

*MARCH 2003 DRAFT*

**African Agricultural Technology Foundation  
Business Plan**

March 2003

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## Abbreviations and Acronyms

### *Abbreviations and Acronyms*

AATF	African Agricultural Technology Foundation
AGM	Annual General Meeting
ASARECA	The Association for Strengthening Agricultural Research in Eastern and Central Africa
CG	Consultative Group
CGIAR	Consultative Group on International Agricultural Research
CLG	Company Limited by Guarantee
CORAF	Le Conseil Ouest et Centre Africain pour la Recherche et le Développement Agricoles
DAC	Design Advisory Committee
DFID	Department For International Development, UK
FTE	Full Time Equivalents
GM	Genetically Modified
GMO	Genetically Modified Organism
IFPRI	International Food Policy Research Institute
ISAAA	International Service for the Acquisition of Agri-biotech Applications
NARI	National Agricultural Research Institute
NARS	National Agriculture Research System
NGO	Non-Government Organisation
OECD	Organisation for Economic Co-operation and Development
PPP	Public-Private Partnership
R&D	Research and Development
SACCAR	Southern African Centre for Cooperation in Agricultural and Natural Resources Research and Training
SSA	Sub-Saharan Africa

## EXECUTIVE SUMMARY

### Introduction

Developments in agricultural science and technology hold out the prospect of major improvements in food security and reductions in poverty in sub-Saharan Africa. However neither the private sector nor the public sector alone can exploit this potential. The private sector has significant technological resources but currently no commercial incentive to develop products of benefit to African smallholder farmers, a category including resource-poor farmers. Public sector organisations in Africa have vast experience working on regionally important crops but need improved access to proprietary technologies that are held by the private sector as well as public sector institutions wherever they exist. African public sector research institutions could also benefit from assistance in adapting technologies so that they are appropriate for African farmers and improved means of achieving dissemination and use of these new technologies by resource-poor farmers.

The African Agricultural Technology Foundation (AATF) aims to facilitate partnerships to remove the constraints on transfer and use of appropriate agricultural technologies. The model has been developed through consultation and collaboration with public, private and NGO stakeholders in Africa, North America and Europe.

### Mission and Objectives

AATF will be established as an African-led, African-based, freestanding, not-for-profit organisation. Its mission will be to improve food security and reduce poverty of African smallholder farmers by facilitating public-private partnerships for the transfer, delivery and uptake of appropriate agricultural technologies. Its aim is to deliver concrete value to African smallholders and promote the development of sustainable markets. It will work closely with African stakeholders—farmers, scientists, small businesses, NGO's and others, to identify the needs of poor farmers and match them with technologies suitable for adaptation to African ecologies and farming systems. Box 1 summarises its mission and objectives.

*Box 1: Mission and Objectives*

<b><i>Mission</i></b>
To improve food security and reduce poverty of smallholder and in particular resource-poor farmers in SSA by facilitating public-private partnerships for the transfer, development, production and distribution of technology.
<b><i>Objectives</i></b>
To develop a portfolio of projects that: <ul style="list-style-type: none"> <li>• Provide smallholders with access to agricultural technologies, materials and know how – with particular focus on accessing technology held by the private sector.</li> <li>• Facilitate existing institutions along the value chain to ensure delivery of products to African farmers and create sustainable markets and private sector engagement.</li> </ul>

### Strategy

The AATF is a partnership between public and private sectors in Africa, North America and Europe. It will achieve its objectives by entering into agreements to access technologies from providers (private sector companies, public sector institutions and NGOs), sub-licensing technologies to private, public and NGO sectors for adaptation to smallholder farming conditions, seeking regulatory consent for new adapted products and sub-licensing to private and public sector parties to produce and distribute them. It will also facilitate production and distribution partnerships, including entering contracts, with public and private sector entities to ensure that new products reach resource poor and other smallholder farmers.

The principles that determine how it will implement its strategy are as follows. It will:

- Act as a principal and as the ‘responsible party’ in facilitating ongoing collaboration and partnership on a case-by-case basis.
- Operate along the entire value chain, acting as a facilitator with delivery and implementation executed by partner organisations.
- Facilitate the transfer of all types of technologies, in line with expected demand and their potential impact on food security and poverty.
- Transfer technology according to African needs and priorities, targeting public and private sector providers wherever they exist.
- Initially focus on the needs of smallholder farmers in the choice of projects, but take account of other potential beneficiaries.
- Work on a project-by-project basis in determining the basis on which the technology is licensed.

### **Location of Operation and Incorporation**

The AATF will operate out of Nairobi, Kenya. The selection criteria for determining the location included quality of life, security, and ease of communications, access and travel. The Implementing Director selected a short-list of four locations (Kenya, Uganda, Ghana and South Africa) and undertook consultations with appropriate authorities in these countries, with a view to making a recommendation to the Design Advisory Committee (DAC) for final host country selection.

The AATF is legally incorporated in the United Kingdom. The choice of law and jurisdiction for licence agreements and contracts entered into by the AATF and third parties will be made on a case-by-case basis, but is likely to be the United Kingdom in many cases.

### **Structure and Governance**

The AATF’s structure and governance arrangements will:

- Create a clear separation between responsibility for setting and monitoring strategy and the management of operations.
- Limit the donors’ liability.
- Allow wide stakeholder participation – without limiting operational flexibility.

