



ATPS Phase VI Strategic Plan 2008-2011

**Science and Technology Policy Research Today for
Sustainable Development Tomorrow**

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LIST OF ACRONYMS

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| AAAS | American Association for the Advancement of Science |
| AAS | African Academy of Sciences |
| ACBF | African Capacity Building Foundation |
| ACTS | African Centre for Technology Studies |
| AFDB | African Development Bank |
| ALF | African Leadership Forum |
| ARCT | African Regional Centre for Technology |
| ASCETE | African Centre for Engineering and Technology Education |
| ASEE | African Society for Ecological Economics |
| ATPS | African Technology Policy Studies Network |
| AU | Africa Union |
| AWSTF | African Women in Science & Technology Forum |
| AYFST | African Youth Forum for Science and Technology |
| COMESA | Common Market for Eastern and Southern Africa |
| COSTECH | Commission for Science and Technology |
| CTA | Technical Centre for Agriculture and Rural Development |
| DANIDA | Danish International Development Agency |
| DCPP | Disease Control Priorities Project |
| DFID | Department for International Development |
| DGIS | Dutch Ministry of International Development |
| EATPS | Eastern and Southern Africa Policy Studies Network |
| ECOWAS | Economic Community of West Africa |
| ESCR | Economic, Social and Cultural Rights |
| EU | European Union |
| FINIDA | Finnish International Development Agency |
| FRN | Federal Republic of Nigeria |
| ICSTD | International Centre for Trade and Sustainable Development |
| ICT | Information Communication Technology |
| IDRC | International Development Research Centre |
| IFPRI | International Food Policy Research Institute |
| IPR | Intellectual Property Rights |
| ISAAA | International Service for the Acquisition of Agri-biotech Applications |
| ISEE | International Society for Ecological Economics |
| KNAS | Kenya National Academy of Sciences |
| KNUST | Kwame Nkrumah University of Science and Technology |
| MAXFACTA | Maximizing Facts on HIV/AIDS |
| MDGs | Millennium Development Goals |
| MUBS | Makerere University Business School |
| NABDA | National Biotechnology development Agency |
| NCCs | National Chapter Coordinators |
| NEEDS | National Economic Empowerment and Development Strategies |
| NEPAD | New Partnership for Africa's Development |
| NETWAS | Network for Water and Sanitation |
| NGO | Non Governmental Organization |
| NIS | National Innovation Systems |

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|-------------|--|
| NUBSA | Nairobi University Biochemistry Students Association |
| OPEC | Organization of the Petroleum Exporting Countries |
| Pan-AFSTRAG | Pan African Strategic and Policy Research Group |
| R&D | Research and Development |
| RMRDC | Raw Materials Research and Development Council |
| SADC | Southern African Development Community |
| S&T | Science and Technology |
| SEEDS | State Economic Empowerment and Development Strategies |
| SET-DEV | Science, Ethics and Technological Responsibility in Developing and emerging countries |
| SIDA/SAREC | Swedish International Development Agency/Swedish African Research Cooperation |
| SSA | Sub-Saharan Africa |
| ST&I | Science, Technology and Innovation |
| STP | Science and Technology Policy |
| SWOT | Strengths, Weaknesses, Opportunities and Threats |
| UDS | University for Development Studies |
| UK | United Kingdom |
| UKPOST | UK Parliamentary Office for Science and Technology |
| UNAS | Uganda National Academy of Sciences |
| UNCST | Uganda National Council for Science and technology |
| UNCTAD | United Nations Conference on Trade and Development |
| UNECA | United Nations Economic Commission of Africa |
| UNMDG | United Nations Millennium Development Goals |
| UNU/INTECH | United Nations University Institute for New Technologies |
| UNU-MERIT | United Nations University – Maastricht Economic and Social Research and Training Centre on Innovation Technology |
| USAID | United States Agency for International Development |
| WATPS | West African Technology Policy Studies Network |
| YADSTI | Youth Agency for Development of Science, Technology & Innovation |
| YPARD | Young Professionals' Platform for Agricultural Research for Development |

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FOREWORD


The ATPS Phase VI Strategic Plan is an ambitious and forward looking mission. Through this plan, ATPS has sought to articulate its vision for the continent and its mission to contribute to poverty alleviation through science, technology and innovation (ST&I) policy research and advocacy. The centre piece of the mission is the strong belief that in Africa's current predicament, bridging the knowledge and technological gaps between Africa and the rest of the world is the foundation for economic prosperity, and that prosperity cannot be built on aid but on home grown ST&I knowledge.

The plan builds on the achievements and strengths of the network and critical analyses of the experiences and gaps identified in Phase V, 2004 – 2007. It seeks to address Africa's unique development challenges especially within the context of achieving specific social, economic and environmental development targets by 2015. As in previous plans, ATPS will continue to close the loop through outreach, knowledge brokerage, science communication and policy advocacy.

The Phase VI Plan has taken a participatory approach to strategic goal setting. The strategic priorities and program objectives are, therefore, based on constructive, reflective and insightful participatory dialogue with ATPS National Chapters, ATPS research associates, relevant stakeholders and other international development partners that are representative of ATPS' milieu. The prospects for its success and the expected impacts on the region are matched in enthusiasm by doubts as to its ability to surmount the obvious challenges, particularly with respect to resource requirements.

The ATPS Board hereby approves the overall framework and the resource implications of the plan as contained in this strategic document. However, it recognizes that the operational management of the plan will exploit the flexibility in the program design to confront contingencies as they arise, and hence make the best use of available resource to achieve the mission of the plan and the vision of ATPS – “an Africa where ST&I research and policy is the norm”.

I wish to thank the ATPS Board, ATPS Secretariat staff, National Coordinators, the network membership and our stakeholders for their contributions to the strategic planning process. I would also like to appreciate our donor consortium for helping to fund the activities of the Network since its inception and our institutional and development partners for their technical support. It is our hope that this Strategic Plan will receive your support to achieve its set goals and objectives and the desired ST&I policy outcomes in Africa.



Prof. Norah K. Olembo
Chair, ATPS Board

EXECUTIVE SUMMARY

The Phase VI Strategic Plan provides a framework for guiding the activities of the African Technology Policy Studies Network (ATPS) over the period 2008-2011. In setting the strategic objectives and priorities for Phase VI, ATPS has taken a participatory approach recognizing the importance of the “strategic planning process” for ownership, buy-in and effective program implementation for achieving the desired policy impacts. The strategic priorities and program objectives are therefore based on constructive, reflective and insightful participatory dialogue with ATPS national chapters, ATPS research associates and other international development partners that are representative of ATPS’ milieu. The plan builds on the achievements and strengths of the network and critical analyses of the experiences and gaps identified in Phase V, 2004 – 2007. It seeks to address Africa’s unique development challenges especially within the context of achieving specific social, economic and environmental development targets by 2015. As in previous plans, ATPS will continue to close the loop through outreach, knowledge brokerage and policy advocacy.

Goals and Objectives

The Phase VI Strategic Plan aims to improve the understanding and functioning of science, technology and innovation (ST&I) processes and systems to strengthen the learning capacity, social responses, and governance of ST&I for addressing Africa’s development challenges, with a specific focus on the MDGs. Taking into consideration the achievements of the ATPS Phase V and activities planned for 2008, ATPS Phase VI will pay specific attention to a set of specific strategic goals identified in liaison with the ATPS national chapters and policy stakeholders. These include to:

- 1) Strengthen institutional and individual capacity to carry out and use cutting edge research in inter-related ST&I processes and systems and their implications for achieving the millennium development goals (MDGs) in Africa;
- 2) Facilitate and strengthen regional and international cooperation and partnerships on related ST&I research and policy issues to assist access to research environments and knowledge communities in other continents;
- 3) Support and strengthen the innovative capacity of youth and women to apply ST&I to relevant development policy issues in Africa;
- 4) Strengthen endogenous technical capacities to produce, use and govern sustainable technologies for achieving the MDGs in Africa;
- 5) Facilitate and support knowledge sharing on ST&I amongst key stakeholders for sustainable development in Africa; and
- 6) Promote the integration of ST&I research and policy in African development planning and policy making processes.

Strategic Priorities

These strategic goals generate three thematic programs (1 – 3) and three cross-cutting strategic program (4 – 6) priorities for the new phase. The thematic programs include:

- 1) Research and research capacity building;
- 2) International cooperation and partnership;
- 3) Youth and gender empowerment;
- 4) Training and sensitization;
- 5) Science communication and stakeholder dialogue; and
- 6) Outreach, knowledge brokerage and policy advocacy.

These programs are inter-twined and together with continuous monitoring and evaluation, form the strategic framework for the Phase VI plan.

Resource Requirements

The implementation of Phase VI activities will require a review of the ATPS staffing situation and a strategy for more active support to the national chapters as a way of achieving the principal strategic objectives of the Network during 2008-2011. A recent program and organizational review called for the establishment and funding of the post of an Operations Manager and creating new research positions to beef up the in-house research capacity of the Secretariat. This will allow the Secretariat to cope with the expanding thematic research programs and program coordination activities. During the last two years of Phase V, ATPS has increasingly developed joint collaborative research programs with like minded Institutions in Europe to foster increased knowledge networking and dissemination of its research findings internationally. The capability to respond dynamically to future program priorities or to integrate flexibility is part of the precautions in the Phase VI Strategy. This approach requires constant updating of skills through staff training and development, in addition to any numerical increases in the staff strength.

New initiatives to actively foster student internships and international staff exchange on S&T relevant subjects are also underway. The level of efficiency and participation within and between the national chapters is therefore critical to the coordination and implementation of the Phase VI plan. ATPS will commit a significant amount of resources to strengthen and sustain the existing chapters through institutional and systems support and training. ATPS aims to complete the establishment of offices and program support staff in the existing 23 chapters while continuing to invest on specialized training on research program management and accounting for the national chapter coordinators. ATPS subscribes to the ethics of good governance and is currently diversifying the composition of its Board to reflect the expanded scope of activities under the Phase VI Strategy that has concomitantly expanded the constituency. ATPS will also work towards achieving the International Organization for Standards (ISO 9001: 2000) status during this phase¹.

In terms of financial requirements, ATPS expects a significant increase in the level of financial support from existing donors and an increase in the number

¹ ISO 9001:2000 International Standard specifies requirements for a quality control and management system based on a systematic, process approach and strives to control and improve organizational results.

of donors supporting its programs. The latter expectation is predicated on the recent involvement of ATPS in the EU Framework VI international cooperation action programs, the increasing international collaborating partnerships and the plans to solicit increased support from African governments and other development partners. ATPS also expects the current donors including the Royal Dutch Government, SIDA/SAREC, the Rockefeller Foundation, International Development Research centre (IDRC), and others to continue supporting ATPS activities in the new phase. The projected expenditure shows a marked increase over previous outlays due to the overall increase in program activities and expansion into new program areas. The overall administrative costs are expected to be below 10% of the total resource envelop.

ATPS core funding remains at risk as some donors move towards thematic research program areas. While ATPS will continue to develop fundable thematic research programs, it should be recognized that ATPS activities, such as policy round tables, youth and gender empowerment and other advocacy programs, which are non-thematic may become increasingly difficult to fund. Unlike other knowledge networks, ATPS is not only interested in knowledge generation (i.e. scientific research), it is also interested in knowledge brokerage, policy advocacy, training and capacity building as well as effective dissemination of knowledge to the final users. This is necessary to ensure effective use and mastery of the knowledge generated to foster development in the sub-region. Until more donor commitments in the area of core funding are secured, ATPS will continue to face challenges in implementing these non-thematic program activities, which define its unique niche. In addition to this, long term sustainability risk includes income uncertainties that can arise from donor reprioritizations, and from developments in the global arena that can adversely impact the world economy. Ways and means of addressing these risks have been explored in two detailed SWOT analyses workshops conducted by an independent consultant, Dialogue Matters UK². These efforts will remain of utmost concern to the management and the ATPS Board during Phase VI.

The Future

With the planned program and expected resource commitments, ATPS comes very close to realizing its vision: *“to become the leading international centre of excellence and reference in science, technology and innovation systems research, training and capacity building, communication and sensitization, knowledge brokerage, policy advocacy and outreach in Africa”*. This vision translates into a mission: *“to improve the quality of science, technology and innovation (ST&I) systems research and policy making in Africa by strengthening capacity for science and technology (S&T) knowledge generation, communication and dissemination, use and mastery for sustainable development in Africa”*.

ATPS will therefore continue to play the role of “the ST&I knowledge broker” until the (S&T) knowledge and policy gaps in Africa have been bridged and

² The first SWOT analyses workshop focused on regional and program management issues while the second focused on national level issues. Participants in the workshops included ATPS Secretariat staff and ATPS National Coordinators respectively.

African nation states have become rich in policies that generate substantial investments in science, technology and innovations (ST&I) for sustainable development in the sub-region, supported by vibrant constituencies of innovative policy makers, ST&I researchers, and grassroots entrepreneurs. ATPS will continue to enhance its outreach efforts and expand its ST&I research and capacity building programs, knowledge brokerage, and policy advocacy with the aim of creating a culture of ST&I policy making in Africa. The planned increase in the number of national chapters as well as the expected further strengthening of ATPS convening power in Africa and beyond through the phenomenal growth in institutional partnerships in Europe, India and America are factors that will enhance the organization's ability to promote ST&I for Africa's development. This task becomes easier as more citizens of the region become aware of, utilize and master relevant science technologies to improve their livelihoods and sustain the environment for the foreseeable future.

1.0 INTRODUCTION

The African Technology Policy Studies Network (ATPS) is a multi-disciplinary network of researchers, private sector actors and policy makers promoting the generation, dissemination, use and mastery of science, technology and innovation (ST&I) for African development, environmental sustainability and global inclusion. ATPS intends to achieve its mandate through research, capacity building and training, science communication/dissemination and sensitization, participatory multi-stakeholder dialogue, knowledge brokerage, and policy advocacy. In collaboration with like minded institutions, ATPS provides platforms for regional and international research and knowledge sharing for the identification and prioritisation, development, use and mastery of ST&I for sustainable social, economic and environmental development in Africa. The Network's Secretariat is based in Nairobi and it operates through national chapters in 23 countries (including Anglophone, Lusophone and Francophone countries) with an expansion plan to cover the entire sub-Saharan Africa (SSA), by 2015. As an international organization, ATPS enjoys the privileges and diplomatic immunities accorded to similar international organizations in Kenya³.

The Phase VI Strategic Plan provides a framework for guiding the activities of the ATPS over the period 2008-2011. In setting the strategic objectives and priorities for Phase VI, ATPS has taken a participatory approach recognizing the importance of the "strategic planning process" for ownership and buy-in and effective program implementation for achieving the desired policy impacts. The strategic priorities and program objectives are, therefore, based on constructive, reflective and insightful participatory dialogue with ATPS national chapters, ATPS research associates and other international development partners that are representative of ATPS' milieu. The plan builds on the experiences and strengths of the network and seeks to address Africa's unique development challenges especially within the context of achieving specific social, economic and environmental development targets by 2015.

The achievements and challenges faced during the ATPS Phase V, 2004 - 2007, also provided lessons for improving the strategic goal setting and implementation, monitoring and control planning for the Phase VI, 2008 - 2011. A detailed risk assessment through two independent SWOT analyses of the Network (at regional and national scales) was therefore part of the strategic planning process for this phase. A number of risk prevention, reduction, transference, acceptance and contingency strategies have been developed. Diversification of the ATPS donor base, building partnerships with like-minded organizations both in developing and developed countries, diversification of ATPS Board, building capacity of the current staff and hiring additional staff to strengthen and diversify the skill base of the Network, and strategies for strengthening existing national chapters are therefore integral parts of the Phase VI plan. ATPS' general approach to training and capacity building, knowledge brokerage, policy advocacy and outreach remains largely unchanged. However, ATPS will be dynamic in responding to new innovations

³ Details on ATPS organizational structure, staffing and operating procedures are provided in annex 1.

to improve its approach to research, science communication and international cooperation strategy in liaison with like minded institutions internationally. This allows for continuity of existing programs while opening up new areas relevant to current development and science and technology (S&T) policy challenges for Africa that are of global character, such as coping with the effects of climate change effect, conservation of biodiversity, integrated trans-boundary water management, environmental remediation, intellectual property rights, biotechnology, ICT, Nanotechnology, and health innovations and energy policy research, etc.

It is expected that ATPS research, training and policy intervention activities within this phase will lead to the generation and transformation of new knowledge and technologies into new S&T policies and innovations for addressing Africa's development challenges in the coming decades with a specific focus on achieving the MDGs by 2015. The multi-disciplinary nature of the Network and the diversity of stakeholders and non-governmental organizations (NGOs) and international experts that engage in ATPS' research, training, and policy dialogues provide a unique niche for ATPS to bridge the science-policy gaps in Africa.

1.1 Rationale for Strategic Direction of ATPS Phase VI

As with earlier plans, the strategic priorities of the Phase VI Strategy are motivated by several factors including (i) the vision and mission of the Network, (ii) the inter-related development and S&T policy priorities for Africa, and (iii) other inter-related global S&T policy drivers that are relevant to African development, environmental sustainability and global inclusion. Jointly, these factors shape the strategic goals, specific program priorities and anticipated science and policy outcomes for this phase. These are discussed briefly in subsequent sections.

1.1.1 ATPS Vision:

"To become the leading international centre of excellence and reference in science, technology and innovation systems research, training and capacity building, communication and sensitization, knowledge brokerage, policy advocacy and outreach in Africa".

1.1.2 ATPS Mission:

"To improve the quality of science, technology and innovation systems research and policy making in Africa by strengthening capacity for science and technology knowledge generation, communication and dissemination, use and mastery for sustainable development in Africa".

1.2 Strategic Goals and Objectives

The Phase VI Strategic Plan aims to improve the understanding and functioning of science, technology and innovation (ST&I) processes and systems to strengthen the learning capacity, social responses, and governance of S&T for addressing Africa's development challenges, with a specific focus on the MDGs. Taking into consideration the achievements of ATPS Phase V and activities planned for 2008, ATPS Phase VI plan will pay specific attention to a set of specific strategic goals identified in liaison with the ATPS national chapters and policy stakeholders. These include to:

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- 3) Support and strengthen the innovative capacity of youth and women to apply ST&I to relevant development policy issues in Africa;
- 4) Strengthen endogenous technical capacities to produce, use and govern sustainable technologies for achieving the MDGs in Africa;
- 5) Facilitate and support knowledge sharing on ST&I amongst key stakeholders for sustainable development in Africa; and
- 6) Promote the integration of S&T research and policy in African development planning and policy making processes.

These strategic goals generate three thematic and three cross-cutting strategic priorities and programs for the ATPS Phase VI. The thematic programs include (i) research and research capacity building, (ii) international cooperation and partnership, and (iii) youth and gender empowerment. On the other hand, the cross-cutting programs include (iv) training and sensitization, (iv) science communication and stakeholder dialogue, and (vi) outreach, knowledge brokerage and policy advocacy, respectively. These programs are inter-twined and together with monitoring and evaluation, form the strategic framework for the Phase VI Strategic Plan. The implementation strategies for these program priorities are elaborated in section 4 of this document.

2.0 RETHINKING AFRICA'S DEVELOPMENT CHALLENGES IN THE CONTEXT OF ACHIEVING THE MILLENNIUM DEVELOPMENT GOALS BY 2015

The current sustainable developmental imperative for Africa can be crystallised in the millennium development goals (MDGs), which range from halving extreme poverty to halting the spread of HIV/AIDS and providing universal primary education, all by the target date of 2015. This forms a blueprint for sustainable development agreed at the United Nations Millennium Summit in September 2000. Some authors have argued that the achievement of the MDGs is both an indication of and a necessity for the realization of human rights, because the MDGs correspond to states' existing human rights obligations found in the Convention of the Elimination of Discrimination against Women and the International Covenant on Economic, Social and Cultural Rights (Painter, 2004). It is hoped that meeting the MDGs, or even substantial progress towards meeting them, would produce a healthier, more economically sound world (DCPP 2007). The MDGs have therefore galvanized unprecedented efforts to meet the needs of the world's poorest. As noted by the United Nations Millennium Project, Task Force on Science, Technology, and Innovation (2005), "the world has an unprecedented opportunity to improve the lives of billions of people by adopting practical approaches to meeting the MDGs".

