in combination with the availability of relevant and up-to-date data on the particular RRNs being investigated (i.e. being a desk study, it is heavily dependent on secondary sources, particularly previous evaluations and reviews).

Finally, the most important findings of the study are summed up. An attempt is also made to suggest the way forward in order to uncover what types of RRN (i.e. regional research association; organisation; centre; programme) are promoting synergy effects between research capacity building at different levels of research capacity (i.e. individual, institutional; national; regional; international).

2 CONCEPTS AND STRATEGIES

The conceptual landscape in the field is filled with ambiguities and inconsistencies. Not only is the same term often defined in a great variety of ways, it is frequently used interchangeably with other closely related terms. Although some overlaps are only natural, we need to consider the semantics of the terms and to strive to uphold certain distinctions. The network concept constitutes the natural starting point of such task, and it is then related to the concept of organisation. Thereafter, I concentrate more specifically on research and education networks, their main characteristics and functions, the role of RRNs in the context of the ongoing globalisation of knowledge production, and, finally, some problems related to their heavy dependence on international development assistance.

2.1 Networks and networking

A network may denote such diverse phenomena as a circuit, a grid, a labyrinth, a net, an organisation, a connected set of computers, a structure, a system, a web or, with special reference to the topic of this study, a number of researchers having any type of relation. What all networks have in common is a set of objects, or "nodes" (cities, organisations, individuals) tied together in a connective structure by links (air routes, lines of decision-making, communication links).¹ The network concept draws attention to the links and relationships between the nodes (e.g. the researchers), rather than to the nodes themselves.²

There exist many varieties of networks, with different structures, functions, objectives and types of participants. Regardless of type, networks are the prerequisite for contact and communication between human beings. To the extent that there is an increasing demand and supply of communication, contact and information in society and the world in general, we will experience a continued proliferation of material and immaterial networks. By the same token, to the extent that social relationships and patterns of communication are multifaceted, networks will also be multidimensional and complex. It is therefore important to think in terms of various network models, which can be modified and integrated as necessary.

The network idea is so pervasive that it has quite recently entered the language as a verb, "networking", which refers to the activity of building networks. Social networking implies building contacts, making friends, and the often informal communication and sharing of information among individuals, colleagues or groups linked by a common interest.³ The basic principle of networking enriches our understanding of the subject matter, namely that networks emerge and are organised in order to increase communication, co-operation and the use, accessing and sharing of information and knowledge, all which are essential to learning processes and mutual understanding.⁴ In essence, networks are to be understood as vehicles by which social trust, communication and co-operation can be established and developed.

Social network theory, which is crucial to this study, is founded on the fact that there often exists a network pattern of informal and close relations and communication channels between people, mainly through voluntary actions, without clear, visible boundaries and without a formally co-

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¹ The dictionary definition of a network is illuminating: "any combination of intersecting or interconnecting filaments, lines, passages, etc.; any system or group of interrelated or interconnected elements."

² Cf. Batten, Casti and Thord, 1995: vii.

³ Baker, 1994; Casti, J. L. 1995. Networking has also been used in a more technical sense, particularly in the field of informatics, cf. Ljungberg, 1997.

⁴ Smith Ring, 1996:20.

ordinated "centre" or mechanism.⁵ Such a network is decentralised and horizontally rather than hierarchically organised. A network-based social structure often lacks clear-cut internal divisions, and people are often allowed to join or exit with relative ease. Many networks are open, extroverted and inclusive, capable of expanding without (formal) limitations, and interact with new "nodes" and other networks as long as people are able to communicate within the network. Although networks typically differ in terms of membership, decision-making, procedures and structure, a social network is perhaps best understood as an informal, voluntarily based, dynamic and borderless open system which is flexible, fluid, adaptable and susceptible to innovations, new ideas and needs without that its internal balance is threatened.

Thus there exist a wide range of different types of social networks. It is fruitful to distinguish between formal and informal social networks. Often the formal and the informal overlap, and to a considerable extent they seem to be mutually reinforcing. It seems that informal networks often gradually become formalised, if and when there is a need for more "ordered" and "formal" relationships. This study focuses on the knowledge networks that have a minimum degree of formal institutional structure and "organisation" (which by no means implies that the informal and spontaneous networks, lacking any formal structure or "centre", are less important).

As indicated above, a basic characteristic of a network is the primary importance of social relationships and the way co-operation, communication and trust are formed and sustained within the networks. This has also important implications for how networks are organised. Networks should be analytically distinguished from other co-ordination mechanisms and social organisational principles, especially formal "organisations" (bureaucracies and hierarchies) but also the market principle.⁶ Networks are typically decentralised and to a large extent horizontally structured and more co-operative and even egalitarian as opposed to the hierarchy in organisations or the competition guiding relationships in markets.

2.2 **Networks and organisation**

An "organisation" refers to something that is organised for some end or work; to an association; a group of persons; the administrative personnel or apparatus of a business etc. To organise is to order, systematise or form as or into a whole, consisting of interdependent or co-ordinated parts. Usually an organisation refers to all or most of the following aspects: a formal system of rules and objectives, a rationalised bureaucratic instrument, which has a formal technical and material structure: constitutions, an administrative hierarchy, a staff, physical equipment, emblems, letterhead stationery and so forth.⁷ More precisely, an organisation is commonly defined as "a formal, continuous structure established by agreement between members with the aim of pursuing the common interest of the membership."8 Building on this notion, an organisation involves:

- specified aims, functions and activities;
- membership (individual or collective); and
- its own formal, permanent structure (i.e. a constitution and administrative structure to order responsibilities and carry out its functions).

⁵ Castells, 1996; Borell and Johansson, 1995 and 1996; Thompson et al, 1991.

⁶ Borell and Johansson, 1996, chapter 4; Castells, 1996; Scott 1992; Thompson et al, 1991.

⁷ Archer, 1992.

⁸ Archer, op. cit. See also Jacobson, 1984.

It is first and foremost the third component, a formal and permanent bureaucratic structure, autonomous and separate from the control of one single member, that differentiates most organisations from a more loosely-structured "network", a research project and from a series of conferences and seminars etc.

The "networks" dealt with in this study (i.e. formal networks, with a minimum degree of institutional structure) are at least to a certain extent also to be understood as "organisations". In practice, networks and organisation often overlap: a network may very well be an organisation, and an organisation is sometimes organised as a network. It is here suggested to think of a host of various organisational models along a continuum, with a formal, independent, hierarchical organisation, with its own legal identity, at the one end, towards an increasingly more decentralised and loosely-structured type of unit, such as a genuinely decentralised "network".

There exist various organisational models, each with its particular strengths and weaknesses. It seems, for instance, that a formalised, clearly defined administrative and hierarchical "organisation" is effective and rational for the implementation of strategies and policies, especially in a stable environment, whereas a more decentralised and flexible "network" structure may be more adaptable in a turbulent, rapidly changing environment and in situations where progress is contingent upon decentralised, voluntary co-operation, communication and more informal relationships. It is also possible to speak of a middle ground, a "network organisation", which then would be a decentralised, boundary-less and extroverted organisation: a seamless network of relationships where the walls within and externally are torn down, but which still contains an effective institutional and administrative structure.

For the avoidance of confusion it should be pointed out that the conceptual meaning of "network" as well as "organisation" should be kept separate from the objects of analysis, such as the Council for the Development of Social Science Research in Africa (CODESRIA) and the Organisation for Social Science Research in Eastern and Southern Africa (OSSREA). Whereas in this study these are collectively labelled regional research networks (i.e. RRNs), some analysts prefer to label them regional research organisations. As will be further elaborated upon below, the term regional research organisation refers, in this study, to a distinct type of RRN.

2.3 Research and education networks

Research, and to an increasing extent education as well, are very much networking activities. It is quite safe to say that all active researchers in the world maintain various types of contacts, co-operation and communication outside the department, university or research institute within which they are based. In other words, networks of various types and networking form integral parts of more or less all successful research activities in the world today, and there are few, if any, examples of progressive research without some type of informal and formal research network and networking.

Research co-operation, networking and communication have proved to be crucial elements in the advancement of professionalism and the growth of viable knowledge communities, often transcending national frontiers, particularly those of small and weak countries. Sometimes the national research and educational structures, systems and universities are very weak, small in size and/or lack the capacity to effectively research, educate and train in a particular field. It is furthermore often argued that networking may play a crucial role in the promotion of the ethos of professionalism and expertise, particularly in locations where civil society and the intellectual environment remain weak, and/or where decisions are dictated and controlled by a ruling elite, for example, through the continuing presence of expatriate advisors. Transnational networking (on cross-border,

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⁹ See Fine, 1997: 23.

regional, continental, interregional or global level) can promote a more viable research and education community, and it may be more effective to "pool resources" through a joint research and education programme, with a certain division of labour amongst the members, and/or carry out research and education at one place, for instance at a regional research centre.

There exists a multitude of formal and informal research networks in the academic community: within as well as between universities, nations and regions, and globally. The networks may be mono- or multidisciplinary; thematic or broad, involve researchers or policy-makers and so forth. Relatively little is known as to which of these various types of research networks are most effective and in what way they contribute to research capacity building. This study is a small contribution to the effort to build more systematic knowledge.