- Protect the AATF from external pressures.

The structure will consist of Members, the Board of Trustees, and Management and Staff. Members, made up of all trustees except ex officio trustees, will be responsible for approving the annual report and accounts of the AATF as well as making any changes to the AATF's Articles of Association. Non-executive Directors will be co-opted as members and will be required to stand down at the expiry of their term on the Board.

The AATF Board of Trustees will have overall strategic and fiduciary responsibility of AATF and will be responsible for advocacy of the organisation's aims and objectives with African stakeholders, technology owners and potential donors. Board of Trustees will be drawn from a range of backgrounds and institutions, including the international and local private sector; public organisations; donor agencies; major NGOs, the CGIAR community and academia.

The Trustees will establish sub-committees and delegate authority to them to a level consistent with it retaining overall fiduciary responsibility for the AATF. The expectation is that four committees will be established: (i) Executive Committee; (ii) Programme / Product Development Committee; (iii) (Board) Nominating Committee; and (iv) Audit Committee.

The AATF Board of Trustees will also develop mechanisms for informal consultation of stakeholders, which could take the form of an ongoing advisory forum. Management and staff will be responsible for the day-to-day management of operations and project development.

### **Operating Model**

AATF will pursue its mission and objectives through three principal areas of activity: (i) the identification with partners of opportunities to match technologies with problems identified by farmers – resulting in the development of product concepts; (ii) the development of these opportunities into fully specified project plans; and (iii) the implementation of these plans by facilitating, managing and monitoring of the plan activities.

AATF will operate in accordance with the strategic objectives of African stakeholders, and with clear operating principles.

- It will be managed employing the best practices from both the public and private sectors while drawing upon the resources of both in pursuit of its food security and poverty reduction mission.
- Its management team will be small and will consist of professionals with extensive agricultural technology and business experience, particularly in sub-Saharan Africa (SSA).
- It will set clear specific objectives and monitor progress against milestones. It will assign specific responsibilities to project managers to advance projects from the adaptive Research & Development (R&D) stage through to adoption by smallholder farmers.
- It will avoid duplicating activities being undertaken by others and will pro-actively seek to forge partnerships with others active in agricultural development in Africa.
- It will be demand-led by developing processes to ensure smallholder farmers and other rural stakeholders participate in the evaluation and development of new potential products throughout the product development process.

As part of its facilitating role, the AATF will seek to mobilise funding for its projects. Its approach will be flexible. Where appropriate it will seek funding from donors for the AATF to invest into its planned activities and/or enter into bilateral funding arrangements where donors provide funds directly to project partners. In other cases it may rely on existing lines of funding to project partners.

### **Evolution of the AATF**

It is intended that the AATF will commence activities with a tight focus and evolve over time in the light of experience. The initial focus will be on: food crops produced, consumed and sold by smallholders; in royalty-free licensing of proprietary technologies and use of publicly available technologies; and on products where delivery and use can be anticipated in a reasonable time frame (i.e. adaptation of existing products, not 'very early' upstream R&D). Over time it is expected, as appropriate, to expand the scale and scope of the AATF to encompass: non-food crops and livestock-related technologies; export products produced and sold by both smallholders and commercial producers; accessing proprietary technologies on advantageous, but not necessarily royalty-free terms; and a broader R&D focus addressing specific pro-poor 'early technologies' (e.g. nutritionally enhanced or drought resistant crops).

The immediate priority for the AATF is to develop a portfolio of projects that meet defined project and portfolio balance considerations.

### **Financial Projections**

The financial projections reflect a set of assumptions about the scale and scope of the AATF. They are illustrative and will be refined as the AATF develops its first project. The business plan projections envisage AATF involvement in 9 projects over the first 5 years, with the first 4 starting in 2004. Thereafter, the number of additional projects is assumed to be between one and two per annum. Based on the assumed mix of projects and expected timescales, AATF reaches a steady state of 13 or 14 active projects by year 2008 and onwards.

In 2003, total AATF expenditure is expected to be US\$2.473m. This covers overheads and the expenditure required to develop 4 projects.

Over the first 10 years, and on the basis of assumptions set out in this document, total AATF funding requirement is US\$65.5m (undiscounted). The AATF's overheads rise to just under US\$2.5m per annum, or 13% of total project costs by the end of the period. AATF project expenditure totals US\$44m over 10 years. The business plan assumes that the AATF projects attract an additional US\$58m in matched funding from public and private sector partners and stakeholders. The financial projections assume that the AATF does not receive any revenues (e.g. from product royalties) over the first 10 years of activity.

# 1. INTRODUCTION & RATIONALE

## 1.1 Background

Strong correlations exist between nutrition deficiency, poor health, learning difficulties, and poverty in Africa and elsewhere. Developments in agricultural science and technology over recent decades hold out the prospect of major improvements in food security and reductions in poverty in Africa and other parts of the developing world. However neither the private nor public sector can exploit this potential alone.

The private sector has significant technological, managerial and financial resources at its disposal. A small number of major international companies have developed new techniques, processes and products that can be readily adapted to improve agricultural products of value to the African smallholder<sup>1</sup> farmer, yet these private companies currently have limited commercial incentives to develop such products. In the developing world the public sector R&D institutions have limited access to new technologies and are under-resourced, but have strong knowledge of local crop varieties and the needs of smallholder farmers. The AATF concept is to bring together in partnership the private sector companies and public sector research institutions in developed nations with African stakeholders including the National Agricultural Research System (NARS) and other agricultural R&D institutions, farmers associations, NGOs and national private sector agribusinesses. The aim is to access advanced scientific and technological resources and adapt them to agricultural products for use in Africa, and to focus on products whose benefits will accrue to smallholders.