An important reality about the MDGs is that attainment of each of the goals is closely linked together because of the causal relations amongst them. Each investment cluster aimed at a goal depends on the others. According to the UN Millennium Development Goals Report (2005), to achieve any particular goal, it is not enough to invest merely in the corresponding sector since most interventions have effects on many goals. In order to reduce hunger for instance, intervention to reduce gender inequality is important just as are increased agricultural production, environmental sustainability and access to appropriate infrastructure and health care. Innovation processes including concrete and practical steps that governments and international agencies can undertake to bring ST&I to bear on achieving the MDGs in Africa are therefore necessary at this stage. Because of the cross-cutting nature of ST&I it has helped to eliminate poverty and hunger and mitigate environmental problems in developed countries and has been credited as a driver for remarkable economic growth in most of the South-East Asia and Asian Pacific countries.

2.1. African Development: An Historical Perspective

Poverty eradication through growth and employment has remained a *constant* developmental imperative for Africa both in the old and the new millennia. Achieving a sustainable growth in output and employment is viewed as the proximate step to the ultimate goal of human development, measured in terms of a healthier society, opportunities for more and better education, good habitat for human beings and other creatures, a citizenry with voice, and material wellbeing that is associated with it.

To the extent that these challenges have featured in one form or the other on Africa's development agenda especially since the 1960s, they cannot be considered new. Of interest however is that devising successful means to addressing these challenges have continued to elude the efforts of many African nation states as well as her development partners alike. With regard to achieving the MDG targets, the success stories in sub-Saharan Africa (SSA) have been minimal. As will be shown in the next section, some success stories exist but the unsuccessful stories dominate the policy landscape of SSA. Mainstream explanation for the continent's poor record of success in achieving the millennium development targets and the continuing developmental challenges in Africa would have us look to the poor choice of policies, with often, if at all, a casual reference to the African policy context and the dearth of ST&I culture in the region. According to this mainstream view especially in neo-classical economic development paradigms, the main factors behind African poverty are poor policies derived from a developmental paradigm that gave the state a prominent role in economic affairs (i.e. lack of "pure democracy"), low rates of capital accumulation, capital flight, lack of entrepreneurship, lack of political will and governance institutions, the unwillingness to rely on foreign capital (rather than its absence), a distrust of the market (meaning ill-ease over the excesses of capitalism), weak macro-economic policy environments, etc (see for example, Ogbu et al., 1995; Lule et al, 2005; Ndulu 2007; DCP, 2007 to mention just a few). These anecdotes are often provided alongside recommendations of privatization and globalization as the magic bullets to combat dependency and foster the much needed economic growth in the sub-region. This approach misleads because S&T policy contexts and culture are in fact central to understanding the choices of policies, and to the *ex ante* assessment of policy successes and / or failures. Many African nation states, and in fact, many countries of the developing world would rather *look outwards* for science, technology, innovations and development aid from the developed world rather than *look inwards* to build necessary local capacities and governance structure to foster home grown ST&I culture. Western models and ST&I policies are therefore often transposed to African ST&I policies without proper adaptation to African social, cultural and ecological environments. Recent case studies in Nigeria find that such technology transfers are neither economically beneficial nor environmentally sustainable (see for example, Urama 2005, Urama and Hodge 2004).

Under the new realities of emerging limits to growth in the developed economies, including the rising energy prices and high interest rates, global climate change, biodiversity loss and degradation of natural ecosystems; the phenomenal growth of Asian countries in the past decade through inward looking ST&I policies, and continued stagnation in growth in other developing countries, the role of ST&I in fostering development has come to the forefront of the global economic development debates once more. The emphasis on "structural adjustment" in Africa and Latin America; "transition to market economy" in Eastern Europe/Soviet Republics; and "retrenchment of welfare state" in the developed countries has now given way to more context oriented development discourse in the new millennium. It is becoming clear to development economists that the omission of ST&I and human capital

development as a growth strategy in these structural adjustment programs was a big mistake.

The huge investments by nation states and development partners on structural adjustment in the 1990s and on development aids in the new millennium failed to transform the economies in Africa and pretty much the rest of the developing countries due to lack of focus on building an ST&I culture. In fact, economy-wide analysis of the impact of food aid reveals that in-kind food aid has unambiguous disincentive effects on domestic food production in Ethiopia (Gelan, 2006). In spite of the efforts by huge investments in development aids in the region, the incidence of poverty has continued to increase.

Consequently, “mainstream development thinking” has at the turn of the new millennium evolved towards “a broad pragmatism”, which draws on the experience of the last 50 years of searching for a “single magic key to development”. This eschews the sterile debate over the role of the state and the market in exclusion of ST&I and human capital formation. It has now become apparent that central to the economic development debate, is the role of S&T in driving factor productivity growth.

2.2. Sustainable African Development, MDGs and ST&I

Africa’s story on progress towards achieving the MDG targets by 2015 is currently very patchy, too slow or in some cases non-existent. In particular, Sub-Saharan Africa lags behind the rest of the developing world on most of the MDGs (DCPP 2007). A report on global progress towards achieving the MDGs titled *Investing in development: a practical plan to achieve the Millennium development Goals*, suggests that SSA is not on track to achieve any of the MDGs, less than half way to the 2015 deadline. Reducing the incidence of poverty and disease still remains a big challenge in the sub-region.

The emerging global development challenges, such as increased degradation of land and forest ecosystems, biodiversity loss, climate change and the associated variability in rainfall patterns, air temperatures, and surface water availability, increasing energy prices, etc would continue to deepen poverty and undermine the provision of vital basic ecosystem services on which many African economies depend⁴. It is therefore imperative that investments in policy relevant ST&I systems research, research capacity building, training, sensitization and policy advocacy to foster ST&I knowledge generation, dissemination, mastery and use will go a long way to addressing Africa’s development challenges in the coming decades, including the achievement of set MDG targets by 2015.

Mugabe (2005) argues that African countries have tended to spread their resources too thinly for any reasonable impact and attributes the weak systems to the lack of a coordinated approach and absence of strong linkages

⁴ Many African countries are primarily agrarian largely depending on natural ecosystem services, including the supply of fresh water and food, biodiversity and wildlife for tourism incomes, and climate regulation and air quality with multiplier effects on food security, health, and general livelihoods in the sub-region.

between the various actors. Hence, contrary to expectations, the remarkable S&T advances in industrialized countries have not been automatically or effortlessly applied to meet the development and environment challenges of Africa. Therefore ST&I came to the fore of development discourse because of the failure of orthodox S&T policy, which focuses exclusively on the supply and use of scientific and technical human resources. The latter has failed to stimulate the desired endogenous technological entrepreneurship necessary for sustainable development and knowledge generated are not often transformed and / or translated to innovations for African development.

It is this recognition of the basic and catalytic roles of this new paradigm shift that resulted in the appeal to national governments by the United Nations Millennium Development Goals Project (UNMDGP, 2005), to pay greater attention to advice from the scientific community if they are to achieve the MDGs. The report argues that ST&I must be placed at the heart of development processes, and become the core of industrial, agricultural and services policies while explicit links should be established between markets and non-market institutions. According to Juma (2005), solving Africa's many pressing challenges requires multi-stakeholder efforts that will involve close cooperation between governments, industries, academia and the civil society. It will also involve experimentation and promotion of mutual learning among all stakeholders including the scientists, policy makers, and development partners. One of the most critical challenges to African development in the coming decades, therefore, is that of transforming S&T into innovations for African development, i.e. "*applying knowledge in development*" (Juma and Yee-Cheong, 2005).

Although increases in workers' productivity in industrial countries have been driven mostly by advantages in S & T, investment in physical capital and the growth of human capital, these factors are strongly influenced by a maze of contextual and institutional factors which were conducive for the transformation of S&T to innovations. Thus, the major challenge to African development is on one hand, to adapt existing S&T from elsewhere to African institutional and cultural contexts without re-inventing the wheel; and on the other hand, to develop and integrate new and existing indigenous S&T into development policy. Developing appropriate capacity that support S&T advances, local entrepreneurship, and national innovation systems at both individual and institutional levels are, therefore, critical for the achievement of the MDGs in Africa, in the short run, as well as for long term social and economic growth and environmental sustainability in the sub-region. Science and technology mediates the introduction of new products and process for economic growth while innovations transform them into tangible development and policy outcomes. Adaptation of this new paradigm is most likely going to yield the desired results if it is made socio-culturally sensitive. In this regard, one challenge from ATPS' perspective is how to build new ST&I capacity in Africa amongst African development stakeholders including, relevant government institutions, ministries and parastatals, S&T institutions of learning, as well as individual development actors and partners. On the other hand, ATPS faces the challenge of becoming an effective knowledge broker to help access and "download" existing knowledge in Africa and elsewhere

into useable formats for effective and practical ST&I development and policy planning in Africa. Finally, there is also the challenge of how to properly blend traditional knowledge with orthodox knowledge especially through collaborative learning processes that are critical to the success of ST&I as a catalyst to Africa's development.

2.3. ATPS Presence and Continued Contribution

During the phase V plan, 2004 – 2007, ATPS continued to pursue its mission through thematic and non-thematic program activities. This was achieved through research and research capacity building, training and research workshops, conferences, publications, knowledge dissemination through policy-linkage seminars and roundtables, and continued policy advocacy.

2.3.1 The Achievements of the Phase V Strategy

ATPS has steadily moved toward thematic research and training program activities, participatory dialogue and international collaborative projects. This has partly been due to a steady decline in core funding that used to support small research grants on S&T issues pertinent to the different countries and communities in the region. The new thematic programs focus on addressing ST&I policy research gaps and training needs identified by the national chapters and a team of senior policy international consultants/research associates (resource persons) working on S&T policy issues in Africa and beyond.

During the current phase, 2004 – 2007, ATPS has grown from having a single thematic research program, *Strengthening ICT Policy in Africa*, to having four thematic research programs, and a collaborative project funded by the EU Framework VI specific measures in support of international collaboration between EU and developing countries. These are *Water and Environment*, *Health Technology Policy*, *ICT Knowledge for Development*, a *Youth Program*, and a *specific support action project for integrated trans-boundary river management policy development in Kenya and Tanzania*. More recently, ATPS has participated in four new proposals submitted to the EU Framework VII call on international collaboration with partner institutions in Europe, India and Africa to build on the lessons learned from the phase V research programs. One of these tenders is now at final stages of contract negotiations with the EU Commission Services. ATPS will continue to draw on the skills and expertise in these new collaborating institutions for effective implementation of the Phase VI research programs.

Within the same period (2004 – 2007), five new chapters in Francophone Africa (Benin, Senegal, Mali, Côte d'Ivoire and Burkina Faso) and two chapters in southern Africa (Mozambique and South Africa) were established. ATPS plans to expand its presence to all SSA countries by the year 2015. ATPS will also increase its participation in the prioritisation of global S&T policy issues of mutual interest to Africa and the rest of the world, such as alleviating rural poverty especially with regards to energy, water, and food poverty in rural Africa, measures to cope with global climate change in rural communities, and conservation of biodiversity in rare habitats of Africa while improving livelihoods for Africa's growing populations.

To enable ATPS to cope with the anticipated increase in program activities the Secretariat is now embarking on recruitment of more research staff and is in negotiation with collaborating institutions in Europe and Africa for potential staff exchange and internships in order to build the research capacity of existing staff.

The main achievements of selected ATPS Phase V program are discussed briefly below:

Research and Research Capacity Building

ATPS has achieved its set goals in the area of ST&I policy research and research capacity building during the 5th phase, 2004 – 2007. ATPS developed many research programs out of which four received support. Two of these were fully implemented during the phase while two other are ongoing and will be completed in Phase VI. Discussions are ongoing on other submitted proposals. A summary of the achievements from selected ATPS thematic research programs are presented briefly below:

Knowledge Generation through Thematic Research Programs:

A) Water and Environment program, 2004 - 2008

The water and environment program mainly funded by the Royal Dutch Government has involved a series of targeted research methodology training; knowledge generation and dissemination activities through commissioned small grants research in nine countries, commissioned baseline studies in five countries, and three commissioned regional review studies covering the ECOWAS, SADC and the Great Lakes regions. Specific stakeholder engagement activities carried out have included a series of international conferences, policy forums and capacity building workshops including:

- An international conference in Addis Ababa, Ethiopia, 29 November – 3 December 2004 (attended by over 100 researchers, stakeholders and policy makers from over 22 African countries and experts from European countries including UK, The Netherlands, France, etc);
- A research methodology training workshop in Nsukka, Nigeria, 3-5 May 2005 attended by participants from Cameroon, Ghana and Nigeria;
- An international policy forum in Enugu, Nigeria, 6 May 2005 attended by over 60 researchers, policy makers and water managers from Cameroon, Nigeria and Ghana;
- An international policy forum in Nairobi, Kenya, 18 May 2005 attended by researchers, stakeholders and policy makers from Egypt, Ethiopia Kenya and Nigeria;
- The 17th NETWAS Regional Water and Sanitation Seminar held in Mombasa, Kenya 5-9 September 2005 on Managing Water Conflicts: Emerging Challenges and Opportunities, attended by 49 Water practitioners and stakeholders from Kenya, Uganda, Tanzania, Sudan, South Africa and the UK;

- A progress review and research methodology training workshop in Nairobi, Kenya 12-13 July, 2006 (attended by participants from Kenya and Ethiopia);
- A progress review and research methodology training workshop in Mombasa, Kenya, attended by participants from over 12 African countries and experts from Europe;
- A progress review and research methodology training workshop in Abuja, Nigeria 20-21 July 2006 (attended by participants from Cameroon, Ghana and Nigeria);
- The 18th Regional Water and Sanitation Seminar organized by NETWAS in Mombasa, Kenya 4-8 September 2006 on *Water and Sanitation in Urban Africa; Emerging Approaches for Reaching the un-Served Poor* attended by 54 water practitioners from 8 African countries and others from Switzerland, India, USA, UK and the Netherlands;
- A capacity building workshop in Maputo, Mozambique attended by participants from over 6 African countries;
- A writeshop on *maximising the impact of research through science communication*, Naivasha, Kenya. 18-20 June 2007, attended by over 40 researchers, Artists, Journalists, and Policy Makers from over 14 African countries and experts from Europe;
- The 19th Regional Water and Sanitation NETWAS seminar and Knowledge Fair held in Mombasa, Kenya 26-28 September 2007 themed: **“Knowledge Experience Expertise Products and Services – KEEP Sharing”**. It was attended by 94 WASH practitioners from 23 countries cutting across Africa, America, Europe and Asia; and
- A final review workshop in Johannesburg, South Africa, 19-22 November, 2007 attended by over the Water and Environment researchers from over 7 African countries.

Each of these workshops brought together African researchers, policymakers, journalists from many African countries and other international experts to enhance the generation, effective dissemination, use and mastery of ST&I in driving environmentally sustainable use of water resources in Africa under close supervision by an international expert on the subject with longstanding experience in the European Water Framework Directive. The aim was to foster knowledge sharing and ensure that ATPS researchers follow international standards in the research process to ensure quality research outputs and informed policy advocacy. The regional study programs conducted under this program involved a series of focus groups and household surveys covering over 3000 households in selected countries. This dynamic engagement with stakeholders throughout the project phases starting from inception to results dissemination stages has yielded great dividends through capacity building and enhanced ownership of the results. The program has so far produced seven Technopolicy briefs, six research papers, five special papers and eight news articles out of which five are already published in national newspapers in the relevant case study countries. Some of these publications have been aired over national radios and some have been reproduced as science cartoons to enhance access to the grassroots. A number of these publications have been presented and peer

reviewed at international conferences and some are now published in international journals. Plans are under way to publish an edited book volume on *“Water and Environmental Management in Africa: the role of Science and Technology”*. The book volume will base on a synthesis of the results of the program. ATPS will through its curriculum review support activities recommend the book for use in S&T higher institutions in Africa. ATPS is also in discussion with science communication experts to simplify the book into simple water and environmental management ethics for use in primary schools. Several results dissemination and policy advocacy activities have also been carried out at national, regional and international levels. Through this program ATPS has become a leading partner in water and environment policy research in Africa, increasingly collaborating with European partner institutions in EU Framework VI and Framework VII international collaboration programs in the subject area. Details of these international institutional partnerships are discussed briefly in section 2.4 “ATPS Milieu, Partnerships and Niche”

B) Strengthening Health Technology Policy in Africa, 2004 – 2007

The ATPS Program on Strengthening Health Technology Policy in Africa focuses on key knowledge and technology issues that lead to the improvement of health delivery systems in selected African countries. The overall objective of the program is to contribute to the improved healthcare delivery and access in Africa by improving the quality of science and technology (S&T) policy and generating and disseminating relevant knowledge. The program is primarily funded by the Royal Dutch Government, is applying the new concept of National Innovation Systems to map the health systems in 10 African countries, including Benin, Nigeria, Swaziland, Tanzania, Cote d'Ivoire, Kenya, Lesotho, Senegal, South Africa, and Uganda. The study which is being supervised by international experts from the UNU-MERIT, is building the capacity of researchers and health practitioners from these countries on this new innovation systems framework. The program was developed in response to felt needs of African policymakers and researchers after an international conference and stakeholder workshop held in Mombassa, Kenya, 28 Nov – 02 December 2005. As is characteristic of ATPS research programs, the goals, objectives and research questions of this program were designed to address key research and policy needs of the African countries represented at the workshop. Over 70 researchers, stakeholders, policy makers and health practitioners from over 24 African countries and selected European experts participated in the brain storming workshop to identify and prioritise policy research questions that informed the design of the program.

The program activities carried out under this program includes:

- An international Conference and Workshop in Mombassa, Kenya, 28 November – 2 December 2005. This was held in collaboration with the New Partnership for Africa's Development's (NEPAD) Science and Technology and was attended by over 70 participants from 24 African countries and selected experts from Europe. As noted above, the brainstorming sessions during this conference and workshop formed the foundation of this program.

- A pre-study workshop for conceptual and methodology training held in Nairobi Kenya, 24-27 April, 2007. The workshop was attended by 23 participants comprising researchers, policy makers and medical practitioners from 8 African countries and resource persons from The Netherlands and South Africa.
- A progress workshop held in Johannesburg, South Africa on 22 November 2007.

Under this program, ATPS has commissioned country case studies in 4 African countries including Tanzania, Swaziland, Nigeria, and Benin, and plans are underway to commission other case studies in Uganda, Kenya, Cote d'Ivoire, and South Africa. The program has so far produced four papers which are already published under the ATPS Special Paper Series.

C) Biotechnology in Africa, 2004 – 2006

In October 2004, ATPS initiated a project on biotechnology in sub-Saharan Africa (SSA) to support the regional NEPAD-IFPRI African Policy Dialogues on Biotechnology and also guide African nations to develop biotechnology and biosafety guidelines. The program has focused on knowledge generation, dissemination and brokerage, and emphasizes transparency, consensus building and inclusive participation of all key stakeholders.

The program's activities have included national and regional dialogues and knowledge exchange sessions in different African countries, including Sierra Leone, Kenya, Mozambique, Uganda, Senegal, etc. Under this program, ATPS also fostered policy interventions to support discussions of the on-going efforts in Africa to craft biotechnology policies, biosafety laws and other regulatory instruments.

Some of the program activities carried out under the auspices of this program includes:

- A one week training and sensitization workshop in Freetown, Sierra Leone, 7 - 11 March, 2005. The workshop was hosted in collaboration with the ATPS-Sierra Leone Chapter, the Technical Center for Agriculture and Rural Development (CTA), Netherlands, the Science and Technology Council of the Ministry of Education, Science and Technology, Sierra Leone, and the World Bank. The aim was to discuss strategies of integrating science, technology and innovation (ST&I) into the planning, development and reconstruction of post-war Sierra Leone.
- A policy round table discussion with Kenyan parliamentarians, to discuss biotechnology policy issues in Kenya, focusing mainly on the contents of the proposed biotechnology bill and policy which was before the Kenyan Parliament. This was held on 8 June 2005.
- Southern Africa Regional Workshop on Biosafety and Intellectual Property Rights (IPR) in Maputo, Mozambique, 31 October 2005 - 02 November 2005. Held in collaboration with Ministry of Science and Technology, Mozambique. High-ranking government officials, academicians, researchers, policymakers, farmers, the media,

consumer groups, lawyers and other stakeholders in the biotechnology industry from Southern Africa attended the meeting.