For obvious reasons, the analysis focuses on research networks operating on a regional level, i.e. RRNs. The concept of "region", however, is notoriously contentious. This study focuses on regional research networks, leaving aside national and global ones. In between these extremes there exist an impressive variety of networks which contain at least some regional dimension, and it is here suggested that the region be understood in an eclectic sense. A purely regional research network involves participants from more than two geographically contiguous countries. However, for various reasons this distinction should be relaxed. First, bilateral co-operation between participants from neighbouring countries may also be considered regional (since we are minimally concerned with the international dimension). Secondly, the members do not necessarily have to be geographically connected as long as they are part of the same broader regional context (i.e. Africa or Southern Africa). Thirdly, a transnational or "world" region ranges from two neighbouring countries (or parts thereof) to whole (or parts of) continents, such as Africa. That is, what is in focus are transnational/international research networks operating between the global and national level, i.e. subglobal networks, transcending national frontiers, but organised with a minimum degree of territorial and spatial (i.e. regional) dimension.

Research networks can thus take many different forms and may arise for many different reasons. Many analysts argue that networks are most effective when they operate within a regional setting, where there is clearly common ground between the partners, both as to issues and resources.¹¹ Regional research co-operation can thus be motivated by the fact of participants being "locked in" within a particular regional context and/or sharing a common (regional) culture, which reduces the "transaction costs" involved in co-operation and communication, compared with actors in other parts of the world, outside the region. This type of research co-operation may be labelled "regional research co-operation". However, research co-operation may arise for the opposite reason, that is, when participants are "different" and do not share the same background. This is often the case when a particular donor, for whatever reason, seeks to integrate participants and researchers from the donor country with researchers in the recipient country, thus establishing North-South cooperation. Many bilateral research programmes in international development co-operation are of this type, whereby for instance a particular research environment or researcher in the North may profit from collaboration with and the expertise of partners in the South while the latter may gain from better research facilities and funding from the North. The participating researchers of this network may also complement one another, simply due to the fact that they are "different". In the absence of better terminology this type of research co-operation can be understood as "complementary research co-operation". Needless to say, "regional research co-operation" and "complementary research co-operation" may very well overlap (i.e. North-South-South co-operation).

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¹⁰ Hettne, Inotai and Sunkel, 1999.

¹¹ Cf. Carden, 1995: 7.

Even so, this simple analytical distinction may enhance our understanding of the functioning of RRNs and the reasons why they emerge (as well as why they receive funding).

It is evident that research networks are necessary components for research capacity building in both the industrialised and the developing countries. Research networks and networking activities are universal phenomena, existing all over the world. The most obvious difference between networks and networking in various parts of the world seems to be related to the very large North-South disparities in the capacity and strength of participants and knowledge systems. The simple fact of the researchers and research institutions in the North being "stronger" and more "developed" seems to imply that they are often more actively engaged in networking activities compared to their counterparts in the South. It appears as if strong and well-functioning research and education systems go hand in hand with a pluralism of research networks.

Returning to the particular characteristics and benefits of research networks and networking activities, Fred Carden advances the rather common viewpoint that research networks should not simply be mechanisms to link people, but should serve specific functions and development purposes.¹² Available evidence also suggests that the mandate and purpose of research networks are sometimes too general, without clearly defined goals and purposes, which may leave room for inefficiencies as well as personal self-interest ("rent-seeking"). However, if taken to its logical conclusion, Carden advances an instrumental and rather primitive interpretation of social relationships and the role of networking. A social network approach, along the lines emphasised above, suggests that networking, extensive contacts, and research co-operation in various forms are prerequisites for dynamic and productive research and education communities. Furthermore, contrary to Carden's proposition, research linkages, research communication and social networking are difficult to measure and evaluate, meaning inter alia that they are not easily translated into explicit development purposes. For instance, researchers often improve their knowledge and get fruitful ideas from being a part of networks which are then used in education and research at the home institution (and vice versa), and it is a risky business for an evaluator to assess the quality and effect of these social relationships in the short and medium term, and particularly in advance, which is sometimes done.

2.4 Globalisation and the role of RRNs

It is hard to deny that the international, or rather global, knowledge system is undergoing a deep transformation process, *inter alia* as a consequence of what is often termed the globalisation process and the fast development of information technology. This comprehensive transformation process has profound consequences for research and education and its organisation.

Conventionally, research and education have been nationally organised and assessed, due partly to the dominance of the vision of building nation-states, among the "national" governments as well as donor agencies. It is clear that the "nation-building project" has had profound implications for the way research and education systems have been organised all over the world. With a national research and education system as the "ideal" model, the value of RRNs has then simply been assessed through the lenses of and with regard to how much they contribute to the ambiguous notion of "national research capacity building". RRNs have often been seen as coping or complementary mechanisms that may enable institutions for research and learning to develop when "national" structures have been weak. Furthermore, it has often been assumed that the main value of RRNs arises when the research in question does not receive sufficient priority from the country

¹² Carden, 1995: 4.

¹³ Cf. Eisemon and Holm-Nielsen, 1995; European Union, 1995; Fine, 1997; Sida, 1998: 4.

receiving bilateral aid or when conditions for building national research capacities are weak. There seems to exist a common belief in the donor community that the situation can be "normalised" with revived and strengthened national institutions.

It is unsatisfactory, however, to understand RRNs mainly in terms of how they contribute to and complement national research capacity building. Christensen and Mackenzie claim that "it must be emphasised that capacity building should not only be seen as happening at the national level."14 Several studies have been produced during the last few years which all focus on RRNs and networking, and they all draw attention to our need to break free from the obsession with national research capacity and instead recognise that national education and research structures are not autonomous or independent (if they ever were) but are becoming ever more closely integrated into a larger transnational research and education system.¹⁵ Fine argues convincingly that the excessive focus of national research capacity is badly misguided and ignores the structural shortcomings of most national systems as well as the role that properly designed RRNs can play within a holistic, systems-oriented strategy for research capacity building and knowledge production.¹⁶ In essence, a more balanced understanding of the real and potential benefits of RRNs for capacity building is called for. RRNs should be recognised as independent phenomena in their own right, with their own dynamics and benefits, which are not sufficiently captured by the framework of national research capacity building. Moreover, it is misleading to view RRNs as something "extra" or as a "complement" to weak national knowledge systems. RRNs are certainly no panacea, but it should be recognised that they are prerequisites and permanent features of the dynamic knowledge systems emerging in the world today.

According to Fine, RRNs should be assessed with regard to how far they are able to respond to the "globalisation" of the knowledge industry. This transformation process, and particularly globalisation, has led to higher education and research now being internationally traded services on a (more or less) global market, implying that universities and institutions have to compete with actors from the rest of the world. At first sight this may be viewed as devastating for African actors, due to their undisputed "weakness" and the fact that their knowledge systems are in deep crisis. Fine argues that this need not be the case: "African scholars and universities can be part of global knowledge networks, obtain access to knowledge in various forms and, in strategic partnerships with regional or global bodies e.g. business schools, offer good educational services locally and be properly remunerated for their efforts. ... All of these players are competing/collaborating through alliances that continually shift, evolve, and disappear over time." In this new "globalised" situation, African universities and other research organisations will inevitably begin to form strategic partnerships and to focus on a more limited range of services, both in terms of educational services and research. Networks, strategic coalitions and alliances across national systems will increase. Thus, Fine sees little worth preserving in terms of the structure and function of the higher education systems as they exist in most African countries today. He also argues that the revolution in information technology has removed the disadvantages of distance and cost for many Africans, especially in virtual services such as knowledge.

¹⁴ Christensen and Mackenzie, 1998: 15.

¹⁵ Fine, 1997; Sörlin 1991; Sida, 1998: 10.

¹⁶ Fine, 1997: 7. Other studies worth considering and also emphasising the need for assessing research capacity within a broader, more holistic context, include Qualman and Bolger, 1996, and to a lesser extent Carlsson and Wohlgemuth, 1996; Moore et al, 1995.

¹⁷ Personal communication in August 1998. Also cf. Fine, 1997 and Sörlin, 1991.

Fine's analysis is consistent with World Bank analyses. According to Eisemon and Holm-Nielsen, World Bank lending and capacity building strategies "must comprehensively address the need to reform the financing and management of higher education and research systems. Changing the role of the state is usually fundamental to these reforms. ... efforts to increase the efficiency of government and donor investments in higher education and research must combine strengthening accountability with increasing institutional autonomy. This will often involve changing traditions of subordination: liberating higher education and research institutions from civil service regulations, allowing them greater control over their budgets, encouraging openness, transparency and competition in resource allocation and, of course, protecting the integrity of academic and scientific work. Countries with significant capacity for research and advanced scientific training will derive little benefit from their investments unless attention is also paid to fostering the use of such capacity by enterprises, producers, government and society as a whole." ¹⁸

2.5 RRNs and international development co-operation

Conventionally the donors have supported higher education and research through the national structures, with the universities at the centre. However, other forms of support are now increasing, to the more autonomous research institutes as well as various types of regional and international research networks and organisations. One such indication is that, since some years now, Sida has been contributing more international development assistance to RRNs than to bilateral research co-operation. Today most donors support regional research co-operation and RRNs in one way or another, and most donor agencies seem to rely on rather similar strategies.