It was concern about the increasing food insecurity in Africa and awareness of the gap between the agricultural science controlled by the developed countries and the needs of the poor in the developing world that brought together representatives of the African agricultural scientific community, the Rockefeller Foundation, the five major international agribusiness companies, directors general and scientists from the Consultative Group on International Agricultural Research (CGIAR) and other key stakeholders in a series of consultations over the last three years. The meetings were initiated by Rockefeller and facilitated by the Meridian Institute, a private, not-for-profit organisation that specializes in mediation and collaborative problem solving. In these meetings, owners of agricultural technologies have expressed a desire based on humanitarian needs to license their technologies, processes and products to AATF in pursuit of its mission. In return, the AATF will assume the role of the responsible party, responsible for assuming appropriate use of the technologies, regulatory compliance of any resulting products and delivery and use of products to smallholder farmers.

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<sup>1</sup> The term 'smallholders' refers to a continuum of African farmers, from those who purchase inputs, generate surpluses of food and sell it for cash (at least in some years) down to 'resource-poor' farmers who can rarely afford or have access to inputs, are vulnerable to food deficits and do not generate surplus cash (e.g. for school expenses). On occasions, resource-poor farmers, as a subset of smallholders, are referred to in particular.

### 1.2 Rationale for AATF

This section sets out the economic and institutional rationale for the AATF, covering two key areas:

- The importance of agriculture and technology for improving food security and reducing poverty in sub-Saharan Africa (SSA).
- The case for an innovative multi-stakeholder initiative and the need for a new mechanism to realise it.

#### 1.2.1 Importance of Agriculture in SSA and the Role of Technology

Over the last forty years in SSA, in contrast to other regions of the world, agricultural incomes per capita have fallen and the proportion of people living in poverty has not declined. Between 1970 and 1995 the number of malnourished children under the age of 5 increased by 40% from 28m to 40m (compared with a 45% reduction in East Asia). Moreover, on current trends SSA is unlikely to be able to meet the Millennium Development Goals on poverty. IFPRI's 'pessimistic' scenario projects the number of malnourished children rising still further (by 9m) by 2020, and it is only in their 'optimistic' scenario that the numbers fall by 50%.

Recent thinking on rural livelihoods has rightly emphasised the fact that rural people engage in a wide range of farm and non-farm activities. However, improving agricultural productivity and incomes in SSA is crucial if food security and a significant reduction in poverty are to be achieved. Around 90% of the total labour force in SSA is, in part, dependent on farming activities for their livelihood, and at least 60% of the incomes of rural people are from farming activities

Increasing farm incomes will stimulate forward and backward linkages in the rural economy thereby increasing investment, employment and incomes in related activities; and it is widely recognised that technology has potential to increase agricultural technology and farm incomes. The positive impacts on the poor of deploying technology are both direct and indirect:

- Higher yields of crops grown for own consumption can release land and resources for crop diversification to improve dietary intake, or for sale in local, national or international markets.
- Increased yields and labour saving technologies can release labour for non-farm activities that increase household incomes.
- Improved varieties with increased resistance to biotic and abiotic stresses reduce vulnerability and increase yields.
- Some technological developments also improve the sustainability of more intensive agriculture through appropriate production practices (e.g. by reducing chemical pesticide use).

The Green Revolution in South East Asia indicates that, historically, wherever technology has been combined with improved infrastructure, supportive policy and an appropriate institutional framework, the reduction in poverty has been striking. There is nothing inherent in the soils or climate of SSA that prevent this. In addition, numerous studies show very high rates of return

to investments in agricultural research and development and technology transfer, production and distribution. Adjusting for bias and optimistic assumptions, estimates suggest that social returns to research and extension jointly are over 35% per annum.

### 1.2.2 Case for Intervention

#### (i) *Market and Institutional Failure and Affordability*

The general case for intervention is the presence of market failures and institutional constraints that combine to deter private investment. Information and coordination failures and related high transaction costs, together with appropriability issues, particularly with self-multiplying seeds, reduce investment and output below the socially optimal level. In addition, even in the absence of market failure and institutional constraints, there is a case for public sector funding of technology adaptation and delivery. Private sector investment cannot be expected to provide technology solutions to problems of poverty and lack of food security unassisted. Where farmers are poor and have not previously had access to modern agricultural inputs the private sector will not risk investment to support dissemination and distribution, but will invest elsewhere.

Public funding of research is an important mechanism for tackling the above failures, and the public sector research, development and distribution networks in SSA have many able and motivated staff. However, these institutions are hampered by inadequate and declining funding, difficulties in retaining staff and limited access to proprietary and non-proprietary technology owned by the private and public sectors in OECD and other developing countries. In addition, the research institutions lack the appropriate capacities and facilities for the development and distribution of the technologies that they produce. In part this is because of the absence of market signals, but is also related to a lack of experience of interacting with national private sector entities and to management culture.