- An Eastern African Policy Dialogue on Biotechnology Policy-making, Trade and Sustainable Development, in Jinja, Uganda, 14 - 17 February 2006. The workshop brought together a wide range of stakeholders – including government and intergovernmental organizations, civil society groups, academia, industry and the media – from the Eastern African region to deliberate on the formulation of coherent, informed and inclusive policies on trade, biotechnology and sustainable development at the national, regional and multilateral levels.
- A Regional Assessment of Biotechnology, Trade and Sustainable Development in Eastern Africa, April – July 2006. ATPS commissioned 10 case studies to build on the priorities and key issues identified in the Eastern Africa Regional Dialogue on Biotechnology and publish a book volume. The title of the book which was published by ATPS and ICSTD is: *Biotechnology: Eastern African Perspectives on Sustainable Development and Trade Policy*.
- A policy Dialogue on Biotechnology, Health and IPRs in Africa, Dakar, Senegal, 14–16 March 2006. ATPS collaborated with the International Service for the Acquisition of Agri-biotech Applications (ISAAA) and NEPAD to host a workshop on Biotechnology, Health and IPRs in Africa. The workshop provided a forum for African scientists, policy makers, civil society, private sector players and researchers to objectively debate the issues and voice their concerns on the potential of modern biotechnology to solve Africa's problems. Participants came from Senegal, Mali, Cote d'Ivoire, Benin, Burkina Faso and Cameroon.

Overall, the program was very successful leading to the publication of a major Book volume "*Biotechnology: Eastern African Perspectives on Sustainable Development and Trade Policy*". The book is now widely used by S&T policy researchers in Africa and beyond.

D) Strengthening ICT Policy in Africa, 2002 – 2006

A concept paper developed a research agenda on the governance and equity issues around information communication technology [ICT] in Africa following a workshop held in Nairobi, Kenya, 8–10 July 2002. Following this workshop, case studies were commissioned covering 13 African countries, including Morocco, Senegal, Ghana, Nigeria, Ethiopia, Rwanda, Kenya, Uganda, Tanzania, Zambia, Zimbabwe, South Africa, and Mozambique.

Other activities carried out under the auspices of the ICT program include:

- A progress workshop was held in Nairobi, Kenya, 23 - 26 June 2003. The workshop featured 16 presentations comprising preliminary findings from country teams, and re-presentations to clarify issues by incorporating new knowledge acquired during the workshop.
- A final dissemination workshop held on 5-6 July 2004 in Nairobi and attended by 12 country teams who presented their final drafts reports.

- A study tour to Finland sponsored by ATPS and the Finish Embassy, 27th August - 2nd September 2006. The tour involved a high powered delegation of eight key representatives from private sector, academia, members of parliament and senior government officials from Kenya and Uganda selected to assess the relevance of S&T parks to African countries.

In summary, the program has so far produced one Technopolicy brief and one special paper under ATPS publications. The study has since been completed and the Project Coordinator is currently working with the country teams to publish the research results in a special issues of Telecommunications Policy (Elsevier Science Publication and leading journal in Telecommunications infrastructure policy). A number of the researchers have now moved on to leadership positions in the ICT area in their countries. Some examples include: CEO, Communications Authority of Zambia; Executive Secretary, ICT Policy Commission of Mozambique; General Manager of the Ethiopian Telecommunications Agency; Executive Director, Rwanda Information Technology Authority; Managing Director, Zamnet Communications Systems, Zambia. This bears testimony to the capacity building effects of the ATPS ICT project.

E) Youth Program, 2004 – 2006

As part of its efforts to build a sustainable constituency in ST&I policy research in Africa, ATPS launched an African Youth Forum for Science and Technology (AYFST) in 2004. The ATPS youth program has successfully given the African youth a voice in the ST&I policy debates in Africa. Through their annual congress, the AYFST members have been able to articulate their views on ST&I related policy issues and to proactively engage in shaping youth participation in regional and national ST&I policy debates. The forum has also provided useful platforms for ST&I career mentoring and networking amongst the African youths. The membership of the AYFST now stands at 15 member countries. Individual members now recognize themselves as partners in African development and have been participating actively in ATPS research prioritisation and policy advocacy through the AYFST website <http://www.ayfst.org>, youth science clubs, etc. The program has received ample support from a number of donors including SIDA SAREC, the Royal Dutch Government, Technical Centre for Agricultural and Rural cooperation (CTA), amongst many others.

ATPS is also committed to supporting activities that expose the youth to issues of science for development particularly through its existing affiliation with universities that can easily facilitate university based science clubs for youth-youth knowledge and information exchange.

Program activities carried out under this program include:

- A Youth Consultative Meeting on “Youth Employment/Wealth Creation: Opportunities in Agriculture, Science and Technology, held on 28-29 April 2005 at Hilton hotel in Nairobi, Kenya. The consultative meeting brought

together 14 youth leaders and representatives from six countries of SSA including Ghana, Ethiopia, Nigeria, Uganda, Zimbabwe and Kenya;

- African Regional Youth Congress held in Nairobi, Kenya, June 20-23, 2005. This regional youth congress brought together over 70 youth leaders and representatives from 22 African countries;
- A MAXFACTA Youth Forum, held on 1st April 2006. This was attended by 30 youths who are either affected or infected with HIV/AIDS;
- A consultative meeting of youth experts on 6-7 April 2006, in Nairobi. This brought together the leadership of the AYFST to plan for the 2nd African Youth Congress in Accra Ghana;
- A Young Professionals Platform meeting in Agriculture Research for Development in the Netherlands, attended by three members of the African Youth Forum on Science and Technology (AYFST) on 2–5 May 2006 to formulate the vision, mission, objectives and strategies of YPARD;
- A Youth Congress, on “*Food Security and Health for Sustainable Development: Perspectives of the Youth*” held in Accra, Ghana, 26–29 June 2006. The meeting brought together young professionals, scientists, youth leaders and representatives from national, regional and international institutions and civil society. The African Youth Forum on Science and Technology (AYFST) and its website (www.ayfst.org) was officially launched at this congress;
- A follow-up workshop under the theme “*Health – A Key to Sustainable Development in Ghana: the Role of the Ghanaian Youth*” from 28-29 March 2007 at the University for Development Studies (UDS), Navrongo Campus by AYFST Ghana;
- A National Youth Leaders Consultative workshop on “*Science, Technology and Innovation in Kenya*” held on 02 March, 2007 at the Milimani Hotel, Nairobi, Kenya by AYFST Kenya. The meeting was attended by policymakers, youth leaders, development partners, media, private sector players and university representatives, and was organized with support from ATPS. The Permanent Secretary in the Ministry of Science and Technology (Kenya), Professor Crispus Kiamba, was the chief guest at the meeting;
- A workshop under the theme “*Basket of opportunities; refocusing the youth towards agriculture, wealth creation and HIV/AIDS prevention*” on March 21 2007 at Nsukka, Nigeria. AYFST-Nigeria was officially launched at this workshop. The forum was chaired by Mr. John Nnia Nwodo, former Minister of Information and Culture, Federal Republic of Nigeria;
- A national youth workshop on “*Food security & health for sustainable development*”, held at the St. Edward’s Hall in Freetown, Sierra Leone on 6 and 7 April 2007 and aimed to sensitize Sierra Leonean youth on the

current trends in food security and health in the country. Mr. Anthony A. Koroma, the Director of Youth and Sports, represented the Honourable Minister for Youth and Sports at the meeting;

- An AYFST in country workshop on 13 April 2007, at the Makerere University, Uganda. The workshop attracted young scientists from Makerere University, Kyambogo University, and Makerere University Business School (MUBS), Kampala International University (KIU) and other members from the private sector;
- The 3rd (YADSTI) annual conference and exhibition held 22-23 March 2007. The two-day conference and exhibition took place at the University of Nairobi's Chiromo Campus, Millennium Hall. It brought together university students, lecturers researchers and scientists from various government institutions;
- An ATPS co-sponsored workshop for the University Biochemistry Students Association (NUBSA) on 18 May 2007 at the Hilton hotel under the theme Intellectual Property Rights: protecting innovations of Kenyans for the benefit of Kenyans;
- National Youth Consultative meeting, Lesotho, 28 June 2007; and
- African Youth Congress on the theme "*Enhancing the Role of the Youth in Attaining the Millenium Development Goals (MDGs) in Africa: Implications for Science, Technology and Innovation*" held in Uganda, 5 – 9 July 2007. This congress brought together over 74 youths from 17 African countries including those from the Diaspora to deliberate on youth involvement in achieving the MDGs in Africa and brainstorm on youth engagement activities within the ATPS Phase VI strategic plan.

In summary, the program has so far produced two conference proceedings which are published under ATPS publications. Selection of participants for the Youth congresses has been through peer review of abstracts submitted by potential participants. The aim is to encourage capacity building in ST&I writing skills amongst the youths. About 400 youths have benefited from this abstract submission tournaments out of which 230 have participated in AYFST programs.

F) International Collaborative Research programs

During Phase V, ATPS has continued to strengthen its international presence and role as a ST&I knowledge broker through participation in European Framework Research Programs. One of such research programs under the auspices of EU Framework VI International Collaboration Program initiative is now ongoing and will be carried over to Phase VI. The project is being carried out in collaboration with the Macaulay Land Use Research Institute, UK and the Tanzanian National Parks Authority. Another research program under the auspices of the new EU Framework VII international Cooperation Action Program is at final stages of contract negotiation. This three year project, "Science, ethics and technological responsibility in developing and emerging

countries” will be implemented in collaboration with a consortium of 11 institutions in Europe, Africa and India.

Research Capacity Building

With regard to the strengthening of the region’s institutional capacity for management and creation of scientific and technological innovations, ATPS and its precursors have funded 155 research projects 30 of which have been awarded during this phase. During the same period, 52 grants have been awarded to the national chapters, 32 of which were awarded during phase V. This represents over 150% growth in support to national chapters during Phase V. Of the research grants awarded in Phase V, nine (9) were awarded under the small grants program and two (2) were thesis grants. All the regional grants (12) and all the youth program grants, seven (7) were awarded during Phase V. This reflects the shift by Donors towards thematic research programs and the emphasis by ATPS on youth capacity building during Phase V. ATPS has taken pride in seeing one of its grantees win an international award in innovative policy research on biotechnology, and another win a prize for the best PhD thesis in Economics or related subject in St. Edmund’s College, Cambridge University.

So far, ATPS has funded its researchers through a selection process involving series of workshops in which cumulatively, over 650 proposals have been presented. An additional benefit in this approach to awarding research grants is that there is a substantial “learning by doing” involved when researchers are engaged to develop proposals, subject those proposals to peer review in a workshop setting, while fostering the use by members of the workshop opportunity to share ideas. Over 1000 people have benefited from this part of strengthening capacity to do policy research in technology. The ATPS research proposal tournaments have had significant capacity building effects on participants including those whose proposals were not funded by ATPS. In addition to selection of good quality policy relevant proposals ATPS makes significant efforts to coach the young researchers whose proposals fail to meet the required quality standard through an interactive peer review system.

Publications

In the area of improving the policy environment, ATPS publishes a set of research output series which define the different components of its research portfolio. This strategy to maximize program impact is based on versioning, so critical in the information age, where a great deal of information can impair attention span. Therefore, ATPS provides value in the policy environment by generating, filtering, and communicating targeted information to policy makers and other relevant audiences.

The Network publications comprise Special Paper Series, Working Paper Series, Research Papers Series, Technology Policy Briefs and Executive Summaries. During phase V, ATPS has continued to engage with international experts to build the capacity of its researchers in publishing their research in international journals. With respect to its flagship publication, we note that since October 2001, when ATPS became autonomous, it has produced 28 working paper series, out of which 11 were published during the

phase V, 2004 - 2007. This rapid publication growth during phase V represents over half of the total output of this series since 1994 when ATPS was established. The rest of the publications, which begun after 2001, include 28 under miscellaneous publications (newsletters, annual reports, workshop reports, flyers) out of which 21 were published during the last phase; 37 under special paper series, out of which 21 were published during the last phase representing more than a 100% increase; 22 under technology policy brief series out of which 16 were published during the last phase representing more than a 200% increase; and 3 under research paper series, out of which 1 was published under the last phase. ATPS researchers are now increasingly published by national governments for policy uses as well as in international journals and conference proceedings. This bears testimony to the increased science quality of the research being carried out under the ATPS programs as well as the capacity building effects this has had on the researchers.

Policy dialogue and dissemination

A) S&T Policy Summits for the State Governors of the Republic of Nigeria, July and September 2005

At the request of the Federal Republic of Nigeria, through the Ministry of Science and Technology, ATPS conducted two regional policy summits for state governors from Northern Nigeria, 4 - 6 July 2005 in Minna, Niger State, Nigeria and another for state governors in the southern Nigeria, 20 -21 September 2005, at Ota, Nigeria. The objective of the summits was to share knowledge and forge a common understanding with state governors, ministers and top policymakers on the need for and how to integrate science and technology into their National Economic Empowerment and Development Strategies (NEEDS) and its state equivalent, the State Economic Empowerment and Development Strategies (SEEDS) of Nigeria. The participants deliberated on three key S&T policy issues:

- how state governments can situate their industrial, agricultural and educational plans and actions within an innovation system;
- how to strengthen the National Biotechnology Development Agency (NABDA) and situate biotechnology in the state development agenda and the poverty reduction strategies; and,
- how to sensitize the state governors on their current and future leadership roles in promoting an S&T-led development of Nigeria.

Both summits were conducted in collaboration with the Raw Materials Development Research Council (RMRDC) of the Federal Ministry of Science and Technology, the Pan-African Strategic and Peace Research Group (Pan-AFSTRAG) and the African Leadership Forum (ALF), Nigeria.

B) CTA/ATPS/NEPAD Africa Regional Meeting on Science and Technology

ATPS collaborated with the Technical Centre for Agricultural and Rural Cooperation (CTA), the Netherlands, and the New Partnership for Africa's Development (NEPAD) to host an Africa Regional Meeting on Science and

Technology from September 14-16, 2004 at the Hilton Hotel, Nairobi. The workshop whose theme was: *Enhancing the Science and Technology Policy Dialogue: Innovation for Development*” was attended by representatives of national, regional and international institutions and civil society, from over 30 African countries.

C) Results Dissemination

Regarding results dissemination, apart from distributing ATPS publications during seminars, policy dialogues, conferences and workshops, ATPS has entered into an arrangement with the Common Market for Eastern and Southern Africa (COMESA) to use COMESA meetings as a vehicle to distribute ATPS publications. ATPS also disseminates publications through the LISTSERVE and mail/courier process. The Library of Congress also collects all new publications for the Congress Library and also for distribution to all Universities. Science and technology policy institutes in Europe such as the UK Parliamentary Office for Science and Technology (UKPOST) are now receiving ATPS publications for use in policy advocacy. As ATPS strives to strengthen her convening power, these alliances would be useful in reaching a wide range of stakeholders and policy makers in Africa and elsewhere.

Another major avenue for dissemination is through <http://www.atpsnet.org> thus placing effectively most of ATPS publications in the knowledge community, in an easily accessible medium. To reach out to the African youths, ATPS has also funded an African Youths Forum in Science and Technology (AYFST) website (<http://www.atpsnet.org>) which is now a formidable portal for knowledge dissemination amongst African youths. In liaison with partners in Europe, ATPS is also developing a web-hosted interactive Database resources and knowledge boards for effective e-dialogue on matters of ST&I in African development. This brings the organization closer to its goal of truly becoming a portal for S&T policy in the region. In the future, the site will host chat rooms on science and technology policy issues between ATPS Network members and the public.

Knowledge brokerage and outreach/Regional research programs

One of the ways in which ATPS has carried on its brokerage role is to initiate research into contemporary S&T policy issues that address cross-cutting questions of importance to the development of Africa. These cutting-edge policy research initiatives at any given point in time are at various stages of implementation. Some have advanced to concept papers and research agenda and are waiting to be funded. These research projects typically regional in scope are funded independently of core resources. The ongoing regional research programs carried out during the Phase V strategy are summarized above while ongoing program initiatives are summarised in section 3, Table 1.

Building ST&I Constituency/Popularizing Science and Technology

As part of its resolve to popularize ST&I in Africa, ATPS has continued to build an ST&I constituency through national chapter outreach activities, including Science Revival Days, active policy advocacy and participation by national chapters in policy reviews and policy development. ATPS has

continued to support a number of core activities to promote ST&I in the sub-region. Some of the activities carried out during ATPS Phase V include:

- A national workshop on “Science and Technology Park Development for Sustainable Industrial Growth” held in Nairobi Kenya, 30 June 2004. The workshop was held in collaboration with the Kenya National Academy of Sciences (KNAS), the International Service for the Acquisition of Agri-biotech Applications (ISAAA), and the African Academy of Sciences (AAS):
- A public lecture on Technological Innovation and Economic Renewal, Nairobi, July 2004. The lecture was given by Professor Calestous Juma, the Director of Science, Technology and Globalization at the Kennedy School of Government, Harvard University. He spoke on technological innovation and economic renewal;
- A one-day workshop and exhibition held in Nairobi, Kenya to commemorate the 2005 Scientific Revival Day of Africa on 30 June. Over 130 participants from local and international research institutions, small and medium-scale enterprises attended;
- A Scientific Revival Day of Africa held by ATPS Nigeria Chapter at Top Rank Hotel, Enugu, Nigeria on 30 June 2005 in Nigeria. The workshop was attended by 47 participants, including policy makers represented by commissioners responsible for science and technology, agriculture and commerce and members of the state;
- A roundtable to discuss the theme: Endogenous Technological Knowledge for Socioeconomic Development held in June 05 by ATPS Tanzania Chapter in collaboration with the Commission for Science and Technology (COSTECH). Twenty-eight people from academia, government and private sector attended;
- The African Scientific Renaissance Day on 30th June 2005, by ATPS Ghana Chapter held at the Kwame Nkrumah University of Science and Technology (KNUST);
- An African Scientific Revival Day, Accra, Ghana 30th June 2006, which featured a lecture on Biotechnology: Hope or Disaster for Africa by Dr Yaa Difie Osei;
- A Scientific Revival Day on 14 December, 2006 at the Grand Imperial Kampala Hotel, Uganda, partnered with Makerere University, the Uganda National Council for Science and Technology (UNCST), the Uganda National Academy of Sciences (UNAS) and the Uganda National Commission for UNESCO;
- A Scientific Revival Day for Africa on 3rd July, 2006 at Rockview Hotel, Wuse II, Abuja by ATPS Nigeria Chapter, which celebrated the 19th anniversary of the scientific revival day for Africa and which was attended by top government officials and renowned scientists in Nigeria;
- A workshop on Strengthening Communication and Journalism in Agricultural, Natural Resource and Rural Development in Central, South and Eastern Africa, Lusaka, 18th to 22nd September 06. ATPS sponsored five well respected Kenyan and Ugandan journalists to the workshop that was attended by 36 media professionals from 12 African countries; and

Through these activities, ATPS has continued to popularize ST&I in the continent and also build a constituency of ST&I enthusiasts at both individual, institutional, national and regional scales.

National Chapter Outreach Activities

As noted, much of the Network's outreach activities occur through national chapters, the workhorse of the Network. Both in Ghana and in Kenya, Network members have successfully established institutions geared to popularize science and technology: the Centre for Innovation and Enterprise Development in Kumasi, Ghana; the Kumasi Institute for Technology and the Environment; and in Kenya, Mukmik Consultancy.