Many of the RRNs existing today are heavily dependent on donor funding. This can be justified by funding sometimes being hard to procure within the countries themselves. However, such donor dependence may also be problematic. A quite influential analysis made by Moore and colleagues draws attention to some characteristics of donor agencies which are particularly negative for the development and functioning of RRNs. ¹⁹ They emphasise the fact that aid agencies, in general, tend to operate in a blueprint rather than a process mode; that the aid agencies are relatively rigid and inflexible in approach and prefer standard formulas and approaches; that their main objective is to achieve the main goals by which they are judged (i.e. spending large quantities of money in the short term and therefore only pay serious attention to large scale activities). According to Moore and colleagues, all these problematic aspects are inimical to effective RRNs and networking activities. They call for a different approach than normally favoured by donor agencies, *inter alia* including:

- patience and a long time horizon rather than short-time and large-quantity spending;
- experimentation, flexibility and willingness to admit and learn from mistakes rather than blueprint programming in advance;
- focus on human skills and knowledge production rather than expensive hardware;
- sensitivity to the particular cultural and political environment and context into which the institution (i.e. in this case the RRN) is to fit, rather than mechanical and instrumental models and rules of thumb.²⁰

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¹⁸ Eisemon and Holm-Nielsen, 1995: 1.

¹⁹ Moore et al, 1995: 32.

²⁰ Ibid.

Furthermore, in a similar vein, Eisemon and Holm-Nielsen point out that, unfortunately, "governments and donors have been more interested in improving the monitoring of research and training investments than in liberating higher education and research institutions from civil service regulations, allowing them greater control over their budgets and factors that affect their costs, encouraging openness, transparency and competition in resource allocation, providing a greater measure of self governance and, of course, protecting the integrity of academic and scientific work." ²¹

Another interesting issue, with regard to the future and functioning of RRNs, is related to the apparent assumption by some donors that the value of networking and a network-based structure lies in the rapid and inexpensive dissemination of information and a (relatively) small bureaucracy, i.e. perceived low transaction costs. This may possibly be a misconception. Drawing on the experience of the African Economic Research Consortium (AERC), Fine argues that networking is management intensive, and in order to succeed a network must invest in full-time, highly skilled staff and in sound procedures and systems. The high management costs can then be explained by there often being a multitude of various interests, functions, activities and relationships which all need to be co-ordinated within the network. There is, however, a lack of further empirical evidence on this matter, and it is possible that (regional) networking in other organisational structures and with other aims and activities are not as management intensive as suggested by the AERC experience.

2.6 Summary

This chapter emphasises the great pluralism of networks, with different characteristics, structures, participants, functions and objectives. Irrespective of type and form, networks constitute the prerequisite for contact and communication between human beings. Networks should be analytically distinguished from other co-ordination mechanisms and social organisational principles, especially formal organisations and the market mechanism. Networks are decentralised, more horizontally structured and facilitate voluntary co-operation as opposed to the latter two, which co-ordinate by way of hierarchy and competition respectively. Nevertheless, in the real world, networks and organisations often overlap. It is therefore fruitful to think in terms of a host of various network and organisational models, which can be ranged along a continuum, from a formal, independent, hierarchical "organisation" towards an increasingly more decentralised and horizontally-structured type of unit, often referred to as a typical "network".

The review stresses that networks and networking constitute important elements of education and research systems all over the world today. Networks serve the broader objective to link researchers, students and teachers, and act as vehicles by which communication, social co-operation can be established and maintained, thus forming part of the vision to contribute to viable research and education communities. There exist a great variety of research and education networks, with a multitude of functions and benefits, such as complementarities, economies of scale and specialisation.

Conventionally, research and education policies have been formulated in terms of the national interest and national research and education capacity. This picture is becoming increasingly more ambiguous as a consequence of the combined effects of the restructuring of the nation-state hand in hand with increased globalisation, internationalisation and transnationalisation of research and education in the world today. That is, due to the extreme emphasis of the nation-state as the dominating unit in the development discourse, it is important to acknowledge that national education

²¹ Eisemon and Holm-Nielsen, 1995: 20.

²² Fine, 1997: 27. Also see Carden, 1995: 5.

and research structures are not autonomous or independent, but are to an increasing extent integrated into a larger global research and education system. It is within this context that the role of RRNs has been rapidly increasing and a further increase in the number of them is likely.

Finally, the analysis draws attention to the heavy reliance of many RRNs on donor funds for their activities. Some recent influential studies in the field emphasise that RRNs may be constrained by the typical characteristics of aid agencies, e.g. their tendency to operate in a blueprint rather than a process mode, their relative rigidity and inflexibility of approach, their preference for standard formulas and approaches, and their preoccupation with achieving the main goals by which they are judged (i.e. spending large quantities of money in the short term and therefore only paying serious attention to large-scale activities).

3 RRNs IN INTERNATIONAL DEVELOPMENT CO-OPERATION

In spite of the impressive number of RRNs existing in the world today, little cumulative and systematic research is being produced. There are no widely accepted criteria of evaluation and most studies in the field highlight the unique features of each network. The aim of this chapter is to develop (in the first section) a basic analytical scheme in order to construct a typology (in the second section) of RRNs in international development assistance. The analytical scheme and the typology will then be employed in the next chapter for a systematic analysis and comparison of the Sida-funded RRNs in Africa.

Some methodological considerations should be briefly outlined. Typologisation means the systematic classification of various, often similar, phenomena according to their structural and typical features as opposed to their unique characteristics. A typology is founded on the fact that it is probably impossible to characterise a phenomenon without relating it to other phenomena. It is best understood as an analytical yardstick designed to facilitate comparisons, highlight key features and discover complex relationships with a limited set of variables. The number of variables should be kept relatively small in order to facilitate comparison, at the same time as the variables are so defined that they are able to capture important aspects of the complex reality (in this case the pluralism and diversity of RRNs). A typology is deliberately a one-sided abstraction in order establish a common ground from which to build further knowledge. It occupies a middle ground between the abstract and the concrete; between theory and practice. It should not be confused with social reality or causal explanation, and the insights provided are not, by themselves, sufficient for understanding the individual RRNs being investigated.

A problem closely related to the task at hand concerns the difficulties for a single analyst to develop a sufficiently broad and deep knowledge of networks for the construction of a relevant typology; a task which ultimately requires comprehensive knowledge and information of research networks from all over the world. The limitations of the study should thus be obvious. Having said this, a great variety of sources of inspiration have been used for developing the analytical scheme and arriving at the four "ideal types" of RRN, for instance, stimulating input and advice from Stefan Molund, Sida, and Jerker Carlsson, Andante; studies on organisation and institutions (including organisation typologies)²³; evaluations and reviews of RRNs²⁴; various official documents, policy strategies and information from both individual donors and research organisations²⁵; and finally handbooks, directories and registers.²⁶

3.1 An analytical scheme for understanding RRNs

As discussed in the previous chapter, formal networks are to some extent always "organised", minimally in order to enable a working relationship with its financiers. It is therefore fruitful to build on the minimum definition of an organisation set out in section 2.2, centring on three broad variables: (i) aims and activities; (ii) membership; and (iii) a formal, organised administrative structure.

²³ Archer, 1992; Jacobson, 1984.

²⁴ Some important studies include: Carden, 1995; Carlsson and Wohlgemuth, 1996; de Vylder and Hjort af Ornäs, 1991, Fine, 1997; Lundgren et al, 1994; Moore et al, 1995; Tostensen et al, 1998; Qualman and Bolger 1996.

²⁵ EU 1996; OECD, 1995; Sida, 1998; SAREC, 1995.

²⁶Africa South of the Sahara Yearbook, African International Organisation Directory 1984/85; Directory of Development Research and Training Institutes in Africa, 1992; Register of Development Research Projects in Africa, 1992; SAREC, 1995; Söderbaum, 1996.

3.1.1 Aims and activities

This variable is very broad and covers a variety of different aspects. Ideally "aims" and "activities" should be distinguished from one another: the aims show what the networks are meant to do, while the activities reveal what they actually do. In practice however the two are difficult to separate. At this stage it seems more important to focus on behaviour, and the functions fulfilled by the network rather than its stated objectives.

A fundamental purpose of a RRN is, one way or another, to support and promote the carrying out of research and research production (which can be done within a great variety of organisational structures). Research production should be analytically distinguished from research networking, i.e. the linking of researchers based in various countries (and places) in order to enhance research cooperation, communication, and the dissemination, construction and sharing of knowledge. Normally, networking seeks to promote better research production, so there are of course overlaps and synergy effects between the two. However, networking does not refer to the production of research *per se*, but draws attention to social co-operation and the communicative aspects, for instance formal and informal communication and dialogue through various means, conferences, seminars, meetings and workshops.

It should be clear from the above that a typical characteristic of RRNs and their multifunctionality is that they simultaneously combine various objectives and strategies. In addition to research production and networking, a RRN may be actively engaged in the publication of research results, through journals, books and working papers etc. Sometimes it is also a documentation centre and seeks to provide information and library facilities. Many RRNs provide research or training grants or scholarships/fellowships, either for visiting their own premises or creating opportunities to conduct research at the researcher's home university or institute. This can be closely related to the objective of education and training.

It is possible to distinguish between at least six main functions of RRNs²⁷:

- 1. Research production e.g. the production of research results and new knowledge.
- 2. Networking e.g. efforts with the purpose to establish, maintain, support and facilitate research co-operation, contacts, and a viable research community, for instance through communicative networks, seminars, conferences, workshops, dissemination and sharing of knowledge, research co-ordination and information technology.
- 3. Publication e.g. the production of books, research reports, magazines, journals, in-house publications but also the support or the funding of external publications.
- 4. Information, documentation and library facilities e.g. the provision of documentation, information, newsletters and library services.
- 5. Research grants and scholarship e.g. the provision of funding, small or large research grants or salary, to junior or senior researchers and analysts, in order to enable research at the home institution or at a particular research network/organisation; fellowships or visiting researcher scholarship; rewards and grants as encouragement etc.