#### (ii) *Consultation Finding*

Extensive consultations with the private sector confirm the need for intervention. The high transactions costs of developing products, including those resulting from co-ordination failures and weak purchasing power have repeatedly been identified as a key constraint for the national and international private sectors in SSA.

In addition, because market size is a key driver for investment by the big 5 agribusinesses (DowAgro, Bayer, Monsanto, Dupont (Pioneer) and Syngenta) commercial investment in SSA may be limited even in the absence of market and institutional failures. (For example, one of the companies indicated that they only focus on products with potential markets in excess of US\$100m per annum.) This focus on larger markets reflects the high costs of product identification, development, testing, regulatory approval, manufacture and market development. It also reflects the fact that the large companies can only add significantly to shareholder value if there is significant growth in top line revenues. The 'Big 5' focus most of their commercial activities outside of OECD countries on a limited number of major crops and the larger developing countries (principally India, China, Argentina and Brazil). They have little commercial interest (if any) in crops grown and consumed only in developing countries.

In the absence of a commercial case for investment, the major agribusinesses have indicated that they are willing, subject to certain conditions, to licence technology for use within SSA on humanitarian grounds.

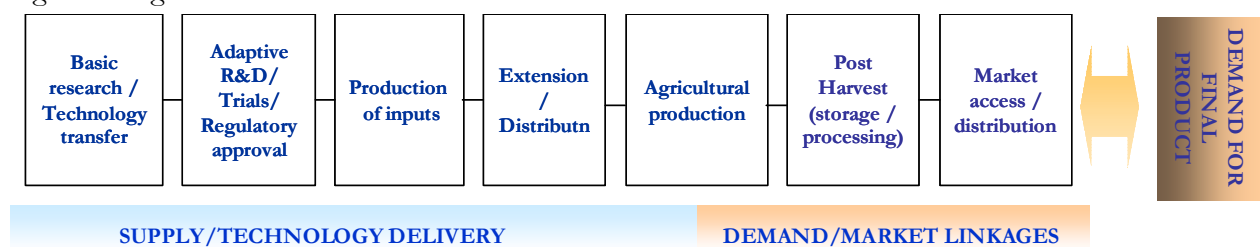
(i) *Gaps in Existing Institutions*

The specific case for a new initiative reflects an assessment of existing public sector interventions. Scoping work and consultations undertaken separately by Rockefeller and DFID have identified three particular gaps in current interventions.

First, existing institutions working in agricultural technology development in SSA do not have effective mechanisms for negotiating transfer of proprietary and other technology held by the public and private sectors in both OECD and other developing countries. The International Service for the Acquisition of Agri-biotech Applications (ISAAA) has played an important role in developing mechanisms for transfer of biotechnology from major OECD companies to developing countries. However, the global focus of its work means that transaction costs tend to be relatively high – reflecting the need to develop new networks and contractual approaches for each project. In addition, ISAAA has a narrower technology focus and does not address problems at all stages in the value chain, or address the longer-term concerns of technology providers and users.

Second, there is a major gap in focus by institutions on the entire value chain to ensure that new and existing technologies are produced, demonstrated and distributed to smallholder farmers. The transfer and use of technology by smallholder farmers presents major challenges. Figure 1 illustrates the links in the supply chain from ‘upstream’ basic and adaptive R&D through production and distribution of technology products to farmers including smallholders. It is not enough to adapt existing technologies for use under African conditions. It is also necessary to find means of assuring regulatory approval, demonstrating performance potential and distributing products and make them affordable to millions of small farmers.

Figure 1: Stages in the value chain



Source: DFID/CEPA

In the absence of these linkages, the risk is that technology remains ‘on the shelf’ and returns to R&D and technology development are lost. Capturing the potential of technology in SSA therefore requires greater effort to integrate upstream and downstream elements of the technology value chain. Although both the public and NGO sectors are engaged in projects that tackle a certain element of the value chain, they are not involved along the entire value chain from R&D to the end-user, and cannot therefore facilitate the appropriate linkages. In addition, many of the skills required to support sustainable agribusiness in SSA relate to commerce and business. With some exceptions NGOs and public sector organisations tend to be weak in these areas.

Third, there is currently a gap in terms of development and communication of best practice in technology transfer and the development of commercial agribusiness. Regional and sub-regional research networks (ASARECA, CORAF, SACCAR) are focused largely on the upstream elements of technology development, and CGIAR centres are organised by agricultural product and do not have general expertise in downstream delivery and interaction with the private sector. In addition, many technologies have cross border relevance, and therefore sub-regional coordination in project development and delivery has the potential to substantially reduce transaction costs and increase impacts.

The challenge for a new initiative is therefore to facilitate public-private partnerships to transfer of public and private sector technology to SSA and to ensure linkages (i) between R&D and production, dissemination and distribution; and (ii) across country boundaries.

*(iv) Why a New Mechanism?*

The recommendations of the multi-stakeholder DAC (and the conclusion of the analysis and consultation processes carried out for Rockefeller and DFID) are that a new mechanism for the delivery of appropriate interventions be created. The entity should have the following characteristics:

- African owned and led, to ensure that technology transfer and agribusiness development is focused on African priorities and interests.
- Have a mix of public and private sector, technical and agribusiness expertise. These capabilities are essential for successful delivery of the proposed interventions, and would be a key difference to existing institutions.
- Be a creditworthy and responsible counterparty capable of entering into contracts with both the public and private sectors. Existing organisations do not necessarily have the powers or capacity to act in this capacity. OECD private sector's agreement to licence technology royalty-free is subject to the creation of a limited liability vehicle that will act as the 'responsible party' ensuring that technologies are appropriately used and are not re-exported into OECD markets. (The existing institutions are inappropriate for this purpose).
- Be an independent institution – which is available to provide support and engage with potential partner institutions on an equal basis. In addition, to the extent that research funding is channelled through the new organisation, there is merit in separating the institution that funds, project manages and facilitates and those that deliver the different components required for technology development and delivery.