Effective policy advocacy through improved access to the policy arena is also on the rise. In Lesotho, Swaziland, Ghana, Kenya, Nigeria, Uganda, Zambia, Tanzania, and Zimbabwe, ATPS national chapters have been recognized by the respective governments as experts and policy advisory on S&T. A number of ATPS members now serve their countries in various prominent capacities both in the parliament, in the senate or in special advisory capacities. The former National Coordinator for Lesotho was in the House of Senate until he passed on; the former Executive Director of ATPS served as the Economic Adviser to the President and Chief Executive of the National Planning Commission of the Federal Republic of Nigeria. A member of the ATPS Board is currently the longest serving Minister for Science and Technology of the Federal Government of Nigeria on record; and another member currently serves as the Mayor and Vice Governor of Abidjan, Cote D'Ivoire. Other ATPS members are also serving in various capacities in relevant ministries. This active engagement by policy makers and key ST&I experts in the Network provides unique opportunities for ATPS to access and influence ST&I policy making in Africa.

In terms of ST&I capacity building, ATPS members including some national coordinators and other researchers are now serving in leadership positions in ST&I institutions ranging from deans of faculties to executive directors of ST&I institutions in both private and public sectors. With regard to closing the loop, in some of the countries ATPS members in academia have demonstrably linked research benefits to the teaching curriculum through the introduction of learning modules on S&T policy into the academic curriculum. These connections have occurred in the Department of Economics at University of Nairobi, Kenya, and in the Department of Mechanical Engineering at University of Science and Technology, Kumasi, Ghana, among others. Other members are actively championing the cause of ST&I policy making in their home countries through publications in the national newspapers, policy advocacy, etc. Through these activities, ATPS Tanzania Chapter is now recognised as an important S&T partner by the Ministry of Higher Education, the United Republic of Tanzania. In Lesotho, the former ATPS national coordinator was called to serve in the Senate in 2006. Other ATPS national coordinators and researchers are increasingly being called upon by government to advice on ST&I policy issues. This is the case in Nigeria, Kenya, Ghana, Tanzania, Lesotho, Swaziland and many others. The AYFST

program has also been a useful tool in fostering the capacity of African youths to contribute to ST&I research and policy debates in Africa.

The ongoing bilateral and multilateral collaborative research projects which are carried out under the auspices of the ATPS thematic research programs, such as the ICT, water and environment, health innovation systems, and EU Framework VI programs are cumulative evidence of effective networking capacity of ATPS. This is necessary to break the “researcher isolation” syndrome which is a common feature of Africa’s S&T policy research terrain. The ATPS collaborative research programs are effectively enhancing inter-regional and international knowledge sharing amongst ST&I researchers, policy makers and stakeholders. This is also enabling access to different knowledge communities both within Africa and in the developed world to avoid re-inventing the wheel. Researchers outside the region are being linked through ATPS annual conferences and international collaboration programs. As noted in Phase V strategy, ending “research autarky” is a goal that all of the S&T-friendly organizations within the region seek to promote but that ATPS has been the most successful.

SUMMARY OF PERFORMANCE HIGHLIGHTS

Box 1: Performance Highlights

ATPS achieved more than its stated goals and objectives for the current phase, 2004 – 2007. Few of the achievements during the phase are listed below:

During the current phase, ATPS has grown from having a single thematic research program, *Strengthening ICT Policy in Africa*, to having four thematic research programs, and a collaborative project funded by the EU Framework VI specific measures in support of international collaboration between EU and developing countries. This dynamic response by ATPS to the shift by some Donors to thematic research programs during the phase is seen as an indication of the built capacity within the network.

In the same period, five new chapters in Francophone Africa (Benin, Senegal, Mali, Côte d'Ivoire and Burkina Faso) and two chapters in southern Africa (Mozambique and South Africa) were established.

ATPS also fostered policy interventions to support discussions of the on-going efforts in Africa to craft biotechnology policies, biosafety laws and other regulatory instruments in member countries, for example, Kenya, Ghana, Nigeria, Swaziland, etc.

An Eastern African Policy Dialogue on Biotechnology Policy-making, Trade and Sustainable Development. The workshop brought together a wide range of stakeholders – including government and intergovernmental organizations, civil society groups, academia, industry and the media – from the Eastern African region to deliberate on the formulation of coherent, informed and inclusive policies on trade, biotechnology and sustainable development at the national, regional and multilateral levels. This led to a regional assessment of biotechnology, trade and sustainable development in eastern Africa. The outcome of the case studies is now published in a book volume: *“Biotechnology: Eastern African Perspectives on Sustainable Development and Trade Policy”*.

As part of its efforts to build a sustainable constituency in ST&I policy research in Africa, ATPS launched an African Youth Forum for Science and Technology (AYFST) in 2004. The ATPS youth program has successfully given the African youth a voice in the ST&I policy debates in Africa.

ATPS had a record growth in publications during the current Phase, with 70 publications in various media. ATPS has also begun to disseminate its research finding through the fourth estate to maximize the impact of its science through the writeshop process. Plans are underway to publish a special issue journal article and a book volume from the ICT and the Water and Environment programs respectively.

ATPS also expanded its constituency through the EU Framework VI international collaboration programs.

ATPS members are now serving in key ST&I positions in national governments and government ministries in Lesotho, Nigeria, etc.

ATPS members are now playing key roles in the ICT sectors in Zambia, Mozambique, Rwanda, Nigeria, Kenya, Ethiopia, etc.

2.4 ATPS Milieu: Partnerships and Niche

2.4.1 The Global Arena

The prospects for science and technology-led development in Africa have never been brighter since the early 80s. Part of the impetus is coming from a global agenda that has once again recognized the centrality of science and technology (S&T) for Africa's development and an acknowledgement the neglect or lack of attention these issues have received from the development partners in the last twenty five years.

Starting with a donors' conference in February, 2004 in London and Amsterdam, sponsored by the Canadian, the British and Dutch governments on forging new partnerships for Africa's renaissance through investments in science and technology knowledge, a renewed commitment for funding science and technology for Africa's development was made. This commitment has seen some key donor organizations making significant programmatic accommodation, including increased funding for science, technology and innovation (ST&I).

In furtherance of this recognition, the United Nation set up a special task force that explicitly recognized the role of ST&I in the attainment of the Millennium Development Goals (MDGs). The Blair Commission was not left out in recognizing the role of knowledge associated with ST&I in Africa's development and went a step further in recommending appropriate steps for actualizing science-led development in Africa. More recently, we have heard appropriate "noises" and definite steps being taken by institutions, such as the World Bank that had in the past assigned marginal value to home grown scientific and technological knowledge in its lending activities and conditionality. At one time, even investments in higher education in Africa, a prerequisite for indigenizing technological know-how, was deemed uneconomical. This has now changed. There is now a consortium of donors that have targeted significant support to revitalizing higher education in Africa.

In the continent, the African Union/NEPAD S&T activities have attracted the attention of development partners and national systems, further underlying the new enthusiasm for S&T led development. The institutionalization of the annual conference of science and technology Ministers is significant. But the link with the national systems is still weak. Following-up on agreed continental agenda with the national systems requires a strong partnership between the AU/NEPAD and other African non-governmental organizations such as the ATPS that have effective links with the national policymakers, some of whom are members of ATPS national chapters.

In addition, the wave and deepening of democratization have enlarged the space for greater dialogue including a renewed appreciation for the role of science and technology in improving the standard of living of Africans, and ultimately in fighting poverty. In general, there is an appreciable increase in the budget of ministries of science and technology. But these increases pale in comparison to what the South East Asian countries devoted to R&D and ST&I activities that transformed their economies into knowledge-based ones.

There is still a certain fuzziness in the role the political class is willing to assign ST&I in development. The portfolio of the Ministry of Science and Technology is still considered a marginal appointment, with many of the Ministers of S&T struggling to catch the attention of their Heads of State and Ministers of Finance. In almost all instances, there is no real capacity for S&T policy formulation and implementation leaving the coordinating role in the ministries in the hands of bureaucrats with no training in the management of ST&I. But more importantly, scientists and proponents of science and technology-led development continue to address and lament amongst each other without any real attempt to download their elitist language to comprehensible forms in order to increase the participation of ordinary Africans in the debate. This is necessary in building political clout/pressure that would register among the political elite. Besides, increasing the accessibility of many Africans to S&T would force scientists to continually relate science and technology to increasing factor productivity in the relevant sectors such as agriculture, manufacturing industries, etc. This moves the discussions into the economic realm in a manner that justifies the investment among economic planners that control the purse-string.

This Milieu presents several challenges/opportunities that ATPS is uniquely positioned to address/ take advantage of in Phase VI. Building on its past activities and increased visibility and acceptability and given the current global interest, it would reposition itself as the institution of choice for international partners in matters of S&T-led development for Africa. Such partnerships must recognize the universality of the origin of knowledge, mutual respect, mutual learning while strengthening ATPS as authentic African institution. Many international scholars/researchers interested in Africa's developmental challenges will find ATPS the appropriate vehicle with skills in translating research to policy; transforming knowledge to innovations for development, effective knowledge brokerage and policy advocacy. Such partnerships are already beginning to emerge with some collaborative efforts underway between ATPS and institutions and centres in Europe and India. In Africa, some nation states are increasingly recognizing the contributions of ATPS national chapters and other Network members by appointing them into top government advisory positions and / or cabinet memberships. In the next phase, this arrangement will be formalized and appropriate structures put in place at the national chapter levels for maximizing the value addition that ATPS brings.

The absence of science communication and dialogue continue to hamper the translation of science/knowledge to the production of goods and services and hinders the building of a strong constituency for home-grown science led development in Africa. ATPS will, therefore, re-energize its science and communication program through "writeshop" that brings researchers, policymakers, journalists and other stakeholders together for mutual learning and dissemination of research results in a very accessible language. It will build the capacity of both the African and international researchers to communicate more widely and build the confidence of the policymakers to trust new knowledge generated by African researchers. Already we are beginning to see policymakers making special requests for the extension of some localized projects whose results have attracted their attention.

ATPS collaborates with United Nations University Institute for New Technologies (UNU/INTECH) in the Netherlands; The Macaulay Institute in the UK; Dialogue Matters in the UK; University of Hyderabad in India; Lund Universitet in Sweden; and with scholars at University of Cambridge, UK; Aalborg University in Denmark, Centre for International Development, Harvard University, USA, University of Strathclyde, Scotland, UNCTAD Geneva and Stanford University, USA, and many others. In Africa, ATPS' partner institutions include ACTS, AAS, AFDB, African Union, the African Institute for Economic Development and Planning, Common Market for Eastern and Southern Africa (COMESA) and the New Partnership for Africa's Development (NEPAD). The recent expansion of the ATPS Board to include more international S&T researchers from the echelons of science in Europe and relevant Parliamentarians in Africa is expected to strengthen these partnerships in the new phase.

2.4.2 Regional Arena

Many agencies in the region have at various times tried to promote science and technology in Africa either through collaboration or by highlighting the potential benefits to engaging in S&T research with an Africa focus.

In 1993 the African Regional Centre for Technology (ARCT), Dakar, Senegal, in collaboration with the African Academy of Sciences and the American Association for the Advancement of Science (AAAS) produced and published a guide to directories of information on S&T, as a major effort to centralize data on research and development institutions. Prior to this effort, several initiatives were underway including the launch in 1991, of a series of meetings through AAAS, to sensitize US scientists, educators and development specialists on major S&T policy issues affecting the African region. The emphasis at the time was on revitalizing teaching and research in the sciences and engineering within the universities.

Within the region, outside of academia, the AAS, ARCT, ACTS and ATPS have been involved in promoting S&T. The AAS, established in 1986, seeks primarily to honour S&T achievers; additionally to mobilize and strengthen indigenous scientific and technological capabilities for science-led development. It is also meant to foster the dissemination of scientific knowledge and facilitate networking among scientists in the region. The membership is composed of scientists, technologists and social researchers.

The Academy intends to continue with these objectives. Although its principal objectives are in consonance with the mission of ATPS, its instrumentality for dissemination and outreach vastly differ from that of ATPS. The Academy's concept of capacity building is peripheral to its existence, does not involve hands-on training via regular training workshops, annual conferences, and grant proposal tournaments. By constitution, the Academy differs from ATPS in being an elite club of scientists who have attained the highest international standards in their scientific endeavour.

The ARCT was established by the Africa Union (then OAU) and UNECA in 1977 to promote the application of technology for development by enhancing

regional technological capacities, offering assistance in technology policy formulation and implementation, and dissemination of mature technologies. In collaboration with other UN agencies, ARCT is actively involved in regional technology awareness seminars and in the fostering of invention and innovation. Some of its more recent research efforts have focused on global biodiversity, climate change and food technology, with activities widely distributed across the continent.

ACTS on the other hand is a policy research institution focused on public policy research and capacity development in international environmental agreements, technological change, and natural commons (natural resource management systems). Since 1992, its main thrust has been on environmental management issues. Additionally, it initiates and provides inputs into policy reform processes as well as disseminates its research findings. With respect to capacity building, ACTS participates in training within the public and the private sector and in research by providing support through either research affiliation or fellowship. ACTS was established in 1988.

More recently (July 2002), a new centre came into existence in the Faculty of Technology, Kigali Institute of Science and Technology, Rwanda. The centre, called African Centre for Engineering and Technology Education (ASCETE), seeks to promote expertise and research on engineering education and to act as a portal for information on textbooks, engineering teaching courseware, software and equipment. ASCETE is set up by the UNESCO International Centre for Engineering Education, located in the Faculty of Engineering at Monash University, Clayton Melbourne, Australia.

In the short term, ASCETE will liaise with industry to seek the harmonization of engineering curricula and will work to encourage networking. In the medium term, it will continue to promote networking, particularly among universities in Rwanda, Central, Eastern and Southern Africa. The long term goals are to strengthen linkages, with emphasis on staff and student exchange programs, and to engage in dissemination by producing scientific journals and a newsletter.

2.4.3 ATPS Niche

Predating many of the activities enumerated above was the 1979 international conference in Vienna, Austria that was convened to review the state of science and technology in Africa. One of the important outcomes of that convention was to emphasize the urgent need to build capacity for research on technology policy in Africa. The response to this call manifested in the establishment of two sub-regional research Networks: the Eastern and Southern Africa Policy Studies Network (EATPS) and the West African Technology Policy Studies Network (WATPS), respectively. The establishment of these sub-regional networks in the 1980s pioneered the merger that became a regional network, ATPS in 1994.

Outside of the universities and colleges of technology, a survey of the level and breadth of support to S&T activities throughout the continent reveal a very sparsely populated terrain. Such a gap is of itself a developmental challenge, particularly in view of the obviously critical role for science and technology in

poverty alleviation, a role that almost universally across the continent is not given sufficient prominence. This is the reason ATPS views as an opportunity rather than a threat, the number of actors in its milieu. In fact, given the serious concern with the small number of active advocates for ST&I in the region, ATPS considers building linkages outside of the region to be a complementary strategic initiative that is timely. ATPS therefore collaborates with some of these allied institutions and centres (e.g. ACTS, NEPAD and others), in addressing research and policy programs of common interest (for details, see section 2.3).

A unique attribute of ATPS is that its research and policy advocacy is driven by the felt needs of African nation states. With national chapters in 23 African countries, ATPS proactively identifies research and policy questions through a bottom-up needs based approach and engages the relevant stakeholders throughout the stages of research process, from research prioritisation and research design to the validation and dissemination of the findings and policy outcomes.

ATPS research priorities are identified by the national chapters in participatory dialogue with relevant government ministries. This first participatory dialogue forms the first “**P** phase” which informs ATPS’ program priorities. This is followed by qualitative analyses for the prioritization of Africa’s research and policy needs through emergent analysis and other forms of discuss analyses. This forms the qualitative “**Q**” phase of ATPS research prioritisation. These two phases lead to selection of research and policy priorities which informs the themes for ATPS annual conferences and workshops. The conferences provides platforms for a Network-wide participatory dialogue for the identification and prioritisation of the specific research and policy questions on selected themes to inform the design of an ATPS regional research program and calls for small grants research proposals on the subject. While the collaborative programs address ST&I research and policy questions of common interest at regional level, the small grants programs address research and policy questions relevant to specific countries. The research program will then be designed to address the emerging questions and policy needs at the relevant scales, including necessary tests of hypotheses. This forms the “**R**” phase. To ensure buy-in and capacity building for all stakeholders, ATPS research teams are always multi-disciplinary including relevant stakeholders, practitioners and scientists in the relevant fields. Each research program is coordinated by one or two experts with good international reputation in the subject area. Finally, the scientific results from programs are continually subjected to international peer review, constant monitoring and interrogation by key stakeholders and policy makers in associated fields. This is achieved through a dynamic engagement with stakeholders in the progress review workshops and in the final participatory workshop for review of the scientific outputs and outcomes from the program. This forms the final “**P**” phase.

This “**P-Q-R-P**” framework enhances dynamic engagement with **researchers, policy makers** and **relevant stakeholders** which provides effective platforms for **triangulating orthodox science/knowledge** (including methods and approaches) with **indigenous science/knowledge** held by

stakeholders and **practical policy challenges** that may be faced in the implementation of recommendations from the research program. Experience from phase V, show that this participatory approach also enhances:

- (ii) A **“weaving together”** of different knowledge communities in a shared responsibility for providing solutions to African development;
- (iii) **Shared understanding and ownership** of the development problems being studied and the results and policy recommendations of the study,
- (iv) **Shared quality control to ensure** that the ST&I outcomes meet the expectations of all stakeholders, including publications in international science journals, news features for the mass media, policy briefings for parliamentary policy debates, etc; and
- (v) **Context relevance** to ensure that the ST&I outcomes are informed by and rooted in Africa’s social economic, ecological and governance structures. Science & technology is useless if they cannot be translated to innovations for development.

Overall, this dynamic process of shared partnership by all stakeholders throughout the research process: from inception, design, implementation and dissemination, is expected to yield trans-disciplinary and trans-cultural S&T and innovative solutions to Africa’s development challenges. It is also expected that this shared responsibility and continued engagement will lead to the necessary behavioural and institutional changes necessary for sustainable development in the region.

The organizational structures of ATPS make it the ideal ST&I policy institution in Africa to champion this participatory ST&I policy research model. Details on the organizational structures of ATPS are provided in annex 1). As an international organization with full diplomatic status in Kenya, ATPS identifies, prioritizes and implements its research and knowledge brokerage activities through its national chapters in 23 African countries and in liaison with international experts on the relevant subjects. This makes ATPS research and policy advocacy unique and very effective in the region. ATPS is not only interested in the orthodox science quality of the research outputs and policy outcomes, it is also interested in weaving orthodox and indigenous knowledge together through a process that gives a voice to all stakeholders and creates a shared responsibility for ST&I policy development and implementation.

3.0 STRATEGIC PRIORITIES AND PROGRAM OBJECTIVES FOR ATPS PHASE VI: 2008 – 2011

In setting its strategic priorities and program objectives for Phase VI, ATPS has been both reflective and engaging, drawing on constructive and insightful feedback from the various sources including two SWOT analyses workshops facilitated by an independent Consultant, Dialogue Matter UK, and debriefing reports received from the ongoing International Development Research Centre (IDRC) sponsored external evaluation of the Network, and ST&I policy priorities of key stakeholders that are representative of ATPS' milieu.

The Phase VI Strategic Plan aims to improve the understanding and functioning of science, technology and innovation (ST&I) processes and systems to strengthen the learning capacity, social responses, and governance of S&T for addressing Africa's development challenges, with a specific focus on the MDGs. Taking into consideration the achievements of the ATPS Phase V and ongoing activities in 2008, ATPS Phase VI will pay specific attention to a set of specific strategic goals identified in liaison with the ATPS national chapters and policy stakeholders. These include to:

- 1) Strengthen institutional and individual capacity to carry out and use cutting edge research in inter-related ST&I processes and systems and their implications for achieving the millennium development goals (MDGs) in Africa;
- 2) Facilitate and strengthen regional and international cooperation and partnerships on related ST&I research and policy issues to assist access to research environments and knowledge communities in other continents;
- 3) Support and strengthen the innovative capacity of youth and women to apply ST&I to relevant development policy issues in Africa;
- 4) Strengthen endogenous technical capacities to produce, use and govern sustainable technologies for achieving the MDGs in Africa;
- 5) Facilitate and support knowledge sharing on ST&I amongst key stakeholders for sustainable development in Africa; and
- 6) Promote the integration of S&T research and policy in African development planning and policy making processes.