²⁷ The RRN may also provide consultancy services or the charging of fees for expert advise and recommendations as part of its profile, which can be motivated by a better utilisation of the expertise existing within its domains, employment purposes or simply covering overall running costs.

6. Training and education – e.g. the provision of education and training courses at the centre, at other research departments or in other forms, for instance *ad hoc* or through workshops and meetings; co-ordination of training and education; supervision and tutoring of (junior) researchers.

When moving beyond particular functions, it is also relevant to know to what extent the network is explicitly policy-oriented and seeks to have impact on the formulation of policies. Some networks focus exclusively on academic basic research and are not concerned with applied research and influencing policy- and decision-makers. The question is whether this is an explicit motive, and its relative importance (it might sometimes even be seen as a particular function of the research network).

Another distinguishing feature of a RRN is whether the participants are drawn from one single academic discipline or if it is a multi/interdisciplinary constellation. A frequently used variable for typologising organisations is whether the co-operation is general or specific in nature.²⁸ One "general" objective, for instance, is to try to enhance the social sciences or the discipline of economics in Africa, while a "specific" objective is to study the gender effects arising from increased urbanisation. Needless to say, the dividing line between the two is blurred, and several research networks involve both.²⁹

It is also interesting to learn to what extent participants co-operate on joint research programmes or are focused on their individual research tasks. Does the research network result in joint research products or do the participants work on their own, individual research projects and perhaps only read and comment the work of one another? This is one of a number of indicators which can be used to account for the cohesion and level of interdependence amongst participants within the network.

The discussion of focus leads to the following variables:

- 1a. Functions of the research network;
- 1b. Degree of policy-orientation;
- 1c. Monodisciplinary or multidisciplinary focus;
- 1d. Co-operation on general or specific issues;
- 1e. Co-operation on joint or individual research tasks.

3.1.2 Membership

A basic distinction to be made is whether the network is composed of individual researchers or the representatives of organisations and associations. If individuals are the members the network may, for instance, seek to support their individual research projects or link them together for enhancing the dissemination of knowledge and information around their research interests as such, whereas if organisations, national institutions or university faculties are the members, the network will normally serve the interests of these organisations, often implying a certain degree of organisational or institutional development. If membership is institutional, it is useful to know whether it is composed of national chapters, university faculties and research institutes, governments or non-governmental organisations.

-6 Archer, 1992

²⁸ Archer, 1992.

²⁹ To a large extent the distinction between general and specific focus resembles the one sometimes made between broad and thematic focus. However, in order to get the broadest possible understanding it is here suggested to combine the former (general vs. specific) with the distinction between mono vs. multidisciplinary focus.

Whatever the type of membership, it is relevant to know to what extent policy-makers and decision-makers are involved as members. This is (often) closely related to the extent to which the research network is policy-oriented (i.e. variable 1b).

Another issue concerns the geographical coverage of the membership constituency. In line with the discussion in the previous chapter, what is "regional" must be understood in an eclectic manner. It is fruitful to distinguish between the regional in the sense of Southern Africa or West Africa, and regional in the sense of continental Africa. It is also interesting to know whether there is a dimension of North-South co-operation, which is sometimes the case due to the fact that RRNs to a large extent are funded by the international donor community.

The number of members is also a fruitful variable, since normally a network with a small membership tends to work differently from one with a more comprehensive membership base.

One important question concerns the importance of the network for its members. The network concept suggests measures to assess the importance of the links, relationships and communication between the participants. This is particularly important in deeper empirical studies, but it is difficult to assess in this study without detailed knowledge and primary material concerning the participating researchers and the network in question. One concrete indicator which can be used here is the extent to which the researcher is financed by (grants provided by) the research network. The question is thus whether the network provides salary or merely a small reward or remuneration. It also makes sense to distinguish between large and small research grants.

A closely related variable concerns the involvement of the members in the activities of the RRN. It is relevant to determine how much of each member's total time and energy is spent on participating in the research network. Needless to say, this aspect is also problematic to measure without primary sources. One concrete indicator is to assess how often participants meet. It makes quite a difference whether participants meet every three years at large conferences, or annually, or whether they meet more frequently at workshops and seminars and maintain close working relationships through personal contact and communication.

Summing up, the following membership variables will be used in the analytical scheme:

- 2a. Type of members;
- 2b. Researchers or policy-makers as members;
- 2c. Extent and geographical coverage of membership;
- 2d. Number of members;
- 2e. Importance of network for members;
- 2f. Involvement of members in activities.

3.1.3 Institutional structure and external relationships

It is common to distinguish between various types of institutional and organisational structures in the construction of typologies. A RRN can take a variety of (sometimes overlapping) forms. It can ranged with regard to what degree it is hierarchical vs. decentralised/horizontally-structured (i.e. "organisation" vs. "network"). It may be a loosely structured association, an umbrella organisation, or a decentralised network without even a legal identity of its own, forming part of a larger organisational structure. Another attribute which enhances understanding is the distinction between non-governmental organisation (NGO) or an intergovernmental organisation (IGO).

Moving on to more specific aspects, it is important to try to assess the strength of membership influence within the network. Are the participants able to influence decision-making and the activities carried out under its auspices? Excessive hierarchy or weak opportunities for membership influence may reduce the dynamism of the RRN.

Another issue concerns the (external) autonomy and independence of the research network in question, particularly in its external relationship with national governments and donors. It is important to determine whether the RRN is allowed to/capable of pursuing its own, independent research agenda and research policy, or whether its functional profile is dictated by the governments and financiers. Perhaps the network in question is best understood as an instrument or integral part of a particular nation's research system? Or is it, for whatever reason, trying to break away from that system? Although the two overlap, it seems fruitful to distinguish between the degree of independent decision-making (or rather, autonomy), and financial dependence. One possible indicator of the former is whether the network has its own legal identity, and what is stated in its constitution and guiding principles. Concerning the latter, a concern has been expressed in the debate that many regional research networks are donor-driven (or even donor-creations) and that their particular organisational structure may perhaps serve donor-needs rather than local needs. This is of course a complex as well as a challenging task to investigate. Given the limitations of this study, the prime concern is to determine what is the degree of donor funding and what other forms of funds cover the costs. Perhaps the network is covering its own expenses, for instance by way of membership fees and consultancy services.

To sum up:

- 3a. Type of organisation/network;
- 3b. Strength of membership influence;
- 3c. Autonomy and independent decision-making towards external actors;
- 3d. Degree of donor dependence.

3.1.4 Summary

This section summarises the analytical scheme. The tables state each of the variables and what value/indicator will be used for measurement.

Table 1. Aims and activities

Variable Name of network	1a. Functions of the research network	1b. Degree of policy- orientation	1c. Mono- or multi- disciplinary focus	1d. Co-operation on general or specific issues	1e. Co-operation on joint or individual tasks
Value/ indicator	1. production 2. networking 3. publication 4.info, docum & library 5. grants & scholarship 6. training & education		mono- disciplinary multi- disciplinary	general specific both	joint individual both

Table 2: Membership

Variable	2a.	2b.	2c.	2d.	2e.	2f.
	Type of	Are	Extent and	Number of	Importance of	Involvement
	members	researchers	geographical	members	network for	of members in
Name of		or policy-	coverage of		members	activities
network		makers the	membership			
		main				
		members?				
	individuals	researchers	regional	approximate	high	high
Value/	organisations/	policy	(southern,	number	middle	middle
indicator	chapters	both	east, west etc.)	(many vs	low	low
	both		African	limited)	(salary; large/	(how often
					small research	participants
					grants)	meet)

Table 3: Institutional structure and external relationships

Variable	3a.	3b.	3c.	3d.
	Type of	Strength of	Autonomy towards	Degree of donor
	organisation	membership	external actors	dependence
Name of network		influence		
	IGO, NGO	high	high	high
Value/indicator	umbrella organ	middle	middle	middle
	network	low	low	low
	association;			(name of main
	organisation			financiers and
				percentage of funds)

The choice of variables is always debatable. Some are clearly more important than others. For instance, the functions of the RRN (variable 1a) are crucial for understanding what actually goes on within it. By the same token, the type of organisation (variable 3a) will have profound implications for how the RRN operates and carry out its functions; an IGO or hierarchical "organisation" will operate quite differently from a loosely co-ordinated research programme or "network". These two variables (i.e. 1a and 3a) are the most crucial components of the analytical scheme, while some of the others are best understood as subvariables in order to reveal a more nuanced picture. For the same reason, some subvariables dwell around similar albeit not identical aspects, e.g. variable 1c and 1d; 1b and 2b; 2f and 3b; and 3c and 3d.

3.2 Four types of RRNs in international development co-operation

In this section the analytical scheme is used in an overview manner in order to assess what are the main types of RRNs in international development co-operation, with main but not sole reference to Africa. The frequency of the various types is also briefly commented upon, although, at this stage in time, this can be no more than qualified "guesstimates". A quick reality check, using the analytical scheme, suggests that there are at least four main types of RRNs in present-day international development co-operation:

- regional research association
- regional research organisation

- regional research centre
- regional research programme and project.30

In this context it must be pointed out that there exist several thousand research networks in the world today. Despite some features in common, they are very different in size; they occur in all fields of activity and across disciplines; they involve individuals and organisations as members, researchers as well as policy-makers; they are both formal and informal, organised and loosely-structured; and they may arise spontaneously or be policy-guided and donor-driven and so forth. If nothing else, the discussion in the first chapter and the analytical scheme defined above will hopefully serve to illustrate the great pluralism and diversity of RRNs. The four-type categorisation below is intended to instil some order in this complex and rather diverse picture, and to serve as an intermediate step and ordering instrument for the more detailed analysis of Sida-funded RRNs in Africa in the next chapter. Consequently, it goes without saying that this four-type-categorisation is open to discussion. Anomalies and ambiguities that run counter to the argument put forward do exist. There are, of course, alternative ways of capturing the multitude of RRNs in present-day international development co-operation. The dividing line between the different types is blurred, implying *inter alia* that various subtypes are detectable within each category.