### 1.3 Business Plan Structure

This business plan is organised as follows:

- Section 2 sets out the AATF's mission and objectives.
- Section 3 provides details on the strategy, defining the principles that will guide the AATF's operations.
- Section 4 discusses incorporation and location.
- Section 5 describes the arrangements for the structure and governance of the AATF.
- Section 6 provides details of the operating model, describing the AATF's specific activities.
- Section 7 sets out the organisational structure and staffing requirements.
- Section 8 describes key elements of the AATF's expected evolution over time.
- Section 9 provides indicative financial projections based on assumptions.

## 2. AATF MISSION AND OBJECTIVES

The African Agricultural Technology Foundation (AATF) will be established as an African-led, African-based, freestanding, not-for-profit organisation designed to promote food security and enhanced livelihoods by facilitating the use of improved agricultural technologies by smallholder farmers in SSA. It will work closely with African stakeholders farmers, scientists, small businesses, NGO’s and others, to identify the needs of poor farmers and match them with technologies suitable for adaptation to African ecologies and farming systems. It is a public-private partnership that will pursue its mission by combining the best practices from, and by drawing upon, the resources of the public and private realms.

By taking advantage of these partnerships and extended networks it will link food security, poverty reduction, market development, and economic growth in ways that both demand and trigger sustainable reform. It will assemble all the necessary components for each project balancing concerns for expense, simplicity, and effectiveness.

Although it is not the primary mission of the AATF it will contribute to capacity building of both private and public sectors, to wherever possible, enable them to execute the tasks.

### *Box 2: Mission and Objectives*

<b><i>Mission</i></b>
To improve food security and reduce poverty of smallholder and in particular resource-poor farmers in Sub-Saharan Africa by facilitating public-private partnerships for the transfer, development, production and distribution of technology.
<b><i>Objectives</i></b>
To develop a portfolio of projects that: <ul style="list-style-type: none"> <li>• Provide smallholders with access to agricultural technologies, materials and know how – with particular focus on accessing technology held by the private sector.</li> <li>• Facilitate existing institutions along the value chain to ensure delivery of products to African farmers and create sustainable markets and private sector engagement.</li> </ul>

Success will require the support and collaboration of the private sector (which controls much of modern agricultural technology), of the African stakeholders including farmers’ organisations, R&D institutions and domestic private sector agribusinesses and of the international donor community. Government organisations can and must lend support toward achieving greater food security and poverty reduction in Africa.

### 3. Strategy

The AATF will achieve its objectives by:

- Entering into agreements to access technologies from providers (private sector companies, public sector institutions and NGOs). The AATF will act as principal and as the ‘responsible party’ in the stewardship of technologies that it licences; ensuring that appropriate regulatory procedures are followed; targeting technologies on identified needs; safeguarding against piracy; and protecting confidential material.
- Sub-licensing technologies to private, public and NGO sectors for adaptation to smallholder farming conditions. Mobilising funding for its projects together with its project partners and, where appropriate entering output-based contracts for the delivery of research and development services.
- Seek regulatory consent for new adapted products. Testing and application for regulatory approval will again be carried out by partner organisations. AATF will provide advice and support, and where appropriate facilitate private sector involvement in the processes.
- Sub-licensing to private and public sector partners to produce and distribute them. Where appropriate it will facilitate production and distribution partnerships, including entering contracts and funding public and private sector entities to ensure that new products reach resource poor and other smallholder farmers. This may involve a number of new approaches to delivery:
  - Helping the (local) private sector to negotiate high volume / lower price agreements with input suppliers (e.g. for fertilisers / herbicides) as part of locally led distribution system development activities.
  - Underwrite part of the market risks faced by seed companies in the production and distribution of a new product – e.g. through development of commercial contracts that guarantee a certain level of sales.
  - Arranging and part-financing contract farm demonstrations of new input packages to smallholder farmers. Developing output-based contracts with private and public sector seed companies to provide extension and distribution services to smallholders over several growing cycles at agreed sites.
  - Where appropriate to provide tapered, short-term market development subsidies to encourage the uptake of technology by small holder farmers.

Section 8 of this Business Plan describes the expected evolution of the AATF over time, including a discussion of the pricing of AATF technology. The rest of this section discusses the principles that determine how the AATF will implement its strategy.

### 3.1 Partnership

The AATF concept is the result of a unique partnership between public and private sectors in Africa, North America and Europe. Progress towards meeting its objectives will require the ongoing support and collaboration of public and private sector technology providers, African stakeholders, African governments, African private sector agribusiness and the international donor community.