These strategic goals generate three thematic and three cross-cutting strategic priorities and programs for the ATPS Phase VI. The thematic programs include (i) research and research capacity building, (ii) international cooperation and partnership, and (iii) youth and gender empowerment. On the other hand, the crosscutting programs include (iv) training and sensitization, (v) science communication and stakeholder dialogue, and (vi) outreach, knowledge brokerage and policy advocacy, respectively. These programs are inter-twined and together with monitoring and evaluation, form the strategic framework for the Phase VI Strategic Plan. These program priorities are elaborated in section 4 of this plan.

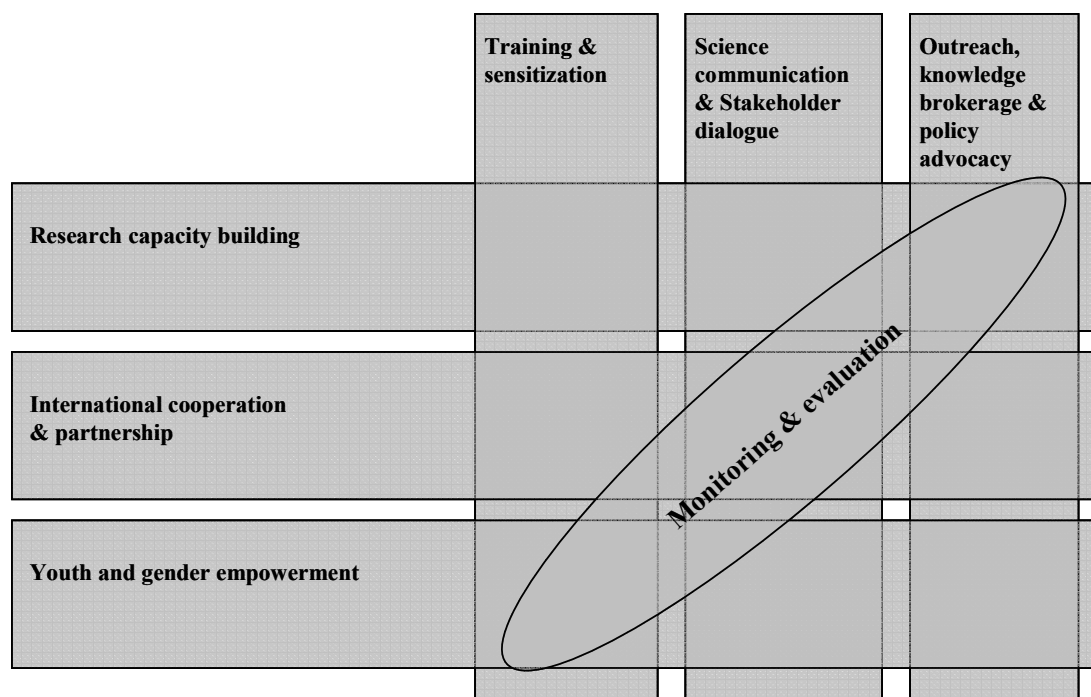


Figure 1: Strategic Framework for ATPS Phase VI showing the Strategic Priorities

Each of these strategic priorities are discussed briefly below:

3.1 Research and Research Capacity Building

The overall strategic objective of the research program is to support cutting-edge multi-disciplinary research and research capacity building projects to enhance individual and institutional capacity to generate and use new ST&I policy-related knowledge for addressing the MDGs in Africa. Specific attention will be paid to research that examines the impacts and relevance of indigenous and emerging science, technologies and innovations (ST&I) systems on achieving the MDGs in Africa.

The specific priorities of the research capacity building program includes to:

- 1) Identify and pursue thematic research into contemporary and inter-related ST&I policy issues of importance to achieving the MDGs in Africa;
- 2) Commission and facilitate targeted small grants research to respond to ST&I systems-related issues of relevance to national interests within the context of the MDGs;
- 3) Identify and award thesis grants for research capacity building in ST&I-related subjects targeting the MDGs in African universities and polytechnics;
- 4) Award thesis supervision grants to promote the development of quality S&T education in Africa; and
- 5) Organize and implement research methodology training workshops on ST&I systems related subjects to enhance capacity to deliver high quality research outputs by Network members.

Under this program, ATPS continues to pursue selective research into contemporary S&T policy issues that address cross-cutting questions of importance to development in the region. The essence of this type of thematic research is to seek results that can be applied widely to solve problems in the region, share country experiences, foster networking among researchers, and provide quality advice based on robust results. ATPS will continue to engage with relevant stakeholders in identifying and prioritizing specific research and policy questions to be addressed in each member country. Specific attention will be paid to all the stages of the research project cycle, including the scoping, planning, implementation and continuous evaluation to ensure adequate risk minimization and timely delivery of target outputs and policy outcomes. Each of the thematic research programs will include the three cross-cutting strategic priorities: targeted training and sensitization activities, public participation and evidence-based stakeholder dialogue, knowledge brokerage and policy advocacy. All ethical issues in contemporary S&T policy research including youth and gender empowerment issues will also be taken into account. To ensure effective research capacity building, the ATPS small research grants scheme and research methodology training workshops will be an integral part of each thematic research program. This approach will ensure a targeted and effective response to specific ST&I policy research issues at local grassroots levels, continued capacity building for young researchers and network members⁵, enhanced cohesion and social responsibility in the ATPS national chapters and cost-effectiveness in research implementation and delivery. The focus and scale of each thematic research program will be informed by its strategic objectives and targeted policy outcomes.

ATPS is committed to generating new knowledge and/or new technologies through applied ST&I policy research of international standard and also emphasizes the transformation of the generated knowledge and technologies to innovations for sustainable development in Africa. The design of each research program will therefore involve a dynamic engagement with relevant stakeholders and social actors to ensure effective results disseminations throughout the research process. In each program, a systematic monitoring system will be put in place to ensure periodic review of progress towards stated objectives and policy outcomes. This will help the Network to stay on track, and ensure the documentation of the lessons learnt in program implementation.

In consultation with the national chapters and other key stakeholders, ATPS has identified a number of ST&I policy research priorities relevant to addressing specific policy research questions in member countries (Table 1). These priorities include research in (i) national systems of innovation in agriculture, water supply; energy and the environment; climate change adaptation; agricultural production and food security; knowledge management especially with regard to intellectual property rights (IPRs); effective utilization of existing technologies for development, especially ICTs, biotechnology, health technology, among others.

⁵ The composition of the research teams for the small grants projects will be designed to encourage young researchers to learn from senior colleagues and international experts throughout the research and peer review process.

In collaboration with allied institutions, ATPS is already at advanced stages in taking forward some of these thematic program activities:

1. In collaboration with the Macaulay Institute, UK and the Tanzanian National Parks Authority, ATPS has already received a specific support action grant from the EU Framework VI international cooperation program. The project: *“Integrated Transboundary River Management Policy Development”* Contract No: INCO-CT-2007-043784-INTREPID. The project takes forward some of the findings of the ongoing ATPS Water and Environment Program and lessons from the EU Water Framework Directive. The program is ongoing and will be completed in Phase VI.
2. ATPS is also in collaboration with 11 other institutions in Europe, Africa and India, on an EU Framework VII project: *“Science, Ethics in Technological Responsibility in Developing and Emerging Countries”* Call identifier: FP7-SCIENCE_IN_SOCIETY-2007-1. The project is being led by Consiglio Nazionale delle Ricerche (National Research Council) Italy and is now at final stages of contract negotiation with EU Commission Services. This project will last for three years.
3. In collaboration with Biotechnology Trust Africa (BTA) ATPS has already submitted a proposal on *Strengthening National IP Policy and Legal Frameworks in East and Southern Africa: Traditional Knowledge, Access and Benefit Sharing and Effective IP Systems* to the Royal Dutch Government. ATPS will continue to pursue cutting edge strategic research in the area of intellectual property rights (IPRs) in liaison with like minded institutions such as the World Intellectual Property Organization (WIPO) and Biotechnology Trust Africa (BTA), etc.

Overall, the implementation program for ATPS Phase VI will give priority to these ST&I policy research needs identified in member countries (re: Table 1) while ATPS remains flexible in responding to new policy and development challenges during the period.

Table 1: Research Priorities for ATPS Phase VI Research Interventions, 2008 -11.

| Research Priorities | Study Thematic Objectives | MDGs targeted |
|---|---|---------------|
| 1. A regional study to review progress towards MDGs in member countries | (i) Conduct case studies on the success stories for knowledge sharing and policy advocacy | All |
| 2. A study of the role of knowledge and innovations systems in ensuring food security in Africa | (i) Commission primary research to examine alternative technologies to enhance agricultural productivity in Africa (ii) Initiate and support international collaboration & knowledge exchange to learn from green productivity experiences in Asian countries (iii) Initiate and support community based learning & knowledge sharing on existing indigenous agricultural technologies with potentials to alleviate food poverty in Africa, including food production, processing and marketing technologies (iv) Organize farmers' forums to disseminate new technologies from elsewhere and building their capacity to produce, use and master green productivity technologies in the agricultural sector (v) Commission national systems of innovation (NIS) in selected agricultural sub-sectors to identify systems failures that constrain innovation and productive capacity in Africa | 1 |
| 3. A study of the role of ICTs in agriculture | (i) Commission regional and small grants research on the role of information and communication technologies in agricultural product marketing (ii) Organize stakeholder policy forum to share success stories elsewhere | 1 |
| 4. A study on science, technology and innovation systems for good health delivery in Africa | (i) Build on existing health innovation systems program to strengthen institutional and individual capacity in health innovation systems research for better health delivery and maternity care in Africa, (ii) Commission follow- up case studies in selected health sectors including nursing and midwifery, traditional health care, and combating HIV aids (iii) Train policy makers on the NIS approach and its relevance to improving health delivery in Africa | 4, 5, & 6. |
| 5. A program on energy and environment for sustainable development Africa | (i) Commission regional and country studies on green energy sources (both indigenous and foreign) to combat energy poverty problems in Africa (ii) Organize a regional workshop to sensitize the public of available energy options and encourage participation in social entrepreneurship initiatives (iii) Commission studies on alternative remediation options for energy pollution in major cities and oil producing regions. Specific attention will be paid to options available to local communities such as bio-remediation, phyto-remediation, etc. | 1, 7 |
| 6. A follow-up study on water and environment for sustainable livelihoods in Africa | (i) Carry out a river basin twining project to share the lessons learned from the Phase V water and environment program with experts and practitioners elsewhere, build partnerships for continued knowledge sharing and river management policy development (ii) Commission a national innovation systems study of the water sector in selected countries to understand constraints to water and sanitation provision in rural and per-urban communities. | 8 |
| 7. A study of the impact women on science & technology the MDGs in Africa | (iii) Conduct and evaluation of the impact of African women in S&T on achieving the water | 3 |
| 8. A study of climate change adaptation strategies in African rural communities | (i) Commission regional and small grants research to examine indigenous coping strategies by rural communities to extreme climate events, such as flooding, draughts, and crop failure, support the development of explicit and implicit S&T policies to mitigate climate effects on rural communities, and improve communication of climate change science through training of journalists and promoting collaborative multi-stakeholder dialogue. | 1, 7 |
| 9. Thesis capacity building program for African youths in S&T | (ii) Commission small thesis writing grants to support young students in S&T or related subjects in African universities. | 1 |
| 10. Collaborative research projects with like minded international organizations | (i) Continue to participate in international collaborative research on S&T related subjects. (ii) Carry out a program on <i>Strengthening National IP Policy and Legal Frameworks in East and Southern Africa: Traditional Knowledge, Access and Benefit Sharing and Effective IP Systems</i> | 8 |

Expected outcomes

By 2011, ATPS expects to have:

- 1) Provided opportunities for African researchers to engage in high-quality peer reviewed research on ST&I related subjects relevant to achieving the MDGs in Africa;
- 2) Built individual and institutional capacity to generate and use ST&I for addressing the MDGs in Africa; and
- 3) Enhanced better understanding of ST&I research and policy processes in Africa.

3.2 International Cooperation and Partnership

The strategic goal of this program is to enable African universities, research institutions, ST&I associated ministries, firms and individual experts to establish contact with their counterparts in other countries, thereby facilitating access to other *knowledge communities* internationally. ATPS believes that this will promote *scientific excellence* and development of necessary *innovative skills* for the production of knowledge, technologies and innovations for development in Africa. It is now widely accepted that the international competitiveness of modern economies is linked increasingly to their ability to generate, adapt and use new knowledge. Science, technology and innovation systems (ST&I) are considered to be key factors contributing to achieving sustainable development, prosperity and economic growth. International cooperation in ST&I sharing has also proved instrumental in enhancing and enriching many other policy areas with an impact on external relations: trade, development, environment, energy, telecommunications, etc in many developing economies.

The Phase VI program on international cooperation and knowledge sharing will be a vital instrument for establishing and reinforcing platforms for co-operation amongst existing knowledge communities on bilateral, inter-regional, and international scales. Specific program initiatives will include developing, adapting and using new knowledge to address the MDGs in Africa while promoting Africa's indigenous technologies for use elsewhere.

Ongoing S&T dialogues and networks will be further enhanced locally and regionally to identify and establish priority areas of research and policy for specific development challenges to the continent, for example, sustainable energy options, sustainable management of water, biodiversity, forest ecosystems and livelihoods, and the role ICTs, biotechnology, nanotechnology, etc in meeting the MDGs in Africa based on lessons elsewhere. These partnership forums will promote regional integration and strengthen the coordination of ST&I cooperation and complementarities with activities carried out by other community policy instruments. Coherence between national activities on ST&I will also be enhanced by supporting the coordination of national programs and through multi-lateral coordination of national ST&I research and policy activities.

Priorities for ST&I cooperation with other countries and regions will be based on participatory dialogue in recognition of their specific socio-cultural and ecological conditions, research capacities and lessons from previous programs. Specific attention will be given to helping less experienced countries to rapidly acquire the necessary knowledge and technologies accumulated in Africa and in other countries of the developing world.

Specific priority will be given to strengthening dialogue between African regions to encourage public and private sector partnerships taking into account the larger framework of external relations and cooperation programs and policies.

The specific priorities of the international cooperation and partnership program include to:

- 1) Promote thematic international cooperation actions in ST&I policy decision making for addressing the MDGs, based on mutual interests and benefits;
- 2) Facilitate and support participatory dialogue amongst relevant policy makers, scientific community, civil society, private sector stakeholders and development partners (donors, relevant ministries, etc), to identify and prioritize S&T cooperation policies of mutual interest;
- 3) Promote and strengthen the participation of targeted African countries, especially in the Francophone and Lusophone regions, in shaping ST&I policy research and policy agenda for Africa;
- 4) Promote Africa's competitiveness through strategic public-private sector partnerships on selected ST&I issues by engaging international experts in ATPS' research programs and through strategic collaborative partnerships with like-minded institutions and private sector enterprises in Europe, Asia and America; and
- 5) ATPS annual conferences: Thematic annual conferences will be employed to take forward emerging issues and/or review ongoing work.

It is expected that these platforms for dialogue will be designed to promote regional integration and the identification and prioritization of common research areas of mutual interest to African countries, facilitate the uptake and use of common identified research outcomes, technologies and innovations for addressing the MDGs in Africa, inform future thematic research by ATPS and like-minded organization in Africa⁶. This will also create effective bi-lateral partnerships amongst African S&T institutions, government ministries, and civil society and with like-minded organizations globally.

3.3 Youth and Gender Empowerment

This program will have two strands of activities designed to mobilize youths and women to build their capacities in S&T research and policy decision-making thereby empowering them to contribute positively to efforts to achieve the MDGs in sub-Saharan Africa. Two program priorities have been identified:

⁶ Helping Africa to set the research and policy agenda for achieving the MDGs in the next decade on the one hand, and helping international agencies and Donors prioritize funding support to targeted needs of the continent.

3.3.1 African Youth Forum in Science & Technology (AYFST)

Since 2005, ATPS has embarked on an African Youth Forum in Science and Technology (AYFST) program with the key objectives of creating awareness and sensitizing African youths; capacity building; peer education and mentoring; information sharing and inclusion, and empowerment of the African youth in the area of ST&I research and policy decision making processes.

Over 230 African youths from 21 African countries have benefited from three regional youth congresses held in Kenya, Ghana and Uganda in 2005, 2006 and 2007 respectively. The congresses focused on youth employment and youth leadership in HIV/AIDS prevention; addressing food insecurity and health for sustainable development in Africa, and more recently, the role of youths in achieving the MDGs in Africa. These programs have been very successful in creating awareness and sustaining interest amongst African youths in ST&I research and policy related issues in Africa, empowering the youth to participate actively in ST&I research, local interventions and social entrepreneurship programs. The continued engagement and dialogue among the youths is enhanced through the AYFST Website <http://www.ayfst.org>.

The specific strategic priorities of the phase VI youth program are to:

- 1) Mobilize the youth and empower them to harness ST&I for development in Africa;
- 2) Support and facilitate regional knowledge sharing and cooperation among African youth;
- 3) Facilitate and promote youth engagement in agriculture, science and technology, and social entrepreneurship programs in their countries,
- 4) Facilitate ST&I career mentoring for African youths by their senior colleagues in Africa and in Diaspora;
- 5) Provide targeted research training and capacity building especially in agriculture, S&T research and practice to address the declining expertise and growing disinterest in the sector; and
- 6) Promote youth involvement in ATPS research and other MDG related S&T projects elsewhere.

Expected Outcomes:

The AYFST program is expected to achieve the following outcomes by 2011.

- 1) Enhanced skills/capacities in agriculture, S&T research and policy advocacy;
- 2) Improved skills in S&T research and project management and implementation practices among African youths;
- 3) Increased youth participation in S&T research projects and other innovative and productive interventions at local, regional and national levels;
- 4) Increased internships at various ST&I related research institutions and non-governmental organizations in Africa and elsewhere;
- 5) A functioning networking platform; forum [online and offline] in which the youth can exchange views and opinions; and

- 6) Increased awareness among the youth on inter-related policy issues in agriculture, science and technology and the need for multi-disciplinary approaches in ST&I research and policy making.

3.3.2 African Women in Science & Technology Forum (AWSTF)

The aim of the AWSTF is to provide a vehicle through which African women can express their ideas, contribute their expertise and participate in policy and decision-making processes in Africa. The program objectives and expected outcomes of the AWSTF mirror those of the AYFST.

3.4 Training and Sensitization

The broad objective of this strategic priority is to strengthen local ST&I capacity in Africa. In order for developing countries to progress in scientific and technological development there is need to build local capacity that can help solve the many science and technology-related problems they currently face. Training and sensitization is a cross-cutting priority within the Phase VI Strategic Plan. It forms an integral part of each of the strategic priority described above.

Universities in Africa are potentially a powerful vehicle for development. However, they are also often underutilized for this purpose. The university curriculum is often not relevant to practical development issues in their host countries because of the pressure to compete and publish internationally. ATPS will continue to encourage universities to work with industry and government to accelerate local and national technical capacity development.

The specific priorities include:

- 1) Reviewing engineering curriculum to mitigate the mismatch between what is taught in polytechnics and skills requirements in the labor market;
- 2) Identifying and awarding small grants to S&T institutions including universities to promote the integration of S&T policy into their curriculum;
- 3) Organizing stakeholder and parliamentary round-tables and participatory dialogue to enhance evidence based policy making in the region;
- 4) Organizing S&T training for policymakers, parliamentarians and entrepreneurs to bridge the knowledge gap and build constituencies for S&T policy making, particularly in relevant government ministries and with other agents of change;
- 5) Organizing training of journalists, researchers, policymakers and artists to create a pool of resource persons for evidence-based popularization of S&T research and policy in Africa; and
- 6) Continuing to support science and innovation parks.

3.5 Science Communication and Stakeholder Dialogue

The importance of science and technology (S&T) to modern societies, and the role of a technologically informed population in promoting social and economic development have been recognized over decades.

There are several reasons why a focus on S&T to benefit the poor in Africa with ATPS Phase VI Strategy is appropriate and timely. Despite recent positive and rising per capita growth in sub-Saharan Africa (SSA), the absolute number of poor people is still rising and is projected to rise to 336 million by 2015 (World Bank, 2006). By 2015, over 90% of the poor are expected to live in either South Asia or Africa. Secondly, S&T is the most important and readily available means to empower the poor. However, S&T culture is yet to be mainstreamed at the community level in SSA, thus limiting the awareness and ability of the region's growing poor populations to recognize and apply basic scientific techniques to their daily chores, and therefore restricting their chances for innovation, growth and prosperity.