3.2.1 Regional research association

A regional research association always has a certain degree of formality and "organisation", often in the form of a non-governmental organisation (NGO). The association label implies that it is normally more "assembly-like", decentralised and "loosely defined" than the typical hierarchical and bureaucratic "organisation", and it may very well be an umbrella organisation or a series of organisations. This can often be explained by the fact that its purpose is not so much a matter of comprehensive policy implementation or research production but more one of linking people together for networking purposes, i.e. often to provide a meeting and networking arena for its members. Sometimes, the "professional association" label may be an alternative term (i.e. since it is not always focused on research production per se). Often, but not always, a regional research association is extroverted in character, and inclusive in terms of membership. A large and growing membership seldom implies an obstacle to the functioning of the association, but rather the contrary: it often improves its dynamism and vitality. The aims and activities tend to be fewer and perhaps more general compared to the other types of research networks discussed here. Examples include the Latin American Association of Political Scientists (LAAPS) and the Association of African Historians (AAH) and, as included below, the African Association of Universities (AAU). Usually, a regional research association does not constitute an alternative or challenge to the national education and research systems. On the contrary, its vitality is to a large extent a reflection of viable and "strong" participating members, be they individual researchers or national chapters and organisations. Although there exist a great number of various regional research associations in many fields, it seems that many fail to attract donor funding. The ones that are able to do so are then often capable of broadening their functions and objectives beyond the objective to link participants in an association, and also strive for other objectives, such as research production and even provision of education. (There are many regional research associations, but relatively few seem to be able to attract donor funds. When they do, they sometimes turn into regional research organisations.)

³⁰ As already indicated, the functions and type of organisation, i.e. variables 1a and 3a in the analytical scheme defined above, have been particularly important for arriving at these four main types. Other variables are, of course, important for understanding the dynamics of RRNs, but they do not of themselves "create" the types.

3.2.2 Regional research organisation

As suggested by its label, a regional research organisation is typically formalised and "organised". Sometimes a regional research organisation can be hard to distinguish from a regional research association, as well as from what is defined below as a regional research centre. However, a regional research organisation derives its distinctiveness between these two types, thus occupying a middle ground between the more decentralised and often extroverted regional research association, on the one hand, and the more hierarchical, "focused", and often more introverted and result-oriented regional research centre, on the other. Often it serves a great variety of functions simultaneously, such as research production, networking, dissemination of information, education etc., and it is therefore not always meaningful to try to define what particular activity is the most important. In fact, this particular type of RRN seems to derive much of its justification from its ability to simultaneously produce research results, research capacity building, research networking, education and training and the dissemination of information. A regional research organisation often has several research programmes ongoing at the same time in several different disciplines or interdisciplinary programmes. Examples include the Organisation for Social Science Research in Eastern and Southern Africa (OSSREA) and the Centre de Estudios Regionales Andinos Bartolomé de las Casas (CBC). Although a regional research organisation is open in terms of membership, it often demands more involvement and input from its members compared to a regional research association. Normally it seeks to build on and strengthen the individual, institutional, national and of course regional research capacities, and quite often it even contributes significantly to international research. There seems to be a quite stable number of regional research organisations in the world today as here defined, and their number and size in the South seems to be closely related to the willingness of the donor community to fund their activities.

3.2.3 Regional research centre

As already indicated above, this type of RRN refers to a centre which is designed and organised mainly in order to produce research and research results, although it also serves a host of other closely related functions, such as publications, dissemination of information, education as well as to some extent networking. It contains its own formalised and autonomous organisational structure, either as a NGO, IGO or as an integral part of another body. Normally a regional research centre holds a significant number of staff and full-time researchers, and it is often large-scale and wellfinanced compared to the three other types of RRNs. Often it focuses on specific research tasks and applied research in order to produce significant research results, which may have an important impact on development and sector strategies and policies in a large number of countries and sometimes even globally. They seek to integrate and promote the national knowledge systems and university departments, but they are often so large that they can be understood as rather autonomous research systems in their own right; sometimes challenging, "crowding out" or being alternatives to the national knowledge systems and genuine national research capacity. A regional research centre is normally just as international as regional in nature, i.e. it is often labelled international rather than regional research centre. There is a limited number of large-scale international and regional research centres in the world today. Some of the most well-know examples are the 18 large international research centres in Asia, Latin America and Africa integrated within the structure of the Consultative Group of International Agricultural Research (CGIAR).

3.2.4 Regional research programme and project

A regional research programme and project is a quite different type of RRN compared to the other three ideal types discussed above. It is decentralised and horizontally structured, with a minimum degree of formality, and seldom contains an autonomous institutional structure beyond the fact that one or a few participants are responsible for co-ordination and the funds involved.

Often the project or programme forms an integral part of, or is co-ordinated by a particular university department or another regional research association, organisation or centre, such as those referred to above. In fact, organising and co-ordinating regional research programmes and projects is an important activity for several regional research organisations and research centres.

A regional research programme and project is often multifunctional but it is often focused, specialised and specific in its operations and activities. Normally its aims are clearly defined and its purpose is primarily to build research capacities (often including an element of research training), produce new research results and enhance close working relationships, research co-operation, communication and contact (i.e. networking) between the limited number of (often carefully selected) participating researchers. It seems to be difficult to uphold the (needed) density of relations between the participants within the project and programme with too a broad and large membership.

The research projects and programmes involved in international development co-operation are normally not purely regional, but often involve a North-South dimension by the inclusion of one or a few "nodes" from the donor country. Furthermore, its functioning is often dependent on the individual members having a solid home base (university or institute) from which to operate, i.e. "weak" participants limit the dynamism and viability of the project in question. Often these regional research projects and programmes build on or are closely connected to or off-shoots of the bilateral research capacity building programmes existing at the national and organisational level. Therefore, it is possible that a regional research project and programme can contribute to individual, institutional as well as national, regional and international research capacities. Another feature worth pointing out is that, within the social sciences at least, the costs of each programme and project is not particularly high compared to the amount of funds delivered to regional research centres and research organisations.

It is impossible, at this stage, to assess the number of regional research projects and programmes, although it appears as if they outnumber all the other RRNs mentioned above taken together.

4 ANALYSING SIDA-FUNDED RRNs IN AFRICA

The objective in this chapter is to analyse the Sida-funded RRNs in Africa through the lens of the analytical scheme defined previously.³¹ The analysis is preliminary and does not always do justice to each single RRN. It deserves to be repeated that the main purpose is to categorise and enable comparisons between and within the various types of RRNs, as a background and base line for further theoretical and empirical investigation and evaluation.

The method was defined in the previous chapter, and here the main analytical problem relates to the difficulty of finding fresh, up-to-date and relevant data on the RRNs being investigated. The limitations of the analysis are evident from the mere fact of its being simply a desk study, drawing on secondary sources, and subject to serious time and resource constraints, given the comprehensive task at hand. For example, no opportunities were provided for field work and direct contact with the various networks. A great variety of sources have been consulted, such as donor evaluations and reviews of the particular RRNs; project catalogues, directories, registers and handbooks.³² In this context it can be mentioned that there is relatively decent information available on some, frequently evaluated RRNs, while there is a general lack of relevant data on others, particularly some of the research programmes and projects which have not been evaluated in the past.

A large number of the Sida-funded RRNs in Africa are covered, with primary reference to those within the social sciences. The point of departure has been the inventory compiled by the Sida Department for Evaluation and Internal Audit in 1996 on SAREC's regional programmes in Africa. The bulk of the regional programmes included in this inventory are covered here, but it is not meaningful to consider every single RRN in Africa receiving funding from Sida. The RRNs are grouped in line with the four ideal types elaborated upon above:

1. Regional research associations

African Academy of Science (AAS)

African Association of Political Science (AAPS)

Association of African Universities (AAU)

Union for African Population Studies (UAPS)

2. Regional research organisations

African Economic Research Consortium (AERC)

African Energy Policy Research Network (AFREPREN)

Council for the Development of Social Science Research in Africa (CODESRIA)

Organisation for Social Science Research in Eastern and Southern Africa (OSSREA)

Southern African Political Economy Series (SAPES)

³¹ The objective is not to discover to what extent these RRNs correspond to the four ideal types identified in the previous section. Instead the types serve as an categorisation and intermediate step before the more detailed investigation through the lens of the analytical scheme.

³² The Sarec project catalogue 1995 (SAREC, 1995) has proved to be a good, albeit basic data bank. Tostensen et al (1998) is informative and other more specific evaluations which have been consulted, include Chege (1997); Christensen and McCall (1994); de Vylder and Hjort af Ornäs (1991); Hassan (1993); Lundgren et al (1994); Okumu and Salih (1994); Sawyer and Hydén (1993); Sinclair (1995); and Thorbecke (1996). Other useful sources are the Directory of Development Research and Training Institutes in Africa; Register of Development Research Projects in Africa.; and the Handbook of Regional Organisations in Africa (Söderbaum, 1996).