The AATF's strategy for achieving its objectives is to act as a principal and as the 'responsible party' in facilitating ongoing collaboration and partnership on a case-by-case basis. It will work closely with other African institutions, responding on a project-by-project basis to the expressed needs of African farmers. It will assemble all the necessary components for each project - balancing concerns for expense, simplicity, and effectiveness. This will include mobilising funding for projects, managing the licensing of technologies, facilitating testing and regulatory approval processes in-country, ensuring appropriate product stewardship, enforcing licence conditions as may be defined and agreed upon by the parties, and ensuring that products actually reach farmers.

The AATF's role in mobilising funding is discussed below in Section 6.4.

### 3.2 Stages in the Value Chain

The AATF will operate along the entire value chain (Figure 1) from transfer and adaptation of technology to farmers' access to output markets, with delivery and implementation undertaken by partner organisations. The nature of the AATF's involvement will vary project-by-project depending on the specific requirements of each. The AATF will have capability to initiate and put in place mechanisms and partnerships to ensure production, distribution and use of the technologies by African farmers. In all of its activities, the AATF will act as a facilitator, with delivery and implementation carried out by public, private and NGO partners.

### 3.3 Types of Technology

Technology is the application of knowledge to solve particular problems. Types of agricultural technology vary according to the type of knowledge, e.g. biological, chemical, mechanical, process. The AATF will be permitted to facilitate the use of all types of technology. A limited set of examples is shown below in Box 3 (focused on seeds).

Choice of technologies will reflect African priorities, will be demand-led and will reflect the potential to improve food security and reduce poverty. In responding to demand, AATF will seek to facilitate the delivery of technologies that are simple, cost effective and provide sustainable value to the farmer.

In addition, the AATF's policy is that developing countries in SSA should make their own decisions on whether or not to adopt particular agricultural technologies (including GMOs). The AATF will expect that these decisions be taken on the basis of an appropriate assessment of the costs and benefit of the technology. The AATF will also require that the countries into which technology is licensed have the capacity to manage their safe development and use.

The AATF will target technology providers (public, private and NGO) in both OECD countries and other developing countries, to achieve both North-South and South-South technology transfer opportunities.

*Box 3: Types of Technology*

<b>Biological</b>	<b>Chemical</b>
Variety improvement through enhancing germplasm	Seed dressing and coating
Tissue culture technologies (breeding & production)	Herbicides, pesticides and fertilisers
Marker assisted breeding for traditional breeding	Storage
Development and production of GM varieties	
<b>Mechanical</b>	<b>Process</b>
High throughput assay technology	Information management systems for breeding
Seed drying and storage	

*Source: CEPA/Meridian/Rockefeller*

### 3.4 Target Beneficiaries

The AATF's food security and poverty reduction focus means that it will give priority to technologies of particular benefit to resource poor and other smallholder farmers. However, other potential beneficiaries will not be excluded from the use of AATF technologies. Targeting of resource-poor or smallholder farmers in general may also be achieved through the AATF's activities in promoting the development of agricultural markets and supporting delivery and distribution in areas of greatest need.

### 3.5 Geographic Considerations

There are several aspects to this:

- Target countries and regions for sub-licensing of product. The AATF will operate in the whole of SSA. The AATF will actively seek to facilitate projects involving collaboration between countries at regional and sub-regional level.
- Definition of Africa 'Territory'. Countries to be treated as part of the Africa 'Territory' particularly for the purpose of export restrictions in licences are assumed to include all of the countries in SSA.
- Location of possible research partners for the activities of the AATF. The AATF's approach will be to identify those (public and private) partners that are expected to be able to deliver the required products and services, in a cost-effective and timely way. Subject to this over-riding consideration, choice of partners located in Africa will be preferred because of the benefits associated with building country and regional capacity.

### 3.6 Target Agricultural Products

To maintain maximum flexibility and provide the broadest range of opportunity, the AATF will consider projects and negotiate license terms on a case-by-case basis. (See Section 3.7 below).

- The AATF will consider both subsistence agricultural products and crops/products sold in local and national markets, although in practice, most smallholders both consume and

sell a portion of their crops, if only locally. Crops grown for export outside of Africa will also be considered if appropriate licenses can be secured.

- The AATF Strategy will not preclude the use of technologies to produce improved non-food agricultural products, although most of the early projects will focus on food crops produced and consumed within SSA.

### 3.7 Licensing Arrangements

The AATF will license technology from the multinationals and from other public and private sector entities in the North and the South. The terms of the licences will be negotiated on a case-by-case basis to achieve a mutually acceptable basis for transfer. Appendix 1 sets out the main clauses likely to be included in such license agreements. Key contractual issues are likely to include:

- Conditions in relation to sub-licensing (or licensing ‘out’) of the technology to AATF partners. These are likely to include restrictions on exports to countries outside of SSA, requirements in relation to information disclosure, labelling of licensed products and product stewardship.
- Role of the technology licensor in abatement of infringement and the presence and extent of any indemnities.
- Rights in relation to new technology created as a result of the activities of the AATF and its research partners.

AATF sub-licenses (to research, production and distribution partners) will reflect the conditions specified in the primary licence between the AATF and the technology provider. In general, sub-licensing to partners will seek to promote the development of sustainable businesses in Africa and (where possible) competition.

### 3.8 Downstream mechanism

When considering its involvement in the downstream mechanism, AATF will follow a number of principles as described in Box 4.