S&T policy studies in ATPS have been a vital source of knowledge and information for new strategies that can achieve visible improvement in SSA. Local and external scholars have carried out several S&T policy studies, but the extent to which policy makers and the general public have adopted the study findings and recommendations to aid development is not certain. Practical ways of communicating science through multi-media in order to transform knowledge to actual innovations for development is, therefore, becoming increasingly important.

The ATPS Phase VI strategy will, therefore, build the Network's experience in this area to close the science-policy gaps through innovative science communication strategies. This strategy will prioritize the following:

- 1) Building partnership with the mass media to promote evidence-based science reporting;
- 2) Providing and facilitating networking opportunities for S&T journalists, researchers and policy makers through joint workshops and policy forums;
- 3) Producing multi-media publications and disseminating ATPS research outputs in user friendly formats, newspaper articles, news features, and other artistic impressions such as cartoons, etc; and
- 4) Facilitating continued publication of high quality scientific research in international journals and other ATPS publication series;

Expected Outputs:

- 1) Designing and producing a media kit;
- 2) Organizing capacity building workshops for journalists and editors;
- 3) Organizing media award schemes to promote individual journalists and media houses that promote the reporting of ST&I activities;
- 4) Organizing write shops for journalists, researchers and artists to reduce relevant publication on ST&I policy;
- 5) Organizing regional policy forums for all stakeholders;
- 6) Convening round-table discussions for policy makers and researchers
- 7) Organizing ST&I week to show the public the relevance of ST&I in their daily chores;

- 8) ST&I policy prize for professional scientists and communication professionals who have conducted excellent innovative projects to present S&T to the public; and
- 9) Building regional and national networks/associations for S&T journalists.

Expected Outcomes

- 1) Better appreciation of ST&I policy research by science Journalists, Policy Makers and artists;
- 2) Newspaper articles (news/feature stories) for publishing;
- 3) Science story books and cartoons for primary schools; and
- 4) ATPS Technopolicy briefs derived from the research findings.

3.6 Outreach, Knowledge Brokerage and Policy Advocacy

The strategic goal under this program is to promote integration of ST&I research and policy in African development planning and policymaking processes. The following activities will be prioritized:

- 1) Expansion of national chapters to all SSA countries by 2015;
- 2) Continued support to parliamentary round-tables and other forms of stakeholder and policy dialogue, including policy fora, e-forum on ST&I and participatory community dialogue on relevant policy issues;
- 3) Continued support for regional research programs, regional training and research methodology workshops;
- 4) Continued support to national chapters to organize science revival days to mainstream ST&I research and policy issues in public debates;
- 5) Mainstreaming ST&I research and policy making in Africa by building linkages with government ministries, parliamentarians, etc., and encouraging involvement of network members in ST&I policy debates in Africa.

Expected Outcomes

- 1) Strengthened partnerships between researchers and policy makers in the ST&I policy process;
- 2) Opportunities for different policy stakeholders to brainstorm on the options for accelerating the achievements of a country's ST&I objectives;
- 3) Sensitized leaders/policy makers on their leadership roles in promoting ST&I-led development;
- 4) Stronger existing ATPS chapter through training, establishment of offices, etc;
- 5) Establishment of a minimum of five new ATPS chapters focusing on Francophone and /or Lusophone African countries; and
- 6) Minimum of eight policy briefs addressing MDG-related ST&I policy issues published.

4.0 PROGRAM IMPLEMENTATION STRATEGY: PROGRAM ACTIVITIES AND STRATEGIC APPROACHES

4.1 Research and Research Capacity Building

4.1.1 Thematic Research Programs

Regional Research: Under this program, ATPS continues to pursue selective research into contemporary science, technology and innovation (ST&I) policy issues that address cross-cutting questions of importance to development in the region. The essence of this type of thematic research is to seek results that are of wide applicability for the solution of problems in the region, to share country experiences, to foster networking among researchers, and to provide quality advice based on robust results. ATPS chooses a theme of strategic importance to the region in consultation with relevant stakeholders. A project coordinator is then appointed to ensure quality control and feedback to the secretariat, as well as function as the secretariat's "point person" in matters related to the theme. It is envisaged that a theme will be chosen once every year as funding permits. In collaboration with partner institutions, ATPS has already submitted some proposals to various donors to take forward some regional project initiatives (see section 3.1 of this document).

Small Research Grants: ATPS will continue to support the competitive small grants program given to individuals or teams in different countries within the national chapters of the network. By aligning the research activities under this program more closely with the strategic plan of national chapters, ATPS aims to respond more effectively to topics and agenda of national concerns to researchers in the network. Additionally, it builds within countries, the analytical skills required to do quality and policy-relevant research.

International Collaborative Research: ATPS will continue to build collaborative research partnerships with international institutions in Europe and elsewhere through continued participation in European Union Framework programs. ATPS' experience from Phase V activities in this area show that such collaborations provide vital opportunities for the identification and prioritization of common science, technology and innovation (ST&I) systems research and policy issues of mutual interests and benefits to Africa and the European Union. Participation in such collaborative research programs also enhances integration and collaboration between relevant ministries and researchers in both continents for the much needed knowledge and technology sharing for sustainable global development. ATPS entered into such research partnerships with institutions in many European countries during the last phase, including Italy, the Netherlands, Belgium, United Kingdom, Germany, India, Sweden, and many institutions in Africa during phase V.

4.1.2 ST&I Policy Research Capacity Building Programs

ST&I Policy Research Methodology Training: Under this program, ATPS will continue to conduct ST&I policy research methodology training as integral parts of its thematic research programs. In addition, ATPS will liaise with like-

minded institutions within the growing ATPS international partner institutions to initiate independent ST&I research methodology training workshops to address emerging concepts and methodologies in ST&I policy research. ATPS is already in discussion with a partner institution in the UK to initiate this program.

Curriculum Review: Under this program, ATPS will continue to initiate platforms or create an environment under which both the content and delivery of science and technology curriculum in formal institutions of learning are enhanced. By improving the curriculum, the possible mismatch between what is taught in polytechnics and the labour market skills requirements is mitigated.

ATPS national chapters will continue to monitor the curriculum content of science and technology programs in the polytechnics and relate that to skills demand in the industry. As has been demonstrated in the case of Ghana and Kenya, the introduction of a new curriculum is also a form of curriculum review. Facilitating dialogues by creating a forum or platform for the exchange of views and expectations between industry and institutions is another way in which this objective will be pursued. ATPS will also continue to mount consultative workshops in response to perceived needs or policy pronouncements as another avenue for pursuing this objective, as has been done in Uganda. This requires a strong alliance between the chapters, the private sector and academia. ATPS will, therefore, require national chapters to identify country specific strategies under their annual strategic plans to address this program so that ATPS secretariat can provide programmatic support through its budgetary process in the context of the overall resource envelope envisaged for the plan period.

Thesis Grants: ATPS will continue to issue grants to students working on their thesis to support the development of science and technology curriculum in institutions of higher learning. A related aim is to build relationships that support the continuous flow of researchers into the network and thus promote African capacity to conduct and disseminate quality research on ST&I policy issues, and also master the use of emerging technologies for sustainable African development. ATPS expects to call for small grants research tournaments each year.

Thesis Supervision: ATPS will encourage thesis supervision by Network members and Secretariat staff as an initiative to promote the development of quality science and technology education and hence grow capacity. This program will consist of providing small honoraria to senior network members to encourage senior academics to provide quality supervision of thesis in the area of science and technology. ATPS will seek joint supervision arrangements with like minded degree awarding Institutions in Africa and elsewhere to facilitate this program.

ST&I Institutional Support: This will consist of small grants for library and miscellaneous equipment support to S&T institutions including universities. ATPS will give preference to certain qualifying S&T institutions that proactively

seek to promote sciences and technology in their curriculum and therefore could act as role models, or those that are otherwise of strategic importance to ATPS such as institutions in countries where the network seeks to take root.

4.1.3 Strategic Research on National Innovation Systems

ATPS will continue to collaborate with national governments and like-minded institutions to conduct strategic research to build the culture of innovations and entrepreneurship in selected sectors of the African economy using the National Innovation Systems (NIS) approach. Priority sectors will include energy, agriculture, food processing and food supply chain, health and environmental management. The program will seek to engage proactively in detailed studies to uncover areas in which countries can dynamically acquire comparative advantage. The objective of the program is to integrate national planning with ST&I planning in order to achieve growth and employment through science, technology and innovation policies.

4.2 International Cooperation and Partnership

4.2.1 International Round Table Discussion Forum: ATPS will liaise with like-minded institutional partners in Europe and Asia to organize international round table discussions on selected global STP interrelated policy issues on mutual interest to partner countries. Through its participation in EU Framework programs and the growing institutional partners in Europe and elsewhere, ATPS is already initiating discussions on memorandums of understanding to foster this initiative.

4.2.2 Joint Participatory Dialogue on ST&I Policy Issues: ATPS will continue ongoing participatory dialogues on ST&I policy relevant subjects. Discussions are underway to enter into partnership with Dialogue Matters UK, to improve on the role of ATPS in facilitating stakeholder dialogue on science, technology and innovation for African development.

4.2.3 Private-Public Sector Partnerships: ATPS will continue to engage the private and public sector actors in technology and knowledge sharing initiatives. ATPS is in discussion with a number of private sector actors to take this initiative forward.

4.2.4 International Conferences/Workshops

ATPS will continue its established program of hosting international conferences and workshops. Every year, ATPS chooses a theme that best captures a significant regional development issue and addresses it at an annual conference. The main thrust of the conference is to provide an African perspective to a given problem and the proceedings are disseminated widely. In addition, the conference also provides a forum for the dissemination of results from ATPS research programs for international peer review. This three-day event is followed by a research grant competition where researchers present proposals that have been peer reviewed at a national level. The meeting culminates with ATPS business including an annual general meeting of the Network, ATPS national coordinators' meeting and a

meeting of the ATPS Board. In addition to the annual conference, ATPS researchers are increasingly being invited for presentations at international conference and policy round tables in Europe, Asia and America. ATPS will continue to encourage its researchers and network members to participate in international science and technology fora for effective dissemination and peer review of ATPS research results and policy recommendations.

4.3 Youth and Gender Empowerment Programs

4.3.1 African Youth in Science and Technology Program

Youth Social Entrepreneurship Program: Under this program, ATPS will sponsor activities designed to mobilize youths and women to build entrepreneurship skills through liaison with social entrepreneurship initiatives elsewhere. ATPS national chapters will be required to identify entrepreneurship skills relevant to achieving specific MDGs in their respective countries and design relevant programs to build the relevant skills. In addition, ATPS will mount lectures on ST&I and social entrepreneurship in Schools and at African youth events, such as the AYFST, science revival days, etc.

African Youth Congress & ST&I Career Mentoring Program: ATPS will continue to support the AYFST congress. This has been held annually since its inception in 2005 and has proved a useful forum for mobilizing and empowering African youths to harness ST&I for development in their countries. Provision of career mentoring opportunities is also a core aspect of the African youth congress. Experience has shown the participants at the congress identify potential thesis supervisors and mentors at the meetings and also form lasting networks in their subject areas.

Youth Science Clubs: Under this program ATPS will continue to support youth science clubs in universities and Youth Agencies for Development of Science, Technology & Innovation (YADSTI) in member countries. This is part of the Networks' integrated approach to creating and sustaining a culture of ST&I policy research amongst African youths.

International Student Internships and Staff Exchange Program: ATPS student internship program has proved a useful tool for introducing S&T students to the Network and also building their interest and capacity in ST&I policy research. Under this program, ATPS plans to extend the internship program internationally. ATPS will also provide opportunities or international student visits and collaborative staff exchange to foster knowledge sharing amongst students. ATPS is in discussion with partner institutions in Europe and in Africa to take this initiative forward.

4.3.2 African Women in Science and Technology Program

Under this program, ATPS will carry out similar activities as specified under the youth program above.

4.4 Training and Sensitization

4.4.1 Training of Journalists, Scientists, Artists and Policy Makers:

Under this program, ATPS will continue to support a series of training and sensitization workshops for journalists, scientists, artists and policy makers in the art of communicating and using complex scientific outputs from research programs. A prerequisite for effective science communication through the media is the availability of scientists and media reporters who can communicate ST&I related research results in forms that are appealing and accessible to the public. Under this program, ATPS has developed innovative ways of breaking the barriers in science communication through the write-shop process. A “writeshop” is an intensive participatory workshop that aims to produce some kind of written output as quickly as possible, taking advantage of the expertise of various participants. These outputs may range from extension brochures, books, leaflets, news/feature stories, policy briefs, and in some cases, science cartoons. This is part of ATPS’ continuing effort to translate ST&I research results into readily accessible and understandable products that will reach the grassroots. This is increasingly seen as an integral part of ATPS core competency, particularly fitting within the new training and sensitization workshops. As noted above, pilot writeshops conducted under the auspices of the ATPS Water and Environment program has been very successful, leading to five (5) newspaper articles published in four (4) countries and many innovative products including science cartoons, two (2) special papers, five (5) research papers, and nine (9) Technopolicy briefs, etc. The workshop was well received by the beneficiaries while many in the scientific community that have come to learn of ATPS interest and commitment to the training of science writers have encouraged it as timely and worthwhile. ATPS sees this support as vital for the sustainability and the expected impact of ST&I policy research in the sub-region. ATPS does not consider its research complete until its results are effectively transformed into innovations for African development. With a predominant population of Africans barely literate, these innovative means of translating research findings to the language of the masses, is imperative. ATPS, therefore, seeks to nurture a network of ST&I researchers, journalists, artists and policy makers who not only researches or writes on ST&I, but who can effectively demystify ST&I for the masses.

4.4.2 Building S&T Constituencies / Popularization of ST&I

Strengthening Existing National Chapters and Expanding to Francophone and Lusophone countries: National chapters continue to play a central role in research dissemination, research intelligence and policy advocacy. Under this program, ATPS envisages an expansion into more Francophone and Lusophone countries. ATPS has already invested in the training and development of national coordinators to prepare them for quality leadership in the area of ST&I policy research, as well as enhanced skills to competitively bid for international research projects. Additionally, ATPS is developing a youth science program as a way of exciting and sustaining the interest of the youth in science and technology studies, in order to build both constituency and capabilities. ATPS will continue to support activities in the existing chapters while seeking to grow the network through expansion into Francophone and Lusophone African countries.

African Science Revival Days: ATPS has also “revived” the forgotten *Africa’s Scientific Revival Day* that is supposed to be marked on June 30 annually and through its activities in Phase V, invigorated the event by marking it an Africa Scientific Day with most national chapters actively participating. Under this program, ATPS will continue to mark the African Science Revival Day on June 30 of each year and also encourage other S&T relevant institutions to participate.

Parliamentary Round Tables on ST&I Policy: As a strategy to integrate ST&I into policy making in Africa, ATPS will organize a parliamentary roundtable on selected ST&I policy questions on demand. ATPS national chapters will be required to work with members of parliaments in their countries to identify key policy questions requiring a round table discussion. ATPS Secretariat will invite international experts on relevant policy issues to a round table with such national parliaments on demand. At the regional level, ATPS will continue to convene roundtables for parliamentarians on ST&I related policy issues. The aim is to train parliamentarians to understand and communicate emerging ST&I policy research to their governments and constituencies. ATPS is already in communication with the UK Parliamentary Office for Science and Technology (UK-POST) to mount a training program for African Parliamentarians on how to communicate ST&I policy research to policymakers.

ATPS Fellowship Program: Under this program, ATPS will maintain a database of research fellows selected from reputable international institutions working on ST&I policy related subject. Membership to the fellowship program shall be by nomination by ATPS Network members subject to evaluation and approval by the ATPS Fellowship Committee. This pool of experts shall serve as external peer review panels for research proposals submitted to ATPS for funding and also assist in the review of research outputs from programs relevant to their subject areas.

ATPS Institutional Membership Program: Under this program, ATPS seeks to form a network of institutions working on ST&I policy related issues in Africa and internationally. ATPS will initiate a forum for ST&I related institutions interested in African development. Participation in these fora which will meet annually to brainstorm on and prioritize ST&I policy issues in Africa, will be by payment of an annual registration fee of USD 100. The aim of the forum will be to prioritize and coordinate ST&I policy research in Africa.

4.5 Outreach, Knowledge Brokerage and Policy Advocacy:

4.5.1 ATPS Multi-Media Publications

Under this program, ATPS will continue to publish the outcomes of its research in multiple media targeting different audiences. The ultimate goal is to ensure that ST&I research findings are effectively disseminated to the last users.

4.5.2 ST&I Journalists and Writers Forum

Under this program, ATPS will form a ST&I forum for science journalists, artists, and researchers to share experiences and encourage good practice in science communication.

4.5.3 African Stakeholder Dialogue:

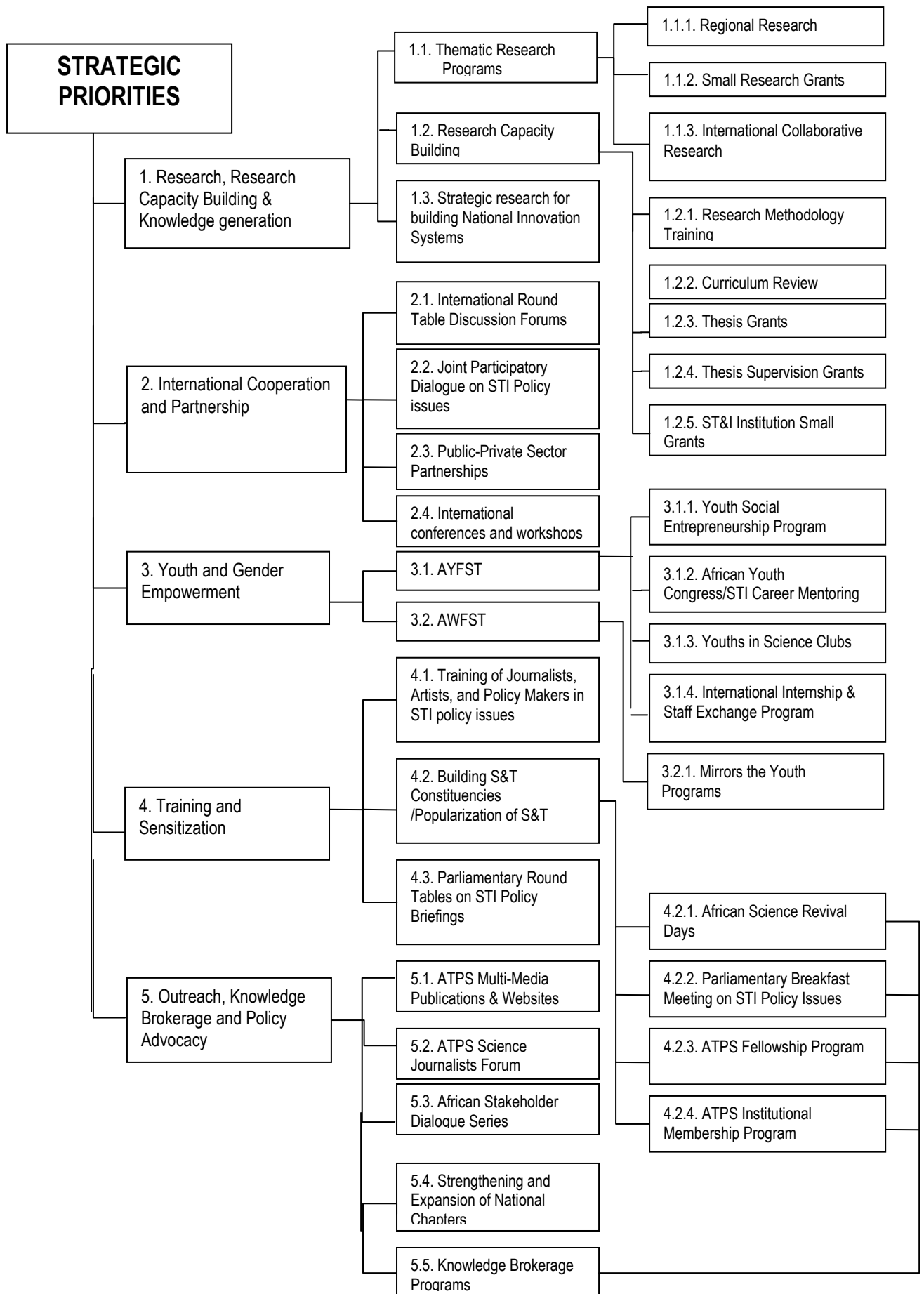
Under this program, ATPS will liaise with like minded institutions, such as the Network for Water and Sanitation (NETWAS), Dialogue Matters UK, etc. to mount grassroots stakeholder workshops on relevant ST&I policy issues on interest at local community levels. The aim will be to engage stakeholders at the grassroots in the development of necessary incentives for sustainable management of ST&I policy issues in their local communities.