3. Regional research centres

International Centre for Insects Physiology and Ecology (ICIPE)

International Livestock Research Institute (ILRI)

Southern African Centre for Co-operation in Agricultural Research (SACCAR)

West Africa Rice Development Association (WARDA)

4. Regional research projects and programmes

Education of Girls and Women in Africa (EGWA)

Forestry Sciences Capacity Building Project (FSCB)

Gender Research and Urbanisation Planning (GRUP)

Gender, Urbanisation and Environment (GUE)

Marine Science Co-operation Programme (MARINE)

Pastoral Network Information Programme (PNIP)

Regional Research Collaboration in Reproductive Health in Africa (REPH)

Soil and Water Conservation Programme (SWCP)

Urban Origins in Eastern Africa (UOEA)

Women and Law in East Africa (WLEA)

4.1 Regional research associations

Variable Name	la function of network	1b degree of policy- orientat	1c mono or multi- discipl. focus	1d general or specific issues	le joint or individual research	2a type of members	2b research or policy- makers	2c geograph. coverage	2d number of members	2e import of network for members	2f involv. of members in activities	3a type of organisat	3b strength of member influence	3c autonomy towards external actors	3d degree of donor depend
AAS	product network public inform grants education 1 - 6	middle	multi	general (specific program)	joint	individual (closed member- ship)	both	Africa	few (112)	low (middle) (fellowsh program + grants)	low	NGO	middle low	high	high (Rockef. Carnegie)
AAPS	product network grants 1 2 5	low	mono	general (specific projects)	joint	individual	research	Africa	many	low (small grants)	low	NGO	middle	high	n.a.
AAU	product network public inform grants education 1 - 6	high (no acad. research)	multi	general (specific)	joint	institute	policy	Africa	many (148; 65% of Africa)	low (fellowsh + small grants)	middle (low)	NGO	middle	high	middle/ low (memb 1/2 donor1/4 consult.)
UAPS	product network publicat inform grants education 1 - 6	low	mono (multi)	general specific	joint	individual	research	Africa	850	low (small grants)	low	NGO	middle	high	n.a.

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4.2 Regional research organisations

Variable Name	1a function of network	1b degree of policy- orientat	1c mono or multi- discipl. focus	1d general or specific issues	le joint or individual research	2a type of members	2b research or policy- makers	2c geograph. coverage	2d number of members	2e import of network for members	2f involv. of members in activities	3a type of organisat	3b strength of member influence	3c autonomy towards external actors	3d degree of donor depend
AERC	product network publicat inform grants education 1 - 6	middle/ low	mono	general specific	joint individual	individual (open) institute (closed)	research	east southern (open to all Africa)	many 20 univer 110 stud	middle (large and medium grants	middle	NGO donor consort	high/ middle	high	high
AFRE- PREN	product network publicat inform grants education 1 - 6	high	multi	specific	joint	individual	both	east southern	200	middle (large grants)	high middle	NGO	high/ middle	high	high (Sida 90%)
CODES- RIA	product network publicat inform grants education 1 - 6	low	multi	general specific	joint (individ)	both	research	Africa	400-500	low to middle (small grants)	middle low	NGO	middle	high	high Sida/ IRDC 55%
OSSREA	product network publicat inform grants education 1 - 6	middle	multi	general specific	joint	individual	researcher	east southern	800	middle (large grants + fellows)	middle	NGO	middle	high	high (Ford, IRDC, Sida NORAD)
SAPES	product network publicat inform grants education 1 - 6	middle/ low	multi	general	joint	individual	both	southern	many	middle (visiting scholars)	middle	NGO	middle	high	high

4.3 Regional research centres

Variable Name	1a function of network	1b degree of policy- orientat	1c mono or multi- discipl. focus	1d general or specific issues	le joint or individual research	2a type of members	2b research or policy- makers	2c geograph. coverage	2d number of members	2e import of network for members	2f involv. of members in activities	3a type of organisat	3b strength of member influence	3 c autonomy towards external actors	3d degree of donor depend
ICIPE	product network publicat inform education 1 2 3 4 6	high (applied research)	multi	specific	joint	states (closed)	researcher	Africa	many	high (for staff) middle or low (for others)	high (for staff)	NGO (within CGIAR)	n.a.	high	high (CGIAR)
ILRI	product (network) publicat inform grants education 1 (2) 3 4 5 6	high (applied research)	multi	specific	joint (individ)	states (closed)	researcher	Africa (10)	many	high (for staff) middle or low (for others)	high (for staff)	NGO (within CGIAR)	n.a.	high	high (CGIAR)
SACCAR	product publicat inform grants education 1 3 4 5 6	high (applied research)	multi	specific	individual	states (individ. partly open)	researcher	southern (east) (14)	many	high (for staff) middle or low (for others) grants)	high (for staff)	IGO (division of SADC)	n.a.	high	high
WARDA	product (network) publicat inform education 1(2) 3 4 6	high (applied research)	multi	specific	joint	states (closed)	researcher	west (15)	many	high (for staff) middle or low (for others)	high (for staff)	IGO	n.a.	high	high (CGIAR)

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4.4 Regional research programmes and projects

Variable Name	la function of network	1b degree of policy- orientat	1c mono or multi- discipl. focus	1d general or specific issues	le joint or individual research	2a type of members	2b research or policy- makers	2c geograph. coverage	2 d number of members	2e import of network for members	2f involv. of members in activities	3a type of organisat	3b strength of member influence	3c autonomy towards external actors	3d degree of donor depend
EGWA	product network grants education 1 2 5 6	high (applied research)	mono	specific	joint individ	individual	researcher	Africa (Anglo- phone)	few	middle to low (grants)	high	co-ord by AAS	high	high	high
FSCB	product grants education 1 5 6	high	multi	specific	individual	individual	researcher	Africa	few	middle to low (grants)	middle	co-ord by AAS	high	high	high
GRUP	product network publicat grants education 1 2 3 5 6	middle (low)	multi	specific	joint individ	individual institute	researcher	southern	few	low (small grants)	middle	network co-ord by two Swed researchers + Uni of Lesotho	high	high	high
GUE	product network grants 1 2 5	high (applied research)	multi	specific	n.a.	individual	researcher	east	few	low (small grants)	middle	network co-ord by Mazing Instit	high	high	high
MARINE	product network publicat education 1 2 3 6	high	multi	general specific	joint individual	individual	both	east	few	middle	middle	co-ord by Swedish node	high	high	high (Sida)
PNIP	product network education 1 2 6	high	multi	specific (general)	n.a.	individual	both	southern	few	low	middle	co-ord by Swed node	high	high	high
REPH	network education 2 6	high (applied research)	multi (mono)	specific	n.a.	individual institute	n.a.	southern	few	low	middle	co-ord by Swed node	high	high	high
SWCP	product grants education 1 5 6	middle	multi	specific	joint	individual	both	east southern	few	middle to low grants	middle	co-ord by Uni of Kenya	high	high	high Sida
UOEA	product network publicat education 1 2 3 6	low	multi	specific	joint	individual	research	east southern	few	middle	middle	network co-ord by Swed node	high	high	high
WLEA	product network grants education 1 2 5 6	high	multi	specific	joint	individual	both	east	few	middle to low (grants)	middle	network plans for NGO	high	high	high

4.5 Summary

Several of the points raised in the description of the four ideal types of RRNs, in section 3.2, are also relevant to an understanding of some of the main features of the particular Sida-funded RRNs in Africa analysed in this chapter. Moving beyond these ideal types and into a deeper interpretation, perhaps the most typical common feature of RRNs under scrutiny is that they are all "multifunctional" and have a number of different *functions* which they strive to achieve simultaneously. Nearly all the RRNs investigated focus on research production, research networking and education and training in various forms. Most of them also give grants and awards, support or carry out publication and disseminate information. In many cases it is this combination of various closely related functions that explains their dynamism and particular strengths. For instance, every one of the regional research organisations focuses on all the functions included in the analysis. But there are also differences of emphasis. Regional research associations and regional research programmes and projects seem to focus more actively on networking than regional research centres, which are heavily focused on the production of research and sometimes less explicitly on networking (beyond their own staff). Furthermore, there are also some preliminary indications that some RRNs have problems carrying out such a multitude of tasks, thus spreading themselves too much.

Many RRNs seek to have influence on *policy-formulation* in one way or the other. But this also varies considerably within the more distinct types and no pattern can be detected. Furthermore, in spite of the sometimes explicit policy-formulation objectives, *policy-makers* themselves seem to be less common and influential participants, perhaps with the most notable exception of regional research programmes and projects.

The bulk of the RRNs are *multi- or interdisciplinary*. There is clear tendency for regional research associations and regional research organisations, on the one hand, to have a more *general* focus than regional research centres and regional research programmes and projects, which, on the other hand, pay more attention to *specific* issues.