*Box 4 – Principles for AATF involvement in downstream mechanisms*

<i>Principle</i>	<i>Description</i>
New approaches	AATF will therefore only seek to intervene where its interventions are demonstrably new and / or add value in a sector or country.
Time limited	Interventions will usually only be appropriate where there is a reasonable expectation that businesses will be sustainable in the medium-term (i.e. not require permanent subsidy). They should therefore be time-limited, and selling prices should be sufficient to cover marginal production and distribution costs.
Multi-product	Wherever possible, interventions designed to support the development of ‘channels to market’ should be multi-product and ‘neutral’ – i.e. leaving farmers to choose the products that they wish to use.

<i>Principle</i>	<i>Description</i>
Risk transfer	Appropriate risk transfer will generally involve the private sector retaining capital and operating risks (i.e. cost overruns) and availability risks (i.e. delays). Even where AATF takes a proportion of the demand risk, the support mechanisms should ensure that the partners retain strong incentives to achieve target increases in demand.

## 4. LOCATION OF OPERATIONS AND INCORPORATION

### 4.1 Operational Location

The AATF Board of Trustees has decided that the AATF will locate its operational offices in Nairobi, Kenya.

### 4.2 Incorporation Location

The AATF is incorporated in the United Kingdom. The choice of the United Kingdom reflects the following considerations:

- The United Kingdom has robust and predictable company, contract and IPR laws capable of supporting the AATF's activities – which will be in the interest of the AATF, technology providers and potential research and 'downstream partners'.
- The United Kingdom legal framework is similar to that in many SSA countries, and is therefore likely to be most familiar.
- Location in the United Kingdom offers potential advantages compared with other locations such as the United States in terms of propensity to litigate and the size of potential damages and is acceptable to the major licensors.

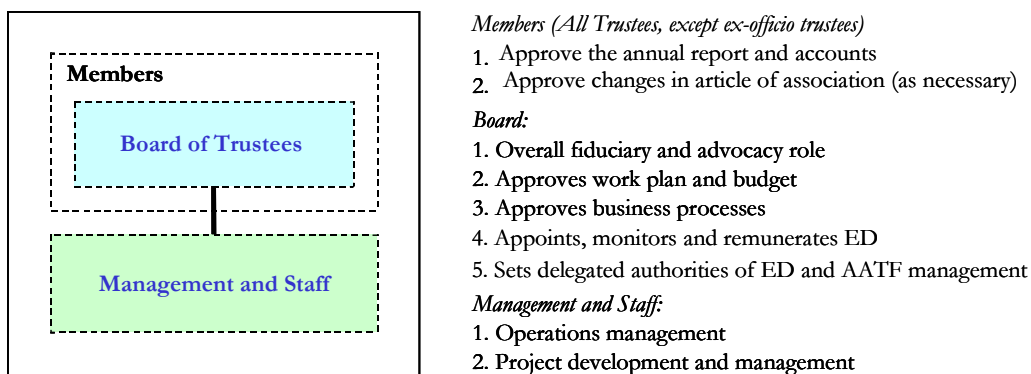
The choice of law and jurisdiction for the licences and contracts entered into by the AATF and third parties will be made on a case-by-case basis. However, there are likely to be advantages associated with and alignment of legal incorporation and law and jurisdiction, in terms of simplicity and familiarity. Therefore it is likely that many licence agreements will be subject to United Kingdom law.

## 5. STRUCTURE AND CORPORATE GOVERNANCE

The AATF’s structure and governance arrangements will:

- Create a clear separation between responsibility for setting and monitoring strategy and the management of operations.
- Limit the donors’ liability.
- Allow wide stakeholder participation – without limiting operational flexibility.
- Protect the AATF from external pressures.

Figure 2: AATF Structure



### 5.1 AATF Legal Entity

AATF is a not-for-profit, limited liability entity. The AATF is currently applying for charitable status. It was incorporated under the Companies Act 1985 of England and Wales (See Appendix 2 for Certificate of Incorporation and Appendix 3 for Memorandum and Articles of Association).

### 5.2 AATF Governance

#### 5.2.1 Governance Levels and Functions

Box 5 below provides a brief description of the AATF membership structure and functions. For additional details, please see the Memorandum and Articles of Association in Appendix 3.

Box 5: Key AATF Structure Issues

Level of Governance and Function	
Members	<p>Companies limited by guarantee are constituted with members. The liability of the members is limited by their Guarantee (in this instance, £5). (Unlike shareholder of company limited by shares, members do not have ownership of the AATF or any entitlement to income that it receives, or value that it creates). Members are the only people able to change the Articles of Association of the company and often retain certain rights in relation to the running of the company. These rights vary from company to company.</p> <p>Membership qualifications are set out in the articles of association. Members will meet annually to approve the report and accounts of the AATF. They will also be responsible for making any changes in the articles of association of the AATF.</p>
Board of Trustees	<p>The Board of Trustees are appointed to run the company, and have overall fiduciary responsibility for its activities. The precise roles and responsibilities, including in relation to the members are set out in the Board Manual.</p>
Management	<p>The Executive Director and his/her staff are responsible for the day-to-day management of the company's activities, with delegated authorities set by the Board.</p>

**5.2.2 AATF Board Composition**

The Board of Trustees will comprise 10-12 people. Trustees (other than the Executive Director and the representative of the host country, who will serve *ex officio*) will serve in a personal capacity. They will not be considered, nor act, as official representatives of governments, organizations or other constituencies. Board of Trustees will be appointed to provide a range of skills, including:

- Commercial agricultural product development expertise. The Board of Trustees will need individuals with understanding and proven track record of taking technology from the laboratory to the market.
- Finance competence. The fiduciary responsibilities of the Board of Trustees crucially involve the financial integrity of the AATF.
- Technical competence, including an understanding of the science required to develop modern agricultural products. Trustees will be required to make judgements on the deliverability, timescale, costs and risks of specific projects and the capability of research.
- Legal expertise. A large part of the AATF's activities will be negotiating and putting in place commercial agreements for the licensing and sub-licensing of technology and contracts with producers and distributors.
- Public policy and fundraising. Familiarity with public sector research systems and development expertise, particularly in Africa. The Board will play an important role in marketing and fundraising for the AATF. Understanding existing public sector research systems and the priorities of potential donors will be important.