4.5.4 Strengthening and Expansion of National Chapters

As noted earlier, the national chapters form the engine of ATPS work and policy advocacy at the grassroots levels. Under this program, ATPS will continue to strengthen the existing chapters through office and systems support. ATPS will remain flexible in its response to the need for expanding to other countries especially focusing on Francophone and Lusophone countries.

4.5.5 Knowledge Brokerage program

Under this program ATPS will continue to act as a broker for ST&I knowledge at both national and regional levels.



4.6 Resource Requirements

The implementation of Phase VI activities will require a review of the ATPS staffing situation and a strategy for more active support to the national chapters with respect to achieving the principal strategic objectives of the Network during 2008-2011. A recent program and organizational review of ATPS called for the establishment and funding of the post of an Operations Manager and creating new research positions to beef up the in-house research capacity of the Secretariat to cope with the expanding thematic research programs. During the last two years of Phase V, ATPS has increasingly developed joint collaborative research programs with like-minded institutions in Europe to foster increased knowledge networking and dissemination of its research findings internationally. The capability to respond dynamically to future program priorities or to integrate flexibility is part of the precautions in the Phase VI Strategy. This approach requires constant updating of skills through staff training and development, in addition to any numerical increases in the staff strength.

New initiatives to actively foster student internships and international staff exchange on ST&I relevant subjects are also under way. The level of efficiency and participation within and between the national chapters is therefore critical to the coordination and implementation of the Phase VI plan. ATPS will commit a significant amount of resources to strengthen and sustain the existing chapters through institutional and systems support and training. ATPS aims to complete the establishment of offices and program support staff in the existing 23 chapters while continuing to invest on specialized training on research program management and accounting for the national chapter coordinators. ATPS subscribes to the ethics of good governance and is seeking to diversify the composition of its Board to reflect the expanded scope of activities under the Phase VI Strategy that has concomitantly expanded the constituency. ATPS will also work towards achieving the ISO 9001 status during this phase.

In terms of financial requirements, ATPS expects a significant increase in the level of financial support from existing donors and an increase in the number of donors supporting its programs. The latter expectation is predicated on the recent involvement of ATPS in the EU Framework VI international cooperation action programs, the widening international collaborating institutions and the plans to solicit increased support from African governments and other development partners. ATPS also expects the current donors including the Royal Dutch government, SIDA/SAREC, the Rockefeller Foundation, IDRC, and others to continue supporting ATPS activities in the new phase. The projected expenditure shows a marked increase over previous outlays due to the overall increase in program activities and expansion into new program areas. The overall administrative costs are expected to be below 10% of the total resource envelop.

ATPS core funding remains at risk as some donors move towards thematic research program areas. While ATPS will continue to develop fundable

thematic research programs, it should be recognized that ATPS activities such as policy roundtables, youth and gender empowerment and other advocacy programs, which are non-thematic may become increasingly difficult to fund. Unlike other knowledge networks, ATPS is not only interested in knowledge generation (i.e. scientific research), it is also interested in knowledge brokerage, policy advocacy, training and capacity building as well as effective dissemination of knowledge to the final users. This is necessary to ensure effective use and mastery of the knowledge generated to foster development in the sub-region. Until more donor commitments in the area of core funding are secured, ATPS will continue to face challenges in implementing these non-thematic program activities, which define its unique niche. In addition to this long term sustainability risk are income uncertainties that can arise from donor reprioritizations, and from developments in the global arena that can adversely impact the world economy. Ways and means of addressing these risks have been explored in a detailed SWOT analyses conducted by an independent consultant, Dialogue Matters UK. These efforts will remain of utmost concern to the management and the ATPS Board during Phase VI.

4.7 The Future

With the planned program and expected resource commitments, the African Technology Policy Studies Network (ATPS) comes very close to realizing its vision: *“to become the leading international centre of excellence and reference in science, technology and innovation systems research, training and capacity building, communication and sensitization, knowledge brokerage, policy advocacy and outreach in Africa”*. This vision translates into a mission: *“to improve the quality of science, technology and innovation systems research and policy making in Africa by strengthening capacity for science and technology knowledge generation, communication and dissemination, use and mastery for sustainable development in Africa”*.

ATPS will therefore continue to play the role of “the ST&I knowledge broker” until the (S&T) knowledge and policy gaps in Africa has been bridged and African nation states has become rich in policies that generate substantial investments in science, technology and innovations (ST&I) for sustainable development in the sub-region, supported by vibrant constituencies of innovative policy makers, ST&I researchers, and grassroots entrepreneurs. ATPS will continue to enhance its outreach efforts and expand its ST&I research and capacity building programs, knowledge brokerage, and policy advocacy with the aim of creating a culture of ST&I policy making in Africa. The planned increase in the number of national chapters as well as the expected further strengthening of ATPS convening power in Africa and beyond through the phenomenal growth in institutional partnerships in Europe, India and America are factors that will enhance the organization’s ability to promote ST&I for Africa’s development; a task that becomes easier as more citizens of the region become aware of, utilize and master relevant science technologies to improve their livelihoods and sustain the environment for the foreseeable future.

5.0 FINANCIAL IMPLICATIONS AND PROJECTIONS

Financing requirements

This section estimates financing requirements for Phase VI activities including the costs of implementing risk management activities and operations evaluations (such as mid term review, feedback mechanisms, and contingency planning). The amount of required funding is determined in relationship to the expected activities within the plan period using the associated activity costs in Phase V with provisions for inflation. These resource requirements are therefore based on the strategic priorities for ATPS Phase VI: research and research capacity building, international cooperation and partnerships, youth and gender empowerment, training and sensitization, science communications and stakeholder dialogues, outreach, knowledge brokerage and policy advocacy; and technical program support and administration. In short, all program activities with financial implications are budget units.

5.1 Income and Expenditure Patterns under Phase V

Income

ATPS made major strides in its fundraising effort in the completed phase. There was a major shift on the income streams in phase V mainly due to the new program areas that were explored by ATPS. The income flows were largely boosted by the Water and Environment Sustainability program and the Health Innovation Systems program both supported by the Royal Dutch Government. The combined contribution from the Royal Dutch Government towards these programs was USD 2,597,220.00. The Rockefeller Foundation also made a contribution of USD 243,504.00 in support of a new program on Biotechnology in Africa. SIDA/SAREC contributed towards the Phase V activities and programs with a core funding of USD 675,000 with IDRC upping the core funding with a contribution of 539,262.00 during the same period.

Other donors and partnerships that made generous contributions within this period include Technical Centre for Agricultural and Rural Co-operation (CTA), Embassy of Finland (EOF), Federal Republic of Nigeria (FRN), International Centre for Trade and Sustainable Development (ICTSD), African Development Bank (ADB), the New Partnership for African Development (NEPAD), among others. Phase V has been instrumental in ushering in new donors on board and attracting new partnerships.

As Phase V comes to a close, ATPS began to receive support from the European Union Framework programs on intentional cooperation activities in partnership with like-minded institutions. For instance in collaboration with Macaulay Institute and the Tanzanian National Parks Authority, ATPS has already received a grant of Euros 91,450.00 from the EU-Framework VI "*Specific Measures in Support of International Cooperation*" program, Contract No. INCO-CT-2007-043784-INTREPID. Another proposal on *Science, Ethics and Technological Responsibility in Developing and Emerging Countries* (SET-DEV) under the new EU Framework VII program on coordinated actions for international cooperation is now in final stages of contract negotiation with the EU Commission Services. The study will be carried out in a consortium of 11 institutions in Europe, Africa and India. The total grant amount for the program is Euro 1,800,000 and the expected ATPS grant amount is Euros 186,918.00.

Expenditure

The Principal activities of ATPS for the phase V have been regional and small grants for ST&I policy research, stakeholder and annual workshops / conferences, policy advocacy and an increased publication activity. The publication portfolio was increased significantly and a higher level of grants was made to national chapters as detailed in the performance report (section 2.3.1). The amount allocated to ST&I policy research considerably went up as a result of the new thematic policy research programs that were initiated in phase V.

Additional expenditure also arose from the establishment of seven (7) new national chapters. Administrative costs were kept below 20 percent during the last phase; with few of the expenses allowed to increase at no more than 5 percent. The expenditure on sensitization workshops for policy makers was part of the costs.

Overall, ATPS' ability to fully support its national chapters and to respond effectively to all ST&I policy needs identified by its member states were limited by the nature and size of funding received during the period. As noted in section 5.4 changes in donor priorities during the period led to dwindling core funding. Significant proportion of the available funding for Phase V was tied to thematic ST&I research activities. ATPS' support to national chapters and ST&I policy research activities were therefore defined by chapter's thematic activities in line with the terms of reference of the grants received.

5.2 Overview of Envisaged Financial Situation under Phase VI

Fund raising activities

ATPS is taking proactive steps to raise funds for the implementation of the Phase VI strategy. As noted in section 3.0, ATPS has submitted proposals to a number of potential donors in collaboration with like-minded institutions in Europe, Africa and India. These proposals which have been submitted to the Royal Dutch Government's Directorate General for International Cooperation (DGIS), the International Development Research Centre (IDRC), the European Framework VII program (EU-FPVII), etc., are at different stages of discussion. Discussions are also ongoing with DGIS on increasing core support to ATPS. SIDA/SAREC will be approached to increase their level of core support to ATPS for the Phase VI period. ATPS is also in discussion with IDRC and other potential donors for support towards ATPS Phase VI implementation.

ATPS Phase VI will explore new ways of fund raising for its non-thematic activities such as knowledge brokerage, policy advocacy, training and capacity building, and science communication and stakeholder dialogue, through partnerships with likeminded institutions in Europe, Asia, America and elsewhere. ATPS is also starting a fellowship programs both at individual and institutional levels and expanding its Board to include a fundraising committee. Institutional membership of ATPS shall be by payment of a subscription fee. ATPS' participation in EU Framework VI & VII programs has opened the door to ATPS for future EU funding. ATPS has received invitations to participate in new submissions to the EU-Framework VII program in collaboration with several institutions in Europe, Africa, and Asia. Other possible donors to which ATPS has set its view are the African

Capacity Building Foundation (ACBF), Danish International Development Agency (DANIDA), the Finish International Development Agency (FINIDA), Carnegie, the UK Department for International Development (DFID), the World Bank, the United States Agency for International Development (USAID), the Norwegian government, among others. Plans are underway to initiate discussions with African governments and Private Sector actors through the networks of members in government and in the private sector.

5.3 Expenditure Projections for Phase VI

A shift in expenditure pattern is expected in the new phase in line with the increased program activities. The projected expenditure in Phase VI shows a dramatic increase over Phase V due to the addition of new strategic priorities and an overall projected increase in activity levels of the existing programs.

Additional expenditure will arise from the strengthening of chapters and creation of new national chapters envisaged in this plan.

The ST&I research and research capacity building programs are expected to constitute a major proportion of the program costs in Phase VI. Programmatic allocations of financial resources shown in Table 2 are based on associate program costs in Phase V allowing for expected inflation over the plan period. A summary of the logical framework for the planned activities in Phase VI are shown Table 3. As can be seen, administrative expenses constitute only 10 percent of total resource needs for the plan period.

The underlying assumptions are that administrative costs will be kept below 10 percent during the phase; with a few of the expenses being allowed to increase at no more than 5 percent over the base year 2007. In some cases provision has been made for spending at higher levels due to increased program activity levels. It is vital to note that, although moderate inflation is anticipated, it has not been fully accounted for.

5.4 ATPS Risk Assessment and Risk Management Strategy

In the process of preparing the Phase VI Strategic Plan, ATPS conducted a risk assessment of the Network based on two SWOT analyses facilitated by an independent consultant, Dialogue Matters, UK. The first SWOT analyses workshop focused on the Secretariat and regional scale issues while the second focused on the national chapters and national/grassroots issues. The results of the SWOT analyses are presented below:

5.4.1 Strengths

- *Well Established Networking Structures:* ATPS is the only African organization dealing with ST&I policy issues with well established and visible networking structures in 23 African countries;
- *National Chapters for Needs Based ST&I Policy Research:* ATPS is the only ST&I organization with national chapters in 23 sub-Saharan African countries. This enables ATPS to identify and respond quickly to ST&I policy research needs and opportunities at all levels (local, national, regional, and international);
- *International Status and Good Profile:* ATPS has an excellent institutional profile in Africa and beyond. As an international organization with full diplomatic status in

- Kenya, ATPS has unique independence in its research and policy advocacy programs;
- *Institutional Partnerships*: ATPS has excellent linkages and good partnerships with like minded institutions in Africa, Europe and India allowing it access knowledge communities in other continents for implementation and peer review of its research and policy intervention initiatives;
 - *The Regional Secretariat*: Having a well established regional Secretariat with well established management and networking structures enables ATPS to coordinate its regional and national activities effectively;
 - *Strong Leadership and Selfless Commitment to ST&I Policy Research*: The strong leadership of the Network and selfless commitment to ST&I policy research by the ATPS Board, Secretariat and national chapter coordinators over the years enables the network to deliver its mandate cost effectively;
 - *Multi-disciplinary and Multi-sector Membership*: ATPS members have multi-disciplinary training and backgrounds including the academia, policy makers, private sectors, civil society, and the media providing unique skill base for the transdisciplinary and trans-sectored approach required for sustainable ST&I policy research. This enables ATPS to access and deploy knowledge from different knowledge communities in its research and policy interventions. This also provides unique platforms for knowledge sharing and capacity building;
 - *Good Record of Achievements*: ATPS has a history of remarkable achievements in the area of ST&I knowledge generation, disseminating ST&I research outputs to policy makers and grassroots stakeholders, capacity building amongst members and within other institutions (government agencies, civil society and ST&I institutions, etc) and influencing ST&I policy in Africa;
 - *Stakeholder Engagement*: ATPS' record on stakeholder engagement throughout its research and policy advocacy processes is second to no other ST&I organization in Africa. The engagement with parliamentarians, policy makers and youths in the design and implementation of ST&I research policy issues is a major strength. This has enabled ATPS to identify and address relevant ST&I policy needs of member countries (ICT, biotechnology, food security, water and environment, health innovations systems, youth engagement, etc) during Phase V; and
 - *Ability to Facilitate ST&I Policy Development*: ATPS has been able to inform and facilitate ST&I policy changes in some member countries, e.g. in Nigeria; convene S&T parliamentary committees in some countries, e.g. in Kenya; mainstream S&T into policies on trade/industry, education and training in others; and also set ST&I priority agendas for member countries.

5.4.2 Weaknesses

- *Coverage of Sub-Saharan Africa*: No presence in more than half of SSA (though successful collaborative work has been carried out with institutions outside our regional coverage). Members desire to see all SSA countries become member of ATPS influencing policy making in their respective countries and in their region by 2015;
- *Institutional and Systems Support to National Chapters*: Lack of adequate institutional and systems support to some national chapters limits the ability of national chapters to respond effectively to ST&I policy needs in their countries;
- *Program Funding*: Lack of adequate resources to fund programs to address ST&I policy needs of member countries identified by national chapters; and

- *National Government Support:* Budget constraints in many African countries often hinder support to national chapters by national governments.

5.4.3 Opportunities

- *Interest in ST&I:* Increasing interest in ST&I policy research in developing countries presents an opportunity to ATPS to contribute to research and policy needs in the area;
- *Institutional Linkages:* ATPS has well established linkages with regional and international ST&I organizations;
- *Potential to Expand:* ATPS has the potential to expand to all countries in sub-Saharan Africa through the networks already formed by members;
- *Awareness by African Governments:* The increased awareness of the need for ST&I policy studies by governments in many African countries presents an opportunity for mainstreaming ST&I in government policy; and
- *Potential to Expand Donor Base:* Potential to expand funding base to include other donors such as the EU-Commission Services, DFID, World Intellectual Property Organization (WIPO), The World Bank, African Governments, etc.

5.4.4 Threats

- *Funding Gaps:* The move towards thematic research funding by some Donors has led to diminishing core institutional funding. This is placing constraints on the type of ST&I policy advocacy work that ATPS can undertake.
- *Increased Competition for Funding:* The increased competitiveness in obtaining donor funding. This may take time away from ATPS policy advocacy and some other grassroots activities;
- *Research Granting Procedures:* The length of time it take for some donors to approve research grants often limit ATPS' ability to respond to ST&I policy needs of member countries in a timely manner. Short term ST&I policy needs identified by member countries may occasionally require a rapid response such that if required to go through a protracted grant processing procedure over several months, ATPS response to the request may become untimely; and
- *Changes in Donor Priorities:* Some donor program priorities often change over time. As an African institution committed to needs based bottom-up ST&I policy research, ATPS' program priorities focus on Africa's development challenges. These may sometimes not be within the program priorities of some donors.

The full reports for the two SWOT analyses workshops can be made available on request.

5.4.5 Risk Management Strategy

This subsection also recognizes and anticipates both operational and strategic risks. Strategic risks include the risk that suddenly, donor program priorities may change in ways that entail commitments not being rolled over when they expire. It also includes the risk that changes in the global environment including developments in the global financial markets may impair donor support. Political risks are also part of the strategic risks. Operational risks include outright project failures due to a number of factors including third party misfeasance, insufficient interest, bad judgment, and contingent liabilities. Projects can also suffer due to agency problems, such as employee malfeasance or other implementation difficulties that can come from national chapters, project partners or collaborators. Partnerships or alliances carry

its own coordination and dependency problems. When a project is dependent on the enthusiasm of partners or timely performance of collaborators or such other parties to achieve group objectives, delays or other difficulties can arise if cooperation or momentum is not forthcoming at the planned intensity. Others include default on pledges and exchange rate risk.

Some of the risk management strategies identified include:

- Donor risks can be mitigated by diversifying funding sources whenever feasible, even for the same project;
- ATPS will seek increases in the proportion of contributions from African governments and the private sector, and more co-funding of activities by host governments and national institutions. The premise is that internal funding (pledges within the region) may be more stable when there is buy-in to ATPS program activities, or a sense of ownership in the endeavour since ATPS serves them as part of its constituency;
- In pursuit of the sustainability objective, ATPS will also look to attract endowments. One possibility is to seek contributions from countries hosting ATPS annual conferences who will be encouraged to use such occasions to make their marks;
- Another component of the sustainability process is strengthening the national chapters to raise funds competitively;
- The possibility of charging fees for the training program is a further avenue to be explored;
- Friendly governments are to be approached through their ministries of science and technology for financial support; and
- Building in-house capacity to develop research proposals for fund raising will be explored.

ATPS internal procedures are documented in ATPS policy manuals which can be made available upon request.

6.0 CONCLUSION

The ATPS Phase VI strategic Plan is an ambitious and forward looking mission. Through this plan, ATPS has sought to articulate its vision for the continent, and its mission to contribute to poverty alleviation through science, technology and innovation (ST&I) policy research and advocacy. The centre piece of the mission is the strong belief that in Africa's current predicament, bridging the knowledge and technological gap between Africa and the rest of the world is the foundation for economic prosperity, and that prosperity cannot be built on aid but on home grown knowledge.

It builds on the achievements and strengths of the ATPS Network and critical analyses of experiences gained in the implementation of the previous phases. The strategic goals and objectives are based on constructive, reflective and insightful participatory dialogue with ATPS national chapters, research associates, relevant stakeholders, and other international development partners that are representative of ATPS' milieu. Six strategic goals are identified, which collectively aim to improve the understanding, functioning and governance of ST&I policy research for African development. The strategic goals generate six inter-twined program priorities including three thematic policy research programs and three cross-cutting non-thematic programs. Together with continuous monitoring and evaluation, these programs form the strategic framework for the ATPS Phase VI plan.