As should be clear from the four-type categorisation, the most obvious difference between various types of RRNs is one of institutional structure. It is enlightening to use the conceptual continuum mentioned in section 2.2. above, ranging from formal, hierarchical, organisation structure, at one end, to and informal, decentralised network structure, at the other. According to this yardstick, the regional research centres are the most hierarchical and bureaucratic structures, followed, in the order given, by regional research organisations, regional research associations and, finally, the most informal, and decentralised type of RRNs, the regional research programmes and projects. That is, the regional research centres are rather typical "organisations", while the research programmes and projects are what in the debate is often referred to as loosely structured and open "networks". Regional research organisations can perhaps be understood as "network organisations". Regional research associations are more decentralised and "flat", and are thus more "network-like" compared with research organisations and research centres, but less so than regional research programmes and projects. This order - regional research centre; organisation; association; programme and project - also seems to mirror, from large to small, the comprehensiveness, size and budget of the networks. The regional research centres are the largest and most costly units, with the largest staff and budget, followed by the regional research organisations, regional research associations and then, finally, the regional research programmes and projects, which are rather small, limited and much less costly. As already mentioned, the latter are often integrated within the structures of one or other of the three other types of RRNs.

Not surprisingly, the "region" serves as a motivation for research co-operation and as a basis for bringing the members together in all RRNs, albeit in different ways, since the "regional" contains many different meanings. Furthermore, the RRNs may simultaneously build on "complementary research co-operation" (i.e. North-South, or more correctly, North-South-South co-operation). The research centres are often international by nature, while the research programmes and projects are mainly regional but often involve one or several nodes from the North, particularly the donor country (and the latter are often tied to bilateral research co-operation programmes).

Although more data are clearly needed, it is interesting that most RRNs apparently enjoy a relatively high degree of autonomy in relation to external actors, such as national governments and the donors. On the other hand, more or less all the RRNs are heavily dependent on foreign aid for their activities, and without aid there would be far fewer RRNs in existence than today and they would most likely carry out a much more limited set of activities.

5 CONCLUSION: TOWARDS A BETTER UNDERSTANDING OF RRNs

The overall aim of this desk study is to contribute to a better understanding of RRNs, with special emphasis on the Sida-funded ones in Africa. It starts off with an attempt to address some of the conceptual ambiguities and inconsistencies in the field. The study reveals the pluralism and multi-dimensionality of the network concept. It draws attention to the fact that networks bring people together and are crucial for social communication. As such they are vehicles for sustaining voluntary co-operation and creating dynamic communities and societies. The network concept should be analytically distinguished from the concept of organisation (bureaucracy and hierarchy). Both simultaneously contribute to an understanding of the really existing RRNs (thus illustrating the overlapping nature of the two concepts when it comes to RRNs).

Education and research networks have existed for a long time. There is reason to believe that RRNs and international networking will become increasingly important in a globalising world, hand in hand with the restructuring of the nation-state and the nation-building concept. RRNs are certainly no panacea by themselves, but should not be reduced to simple coping mechanisms in cases where national systems for education and research are weak or struggling. Some recent studies in the field argue convincingly that RRNs must be integrated, together with local and national-level operations and activities, into a holistic, systems-oriented approach to research capacity building.

International development assistance to RRNs has increased during the last decade(s). Some RRNs are donor creations and to a large degree they are donor-driven. Arguments have been put forward that the way aid agencies operate can constrain the dynamism of RRNs and networking activities.

The third chapter develops a basic framework for analysing and classifying RRNs in international development co-operation, based on three main variables: (i) aims and activities; (ii) membership and (iii) institutional structure and external relationships to governments and donors, which in turn could be divided into a number of more detailed subvariables. This analytical scheme is then used in the most general sense in order to assess what types are the most frequent in present-day international development co-operation, particularly in Africa. Four main ideal types of research networks in international development co-operation are discovered and described: (i) research associations; (ii) research organisations; (iii) research centres and (iv) research programmes and projects.

In the fourth chapter, the analytical scheme is employed for a more detailed analysis of a large number of Sida-funded RRNs in Africa. The four ideal types constitute an ordering instrument from which to begin the more detailed investigation through the lens of the analytical scheme. Some notable general similarities between various types of RRNs in Africa were discovered, for instance that all RRNs, regardless of type, are multifunctional; focus on research production and perform various forms of networking activities; and often carry out education and training. Many RRNs are multidisciplinary. The differences between various networks should also be taken into consideration, particularly the important dividing line between various types of institutional structures. According to this yardstick, the regional research centres are the most hierarchical and bureaucratic structures, followed in order by regional research organisations, regional research associations, and finally the most informal, and decentralised type of RRNs, the regional research programmes and projects. Regional research organisations can perhaps be understood as "network organisations". Regional research associations are more decentralised and "flat", and are thus more "network-like" compared with research organisations and research centres, but still less so than

regional research programmes and projects. This order – regional research centre; organisation; association; programme and project – also seems to picture, from large to small, the comprehensiveness, size and budget of the networks.

The study reveals the great pluralism of RRNs and networking strategies. Future research and evaluations in the field should recognise that we have limited general knowledge of the dynamics, effectiveness and viability of networks and networking. Although much can be learnt from previous research and evaluations, a recent study by Tostensen and colleagues reflects the failure to build cumulative and systematic knowledge in the field. Without denying that the study has a number of strong points – it reviews evaluations of twelve regional and international research networks in a rather comprehensive manner – the rather unsatisfactory point of departure is that, given the present diversity of RRNs, "it has been difficult to apply a common yardstick when assessing them. Rather, individual treatment of a qualitative nature has been warranted." ³³

Good evaluation as well as good research rests on theory and systematic knowledge. To this end, comparison constitutes one of the most powerful analytical instruments available to science and systematic knowledge. As Swanson points out: "Thinking without comparison is unthinkable. And, in the absence of comparison, so is all scientific thought and scientific research."³⁴ The argument put forward here is simply that there is a pressing need for comparisons between and within various types of research networks as well as in time and place. It is hoped that this desk study provides some input for meeting that challenge.

A host of interesting questions and hypotheses can be generated from this desk study. One obvious concern relates to whether a particular type of RRN is more efficient than another at performing a particular activity. Although different types of networks rely on different strategies, it is unlikely that all strategies are equally effective. A quite natural starting point is to try to assess whether a particular type of RRN, for instance a regional research organisation, is better designed and more efficient at networking and facilitating social communication compared to a different type, such as a more informal and loosely structured regional research programme and project. The comparison should also be made with regard to other functions, especially research production. Considering the fact that RRNs perform a multitude of functions, it can be hypothetised that some types are spreading themselves too much and should tighten up their operations and concentrate on main activities. Furthermore, considering the gigantic size and budget of research centres, it is worthwhile trying to assess whether these are cost-efficient compared to smaller and dramatically less costly structures, such as a regional research programme. The questions are many but the answers remain few. Comparisons of these and similar matters are of course also called for within and not only between the more distinct types of RRNs.

We need also to place the RRNs within the overall context of research capacity building. It is important to recognise that research capacity building can be enhanced at various levels, i.e. individual, institutional, national, regional and international research capacities.³⁵ Many important research and evaluation questions unfold as one starts to think in these terms and with regard to the need for a holistic approach to research capacity building. The interesting as well as problematic

³³ Tostensen et al 1998: 11.

³⁴ Quoted in Ragin, 1987: 1.

³⁵ Sida, 1998: 36-37. It is difficult to dispute that the different levels/instruments are unsatisfactorily conceptualised as well as theorised, which has had negative implications for the implementation and efficiency of donor policies, including those of Sida. The following studies are worth considering in the process to develop better capacity building policies, Berg, 1993; Carlsson and Wohlgemuth, 1996; Cohen, 1994; Dia, 1996; Fine, 1997; Karakezi, 1991; Qualman and Bolger, 1996.

thing is that there is a general lack of knowledge on how research capacity at one level relates to the other levels. One thing we do know is that there exists no given automaticity between the levels, from the bottom and upwards, whereby individual research capacity building automatically contributes to institution building, and then further to national and then regional and international capacity building. When RRNs are brought into the equation, the intriguing question is to try to uncover what types of research networks (i.e. regional research association; organisation; centre; programme) are promoting synergy effects between the types/levels of research capacity building (i.e. individual, institutional; national; regional; international). Perhaps a particular type of RRNs, for instance a regional research centre, has only limited impact on national research capacity, but instead has a very large effect on individual and regional research capacity? Simularly, it is possible that a regional research organisation enhances national research capacity building whereas the main contribution of a regional research programme and project is to individual and regional research capacity.

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ABBREVIATIONS

AAH Association of African Historians

AAPS African Association of Political Science

AAS African Academy of Science

AAU Association of African Universities

AERC African Economic Research Consortium
AFREPREN African Energy Policy Research Network

CBC Centre de Estudios Regionales Andinos Bartolomé de las Casas

CIDA Canadian International Development Agency

CGIAR Consultative Group of International Agricultural Research

CODESRIA Council for the Development of Social Science Research in Africa

EGWA Education of Girls and Women in Africa
FSCB Forestry Sciences Capacity Building Project
GRUP Gender Research and Urbanisation Planning

GUE Gender, Urbanisation and Environment

ICIPE International Centre of Insect Physiology and Ecology

IDRC International Development research Centre

IGO intergovernmental organisation

ILRI International Livestock Research Institute

LAAPS Latin American Association of Political Scientists

MARINE Marine Science Co-operation Programme

NGO Non-governmental organisation

NORAD Norwegian Agency for Development Co-operation

OSSREA Organisation for Social Science Research in Eastern and Southern Africa

PNIP Pastoral Network Information Programme

REPH Regional Research Collaboration in Reproductive Health in Africa

RRN Regional research network

SACCAR Southern African Centre for Co-operation in Agricultural Research

SAPES Southern African Political Economy Series

SAREC Swedish Agency for Research Co-operation with Developing Countries

Sida Swedish International Development Co-operation Agency

SWCP Soil and Water Conservation Programme
UAPS Union for African Population Studies

UOEA Urban Origins in Eastern Africa

WARDA West Africa Rice Development Association

WLEA Women and Law in East Africa

Terms of reference for a background study for an evaluation of support to African research through regional research networks

1. Purpose and background

The purpose of this study is to provide UTV with a background analysis for a planned evaluation of Sida/SAREC's support to regional research networks in Africa. The study is to be used in the working out of a model for the intended evaluation. The evaluation is concerned with the effects of regional research networks on research and research development in the countries concerned. A preliminary model for evaluation was presented in a previous study of the contents of existing SAREC evaluations support to networks in Africa. This model is essentially based on a combined analysis of the contributions made by the networks to institutional and individual capacity building.