The prospects for successful implementation of the ATPS Phase VI plan and the expected impacts on the region are matched in enthusiasm by doubts as to its ability to surmount the obvious challenges, particularly with respect to resource requirements. Although the ATPS Board has approved the overall framework and its resource implications, the operational management of the plan will exploit the flexibility in the program design to confront contingencies as they arise, and hence make the best use of available resource to achieve the mission of the plan and the vision of ATPS – “an Africa where ST&I research and policy is the norm”.

Table 2: Programmatic Allocation of Financial Resources-Phase VI

(Figures in US Dollars)

| | 2008 | 2009 | 2010 | 2011 | Total |
|---|------------------|------------------|------------------|------------------|-------------------|
| PROGRAMMES | | | | | |
| A. Research, Research Capacity Building & Knowledge generation | | | | | |
| Regional Research Projects | 700,000 | 750,000 | 900,000 | 800,000 | 3,150,000 |
| Small Research Grants | 100,000 | 120,000 | 140,000 | 160,000 | 520,000 |
| International Collaborative Research | 150,000 | 300,000 | 500,000 | 600,000 | 1,550,000 |
| Research Methodology Training | 120,000 | 100,000 | 160,000 | 160,000 | 540,000 |
| Curriculum Review | 120,000 | 120,000 | 120,000 | 120,000 | 480,000 |
| Thesis Grants | 50,000 | 60,000 | 60,000 | 60,000 | 230,000 |
| Thesis Supervision Grants | 30,000 | 30,000 | 30,000 | 30,000 | 120,000 |
| Institutional Support | 80,000 | 80,000 | 90,000 | 100,000 | 350,000 |
| | 1,350,000 | 1,560,000 | 2,000,000 | 2,030,000 | 6,940,000 |
| B. International Cooperation and Partnership | | | | | |
| International Round Table Discussion Forums | 10,000 | 136,000 | 40,000 | 160,000 | 346,000 |
| Joint Participatory Dialogue on STI Policy issues | 100,000 | - | 140,000 | - | 240,000 |
| Public-Private Sector Partnerships | 15,000 | 28,000 | 48,000 | 58,000 | 149,000 |
| International Conferences | 300,000 | 360,000 | 300,000 | 300,000 | 1,260,000 |
| | 425,000 | 524,000 | 528,000 | 518,000 | 1,995,000 |
| C. Youth and Gender Empowerment | | | | | |
| African Youth Forum for Science and Technology (AYFST) | 161,000 | 219,000 | 280,600 | 336,520 | 997,120 |
| African Women Forum for Science and Technology (AWFST) | 161,000 | 219,000 | 280,600 | 336,520 | 997,120 |
| | 322,000 | 438,000 | 561,200 | 673,040 | 1,994,240 |
| D. Training and Sensitisation | | | | | |
| Training of Journalists, Artists and Policy Makers in STI Policy issues | 105,000 | 100,000 | - | 140,000 | 345,000 |
| Building S&T Constituencies/Populization of S&T | 50,000 | 50,000 | 50,000 | 60,000 | 210,000 |
| Parliamentary Round Tables on STI Policy Briefings | 40,000 | - | 70,000 | 80,000 | 190,000 |
| | 195,000 | 150,000 | 120,000 | 280,000 | 745,000 |
| E. Science Communications and Stakeholder Dialogue | | | | | |
| ATPS Multi-Media Publications & Websites | 245,000 | 245,000 | 245,000 | 245,000 | 980,000 |
| ATPS Science Journalist Forum | 66,000 | 68,400 | 68,400 | 68,400 | 271,200 |
| ATPS Stakeholder Dialogue/Training Program | - | 60,000 | 80,000 | 100,000 | 240,000 |
| | 311,000 | 373,400 | 393,400 | 413,400 | 1,491,200 |
| F. Outreach, Knowledge Brokerage and Policy Advocacy | | | | | |
| Strengthening and Expansion of National Chapters | 380,000 | 315,000 | 344,040 | 375,120 | 1,414,160 |
| Knowledge Brokerage Programmes | 60,000 | 60,000 | 60,000 | 60,000 | 240,000 |
| | 440,000 | 375,000 | 404,040 | 435,120 | 1,654,160 |
| G. Technical Support | | | | | |
| Coordinator Training Workshops | 15,000 | 25,000 | 30,000 | 45,000 | 115,000 |
| Honoraria for Coordinators | 50,000 | 50,000 | 45,000 | 30,000 | 175,000 |
| Board Meetings | 45,000 | 60,000 | 60,000 | 60,000 | 225,000 |
| Network Consultants | 31,000 | 30,000 | 30,000 | 30,000 | 121,000 |
| Program Management | 300,000 | 330,000 | 363,000 | 399,300 | 1,392,300 |
| Institutional Attachments/Staff exchange | 60,000 | 60,000 | 60,000 | 60,000 | 240,000 |
| Staff Travel | 60,000 | 60,000 | 60,000 | 60,000 | 240,000 |
| Staff Training | 18,000 | 21,000 | 23,000 | 24,000 | 86,000 |
| Literature acquisition, referral services | 15,000 | 30,000 | 32,000 | 45,000 | 122,000 |
| Website Hosting | 3,000 | 3,000 | 3,000 | 3,000 | 12,000 |
| | 597,000 | 669,000 | 706,000 | 756,300 | 2,728,300 |
| Total Programmes | 3,640,000 | 4,089,400 | 4,712,640 | 5,105,860 | 17,547,900 |
| ADMINISTRATION-10 % of Programme costs | 364,000 | 408,940 | 471,264 | 510,586 | 1,754,790 |
| TOTAL EXPENDITURES | 4,004,000 | 4,498,340 | 5,183,904 | 5,616,446 | 19,302,690 |

Table 3: Logical Framework

| Strategic Objectives | Outcomes | Activities | Performance Indicators |
|---|---|---|--|
| 1. <i>Research, Research Capacity Building & Knowledge Generation</i> | <ul style="list-style-type: none"> Improved ability of African researchers to engage in high-quality peer reviewed ST&I policy research for African development; Enhanced understanding of ST&I research and policy processes in Africa; and Improved ability to formulate and implement innovative ST&I policies in Africa. | 1.1 Regional research projects 1.2 Small research grants 1.3 International collaborative research 1.4 Research methodology training 1.5 Curriculum review 1.6 Thesis grants 1.7 Thesis supervision grants 1.8 ST&I institutional support 1.9 Strategic innovations systems research | 1.1.1 Relevant knowledge generated. 1.1.2 Number of ST&I policies offered and adopted. 1.1.3 Number of regional & small grants projects completed. 1.1.4 Number of capacity building training completed. 1.1.5 Adoption of new ST&I curricular in Schools. 1.1.6 Quality of theses supported. 1.1.7 Number of institutional grants issued. 1.1.8 Number of successful innovation studies completed. |
| 2. <i>International Cooperation and Partnership</i> | <ul style="list-style-type: none"> Better regional integration and the identification and prioritization of common research areas of mutual interest to African countries; Enhanced uptake and use of common identified research outcomes, technologies and innovations for addressing the MDGs in Africa; and Increased partnerships amongst African S&T institutions, government ministries, and civil society and with like-minded organizations globally. | 2.1 International round table discussion fora 2.2 Joint participatory dialogue on ST&I policy issues 2.3 Public-Private sector partnerships. 2.4 International conferences & workshops | 2.1.1 Number of collaborative round table discussions held. 2.1.2 Number of participatory dialogue on global ST&I policy issues completed. 2.1.3 Number of Public-Private partnerships created. 2.1.4 Number of international conferences and workshops successfully hosted. |
| 3. <i>Youth and Gender Empowerment</i> | <ul style="list-style-type: none"> Enhanced skills/capacities in agriculture, ST&I research and policy advocacy amongst Africa Youths and women; Increased youth/women participation in ST&I research projects and other innovative and productive interventions at local, regional and national levels; A functioning networking platform, forum [online and offline] in which the youth/women can exchange opinions; and Increased awareness among the youth/women on inter-related policy issues in agriculture, science and technology and the need for multi-disciplinary approaches in ST&I research and policy making. | 3.1 Youth/Women social entrepreneurship program 3.2 African Youth/Women congress/ST&I career development program. 3.3 Women/Youth in science clubs 3.4 International Internships and Staff exchange program. | 3.1.1 Number of youth/women entrepreneurship programs created. 3.1.2 Number of youth and women ST&I congresses held. 3.1.3 Number of youth/women science clubs supported. 3.1.4 Number of international internships supported. |

| Strategic Objectives | Outcomes | Activities | Performance Indicators |
|---|--|---|--|
| 4. <i>Training and Sensitisation</i> | <ul style="list-style-type: none"> • Enhanced dissemination of ST&I policy research to policy makers and to stakeholders at the grassroots through the fourth estate. • Build capacity of journalists, artists and policy makers to communicate and use ST&I policy research. • Appreciation and apt use of ST&I policy in African development. | <p>4.1 Training of journalists, artists and policymakers in STI policy issues.</p> <p>4.2 Building S&T constituencies/Populization of S&T.</p> <p>4.3 Parliamentary roundtables on ST&I policy briefings.</p> | <p>4.1.1 Number of training workshops successfully hosted.</p> <p>4.1.2 Number of Journalists, Artists, Policymakers, Researchers and Parliamentarians trained</p> <p>4.1.3 Number of Parliamentary round tables held.</p> |
| 5. <i>Outreach, Knowledge Brokerage and Policy Advocacy</i> | <ul style="list-style-type: none"> • Better appreciation of ST&I policy research by science journalists, policy makers and artists; • ATPS Technopolicy briefs derived from the research finding; • Strengthened partnerships between researchers and policy makers in the ST&I policy process; • Sensitized leaders/policy makers on their leadership roles in promoting ST&I-led development; • Stronger existing ATPS chapter through training, establishment of offices, etc; • Establishment a minimum of 5 new ATPS chapters focusing on Francophone and /or Lusophone African countries; and • Minimum of six policy briefs addressing MDG related ST&I policy issues published. | <p>5.1 ATPS multi-media publications & websites.</p> <p>5.2 ATPS Science Journalist forum</p> <p>5.3 ATPS Stakeholder Dialogue/Training programs.</p> <p>5.4 Strengthening and expansion of National chapters.</p> <p>5.5 Knowledge brokerage programs.</p> | <p>5.1.1 Number of publications in various media.</p> <p>5.1.2 Number of ATPS national chapters supported.</p> <p>5.1.3 Number of new chapters established in Francophone and Lusophone African countries.</p> <p>5.1.4 Number of grassroots stakeholder workshops successfully carried out.</p> |

Notes: The performance indicators are shown above to give an indication of the project/activity designs. Each activity will have its own specific outputs, events and detailed indicators for success.

ANNEX 1: ATPS HISTORY, ORGANIZATIONAL STRUCTURE AND OPERATION PROCEDURES

As noted earlier, ATPS is an international NGO with the headquarters in Nairobi, Kenya: a multi-disciplinary network of researchers, private sector actors and policy makers promoting innovative science, technology and innovation systems (ST&I) research and policy making for sustainable development in sub-Saharan Africa (SSA). ATPS achieves its mandate through research, capacity building and training, science communication/dissemination and sensitization, participatory multi-stakeholder dialogue, knowledge brokerage, policy advocacy and outreach. In collaboration with like-minded international institutions, ATPS provides platforms for regional and international research and knowledge sharing for the identification and prioritisation, development, use and mastery of ST&I in Africa. In addition, ATPS also provide support to the New Partnership for Africa's Development (NEPAD) framework.

As an international organization, ATPS enjoys all the privileges and immunities given to similar international organizations based in Kenya. These include Tax and VAT exempt status, employment of expatriates etc. A formal host-country agreement was signed between ATPS and the Government of Kenya represented by its Minister of Foreign Affairs in 2003.

ATPS activities are financed by several international donor organisations. The Royal Dutch Government, International Development Research Centre (IDRC), Carnegie Corporation of New York, SIDA/SAREC, Rockefeller Foundation, Ford Foundation, Coca-Cola Northern Africa, OPEC and World Bank, the Nigerian Government, and the European Union Framework programs, are some examples of organisations that fund ATPS.

ATPS organizational structure, including the financial sections staffing, professionalism and mandate

The Network's organizational structure is composed of an International Board, the Secretariat, a steering committee of national chapter coordinators and resource persons, and the national chapters (Figure 2). The different levels of responsibility within the ATPS organizational structure are discussed briefly below.

The ATPS Board is the overall policy-making body and comprises African and non-African scholars and managers. The Board meets twice a year and reviews and approves the program of work and budget. It formulates and monitors the implementation of policies and procedures designed to fulfil the Network's objectives and gives general direction to the Executive Director and the Secretariat. It also approves the appointment of national chapter coordinators upon the recommendation of the Executive Director. The Board also approves small grants and appoints ATPS external auditors. ATPS is currently expanding its Board to reflect the growing multi-disciplinary and international nature of its programs in the new phase.

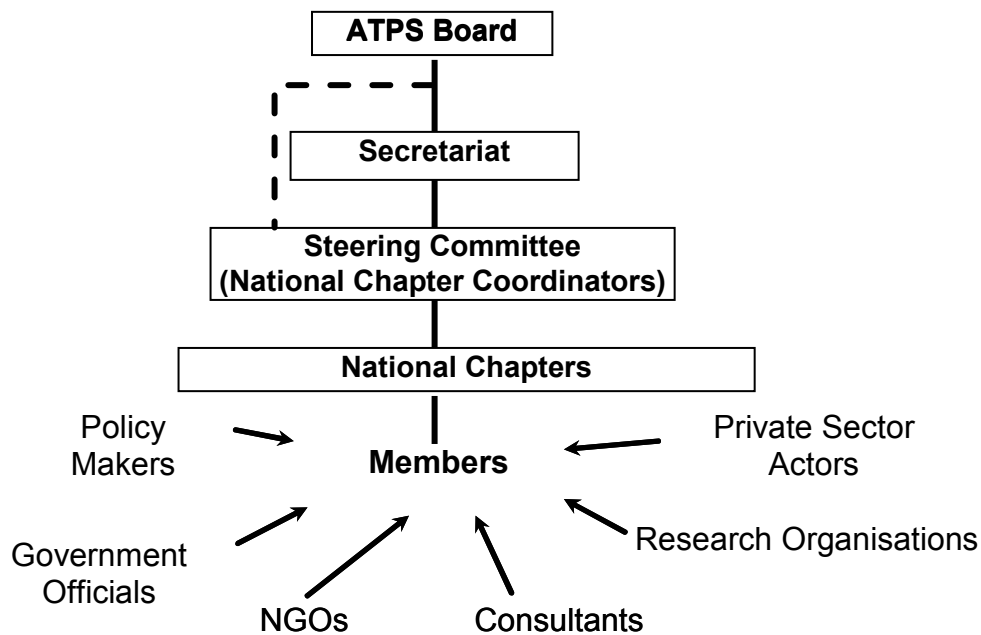


Figure 2: ATPS Organizational Structure

The Secretariat has a 14 member staff to execute and coordinate the mandate of the Network. The Executive Director is responsible for the overall intellectual and administrative leadership of the Secretariat and is the chief operating and financial officer. The Director of Research, Training and Outreach coordinates the research, training/capacity building and outreach programs of the Network in liaison with Senior Policy Research Associates and Resource Persons coordinating specific research programs; a Research Training and Events Manager; a Communications and Outreach Manager, etc (see Figure 3). The administrative unit is run by the Finance and Administration Manager in liaison with Accounts Officers / other secretarial assistants and a driver. The Secretariat is responsible for fundraising, developing regional programs and strategies, and the overall science and administrative leadership for the country level activities in liaison with a 23 member Steering Committee of National Chapter Coordinators (NCCs). The Secretariat organizes the annual conferences and all other regional activities of the Network usually in collaboration with the host national chapter.

Each National Chapter Coordinator provides intellectual and administrative leadership for ATPS activities in his/her country. The Secretariat funds national chapters out of grants from various donors to perform different tasks. The national chapters provide strategic plans outlining priority areas of research, training and capacity building, and science communication in their various countries. These identified priority areas guide the research, training /capacity building and science communication efforts of ATPS at both regional and country levels.

The Expert Consultants (Resource Persons) provide intellectual guidance and methodology training for each thematic research program. These consultants also ensure that the science quality of the research and training carried out under ATPS thematic programs are of international standard and provide capacity building and mentoring support to ATPS researchers.

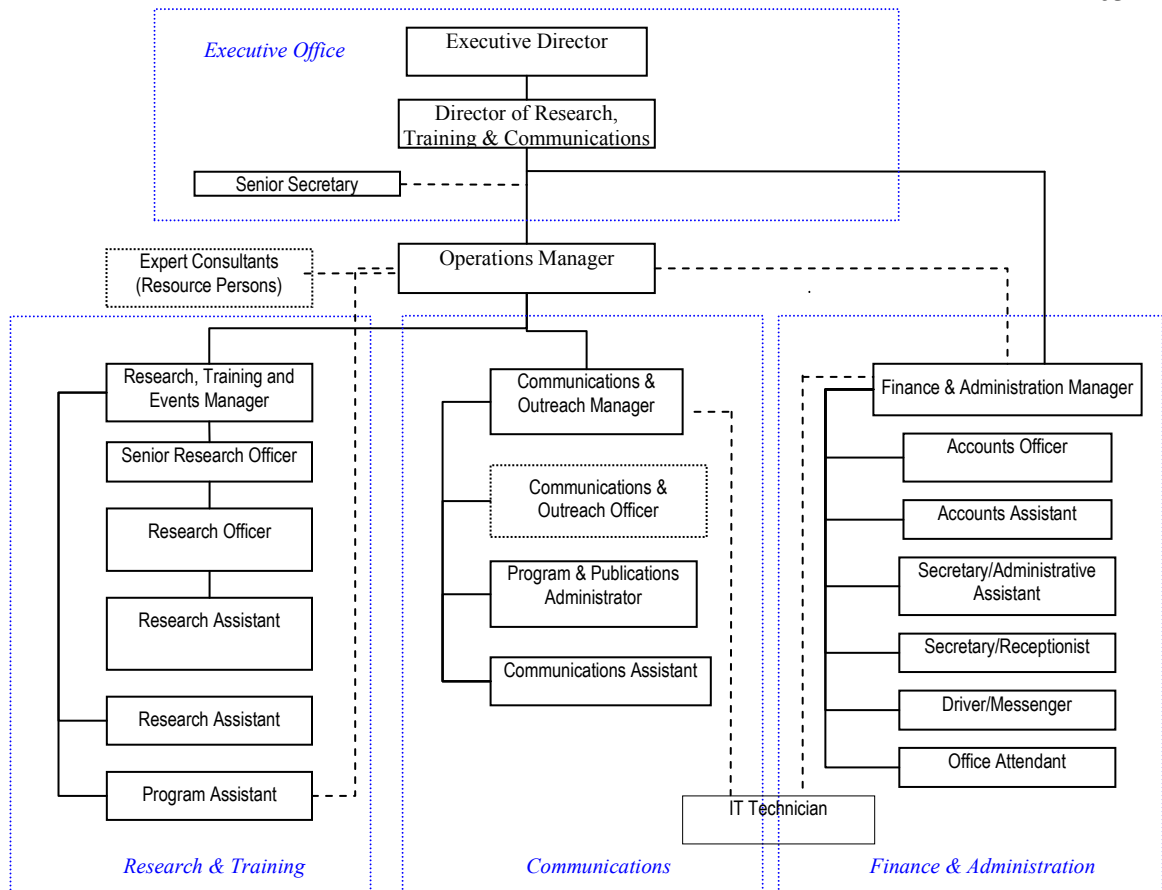


Figure 3: Organizational Structure of ATPS Secretariat

ATPS will continue to pursue its mission through engaging in ST&I policy knowledge generation and dissemination, capacity building / training and outreach, multi-stakeholder participatory dialogue, knowledge brokerage and policy advocacy.

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