In the discussion about the previous study, it was emphasised that the expression 'regional research networks' covers quite a variety of phenomena and that an analysis of the diversity is a necessary step on the way to the evaluation planned. It was also stressed that the evaluation should look at the research networks in a specifically regional perspective, and not only as instruments of national capacity building. Yet another proposal was that the evaluation should be designed so as to contribute towards the build up by the networks of their own systems for management by results.

2. The assignment

The present assignment has the following main components:

- 1. A general review of literature on the concepts of research networks and support to research networks in developing and industrialised countries.
- 2. An inventory and analysis of types of research network in international development co-operation, accompanied by an assessment of the frequency with which networks of different kinds figure in African development co-operation.
- 3. Preliminary analysis of Sida-funded networks in terms of the typology devised, and a review of existing information concerning these networks' systems of result monitoring and management.

These sub-assignments are described at greater length below (2.1-2.3).

2.1 The concept of research networks

What different meanings do we attach to the term 'research network'? What distinguishes a research network from other forms of research co-operation such as seminars, conferences, individual contacts and research projects? What are the problems which researchers, research administrators and other actors in the research community hope to solve by creating research networks at national, regional and global levels? Special attention should be paid to the question of the expected and actual benefits of *regional* research networks.

¹ Carlsson, Jerker, and Lennart Wolgemuth. Capacity Building and Networking. A meta-evaluation of African regional research networks. Sida Evaluation 96/45. Sida, 1996.

A discussion of research networks has to be based on an analysis of the conditions and requirements of modern knowledge production. The growth of interest in networks as organisational frameworks for scientific research can be viewed as a result of the globalisation and increasing specialisation of research. There are also those who in networking see mainly a tool for the interdisciplinary management of complex research tasks.

One interesting question is whether the motives for establishing research networks are the exactly same in the developing countries as in the industrialised countries. To what extent have networks in the developing countries come about through local initiatives and to what extent are they the result donor initiatives? Is the network regarded as an adjunct to the university or rather as an alternative to that institution? To what extent is it a means for donors to circumvent slow-moving university bureaucracies and achieve results corresponding to their own objectives and preferences?

2.2 Types of research network

Donors support a whole variety of research networks. For the consultant, one important task is to attempt, with the aid of a few well-chosen variables, to instil order into this diversity of 'networks'. Possible variables include the following:

- 1. Purpose. Some networks are narrowly concerned with research, others have other purposes as well; some are intended for the production of particular research findings or for dealing with a definite research assignment, others devote themselves to more long-term building of 'research capacity', some focus on a narrowly defined research field, others have wider aims, and so on.
 - The formal purposes of the network have to be distinguished from individual researchers' motives for taking part in the activity and also from the network's actual functions and effects. It cannot be taken for granted that a network operates in accordance with its official purposes. Purpose, all the same, is a basic variable.
 - What is the 'value added' to research and national development in the countries concerned which, according to the prime movers, justifies the commitment of resources to the network? This is one of the prime issues.
- 2. Size. What is the membership strength of the network? How many of the members are researchers?
- 3. Geographical composition. How wide is the network's geographical coverage?
 - One essential question is to what extent, if at all, the network is a form of North/South cooperation and to what extent it exists to facilitate research co-operation between developing countries. Sida-funded networks in Africa comprise both networks including researchers from industrialised countries - Sweden among them - and networks whose members are exclusively Africans.
- 4. *Institutionalisation*. What degree of formalisation characterises the network? Does the network have a legal identity of its own? How is membership defined? Is the network an association of research institutions, individual researchers or both? Has the network been formed to solve a limited problem or is it a more permanent structure? Is it represented in research policy-making bodies?
 - Several of the African 'networks' supported by Sida/SAREC are NGOs in the research sector which use development co-operation funding to create and co-ordinate networks but also engage in education and other things. It can presumably be more correct to describe these organisations as 'network organisations' or 'networking organisations' than as 'networks'. One could also speak of them as 'networks of networks'. This not exclusively terminological question should be sorted out in the study.

- 5. *Management and decision-making*. Is there a governing body and how often does it meet? Is the governing body supported by an executive function and various advisory committees? How many people are involved in these different bodies? What are the established forms of member participation?
 - One question which ought to be discussed is how and to what extent network organisations which are separate from the universities and other national research institutions issue an independent research policy. Do these NGOs have a research agenda of their own? To what extent are they *de facto* subordinated to the donor organisations, the universities, the researchers taking part and other interests affected?
- 6. Administration. Is the network administered by a special secretariat, within the framework of an existing university organisation, or is the administration based on more voluntary contributions?
- 7. *Academic affiliation*. Are the researchers taking part in the activities of the network recruited from one and the same academic discipline or is the network a multi-disciplinary constellation?
- 8. Functional profile. Is the network entirely research-oriented, or does it also deal with other activities, such as education, opinion formation, public information and so on? How are time and resources allocated between different activities? Is research accommodated within a small or a large research field? Is there are uniform and unified concept for the research activity?
 - One question to which attention ought to be paid under this or some other heading is to what extent, if at all, the network focuses on questions of *regional importance*.²
- 9. Forms of co-operation and communication. How often and for what purposes do the members of the network meet? To what extent is the interchange of information based on modern information technology? How is one researcher's input integrated with the other's? Do people co-operate on common research tasks or do they devote themselves more to an interchange of experience on parallel projects? Do they co-operate on the planning of new projects? Does work within the network result in joint research products and publications?
- 10. *Finance.* How are the activities financed? Do a small number of international donors predominate? Is some form of support received from national governments? Does the network have its own sources of income consulting activities, for example?
- 11. *Members' dependence on the network*. How important is network membership to the individual researcher? Is membership a full-time commitment? To what extent is the member's research activity financed through the network? What is the cost of membership to the individual researcher? Is it possible to distinguish a hard core of members who are more dependent on the activities of the network than others?
- 12. *Relations to university systems concerned.* Cf. above, concerning institutionalisation, management and decision-making, administration, funding, members' dependence on the network etc.
 - The above list does not claim to be exhaustive or definitive. The variables enumerated ought, however, to be taken into consideration by the contractor. Other variables also figure in literature on research networks. One essential part of the assignment is to compare and synthesise existing analytical models. The consultant must feel free to make a contribution of his own to concept formation.

² A question of regional importance is either a question affecting a region as such or a question common to all the countries in a region. A question can of course be common to the countries in a region without at the same time being a question that concerns the region as such.

The report to Sida is to contain a full list of the literature used. Literature searching can in principle include all literature about research networks which is relevant to the evaluation planned, and thus need not be confined to analyses of African networks. Nor need it be confined to analyses of networks funded by Sida/SAREC. The representativeness of the literature quoted for Africa and for identifying types of network ought, however, to be discussed. There must not be any uncertainty about the empirical foundations of the study.

2.3 Review of Sida-funded research networks

The consultant shall review SAREC's regional programmes in Africa in the terms of the typology devised. This review can very well take as its starting point the inventory compiled by UTV in 1996 of SAREC's regional programmes in Africa. The UTV list, which comprised about 30 programmes, will, however, have to be updated, with assistance from SAREC. The analysis of the individual networks is to be based on evaluation reports and other existing documentation. The result of the review will be used by UTV at a later stage in order, with the consultant's assistance, to prepare a suitable sample of programmes for the evaluation.

The review is also to include existing data about the systems of result monitoring and management by results in use within the reviewed network.

3. Timetable and implementation

Work is to begin on 1st July and to be concluded on 15th November. The total extent of the task will to a great extent depend on the availability of serviceable literature and other documentation, but it is not to take more than eight effective working weeks.

The supportive documentation for the study consists of Sida documents and other published material. The task of identifying and compiling relevant material devolves primarily on the consultant. In this work the consultant can count on a reasonable amount of support from Sida/UTV. A preliminary digest of documentation of SAREC's programmes, compiled by UTV in 1996, also contains references to a wider literature on support to research networks in international development co-operation.

The consultant shall keep UTV informed of the progress of the work. An account of the results of the initial literature research shall be given as soon as possible. It is important that UTV be informed distinctly and in good time of problems which can jeopardise the implementation of the assignment as described here. The assignment can be modified, if there are good reasons for doing so, as work proceeds, but not without UTV's approval.

4. Reporting

The assignment is to be accounted for in a report running to not more than 35 pages (not including summary, bibliography and appendices). The report is to be written in English. It is to be preceded by a short summary (not more than two pages). A separate summary for *Sida Evaluations Newsletter* shall be delivered together with the report; see relevant portions of the instructions for the *Newsletter*, appended.

A draft report is to be submitted to UTV not later than 23rd October 1998. The final report must reach UTV not later than 15th November 1998.

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