- **Producer experience.** The Board will require individuals with experience of producer organisations, and where possible, first hand experience of production and commercialisation constraints

Trustees will therefore be drawn from a range of backgrounds and institutions, including the international and local private sector; public sector organizations; donor agencies; major NGOs, the CGIAR community and academia.

Trustees will be expected to attend regular meetings of the Board and of the Committees to which they are appointed, to give adequate attention to documentation and to perform representational duties with donors and client countries and organizations as needed.

Subject to the appropriate skill mix the presumption is that the Board will be balanced in terms of:

- **Geographical distribution.** Trustees are expected to comprise individuals from a range of countries and regions, including both donor and beneficiary countries. In line with the principle that the AATF is African led, the majority of Board of Trustees are expected to be nationals of countries in SSA (Eastern, Central, Western and Southern regions). Normally there should not be more than one Trustee from any particular country at any given time.
- **Gender.** The AATF Board should include Trustees of both sexes, and an effort will be made to achieve a reasonable gender balance.

Trustees will be elected for terms of no more than three years, but will be eligible for re-election to a second term, but they may not serve more than two successive terms. Trustees' terms of office will be staggered to ensure continuity. A 'Nominations Sub-Committee of the Board' will make recommendations to the Board for appointment of future Trustees. New Trustees will be appointed by the Board to maintain the appropriate mix of expertise necessary to support the activities of the AATF.

The Chair of the Board will normally be elected for a three-year term, and will be selected by virtue of experience on the AATF Board (except for the first Board Chair), recognized standing in a field relevant to the mission of the foundation, personal leadership qualities and ability to represent the Foundation effectively in International Meetings. The Chair will be expected to devote the equivalent of four to six weeks each year to service of the Foundation.

### **5.2.3 Board Sub-Committees**

The Board will establish Sub-Committees and delegate authority to them to a level consistent with it retaining overall fiduciary responsibility for the AATF. The expectation is that four committees will be established:

- The Executive Committee will comprise the Chair of the Board, Chairs of the Programme / Product Development and Audit Committees, and the Executive Director. It will have delegated authority to act on behalf of the Board as appropriate, and will be responsible for reviewing the annual accounts and budget and recommending them to the full Board for approval. It will also make recommendations to the Board in relation to other financial policies and asset management. Finally, it will

support the Chair and Executive Director in preparation of Board and Sub-Committee agendas and will be responsible for reviewing the performance of the Executive Director, setting his/her objectives and remuneration.

- The Programme / Product Development Committee will comprise five persons and the committee will be responsible for advising the Board on the AATF's strategic plan and on complementarities with national programmes and the work of other institutions. It will also be responsible for the strategy and processes put in place for product development, project implementation and evaluation. It will be responsible for reviewing and approving projects within delegated authorities set by the Board, and will review the overall portfolio or programme of projects and will recommend them to the Board for approval.
- A Nominating Committee, comprising of three persons, will be responsible for nominating new Trustees to the full Board, recommending the re-election of Board Trustees, the nomination of the Board Chair, Vice-Chair and Chairs of the Board Sub-Committees in consultation with the Board Chair. The Committee will also be responsible for maintaining a data bank of potential candidates for future Board membership.
- An Audit Committee, comprising of three persons, will provide assistance to the Board in fulfilling its fiduciary responsibilities relating to the accounting, investment, internal controls and reporting practices of the Foundation. It will ensure that the Foundation's accounts and financial statements are properly audited by an independent public accounting firm and make recommendations to the Board annually on the selection of the external auditor. It will also be responsible for monitoring the AATF's management systems and policies to assure donors that resource are prudently and efficiently employed to achieve the approved mission and objectives

### **5.2.4 Stakeholder Interaction**

In selecting and approving projects, the AATF will take account of the needs of its principal stakeholders. These are (i) the ultimate beneficiaries of its projects (i.e. smallholder farmers in SSA); and (ii) its partner organisations in the public and private sector in SSA and elsewhere. Board competencies take account of the expected requirements of these groups. However, the primary mechanism for stakeholder interaction will be the product concept development and project planning processes. Beneficiaries of AATF projects will be involved through participatory mechanisms and partner organisations through their direct engagement in the projects. Stakeholders will also be involved in monitoring, evaluation and impact assessment of projects.

### **5.2.5 Board Advisory Committee**

An Advisory Committee, comprised of representatives of various stakeholder organizations in Africa as well as technology providers and donors, will be established to provide guidance, both to the AATF staff and to the members of the Board's Programme / Product Development

## Section 5: Structure and Corporate Governance

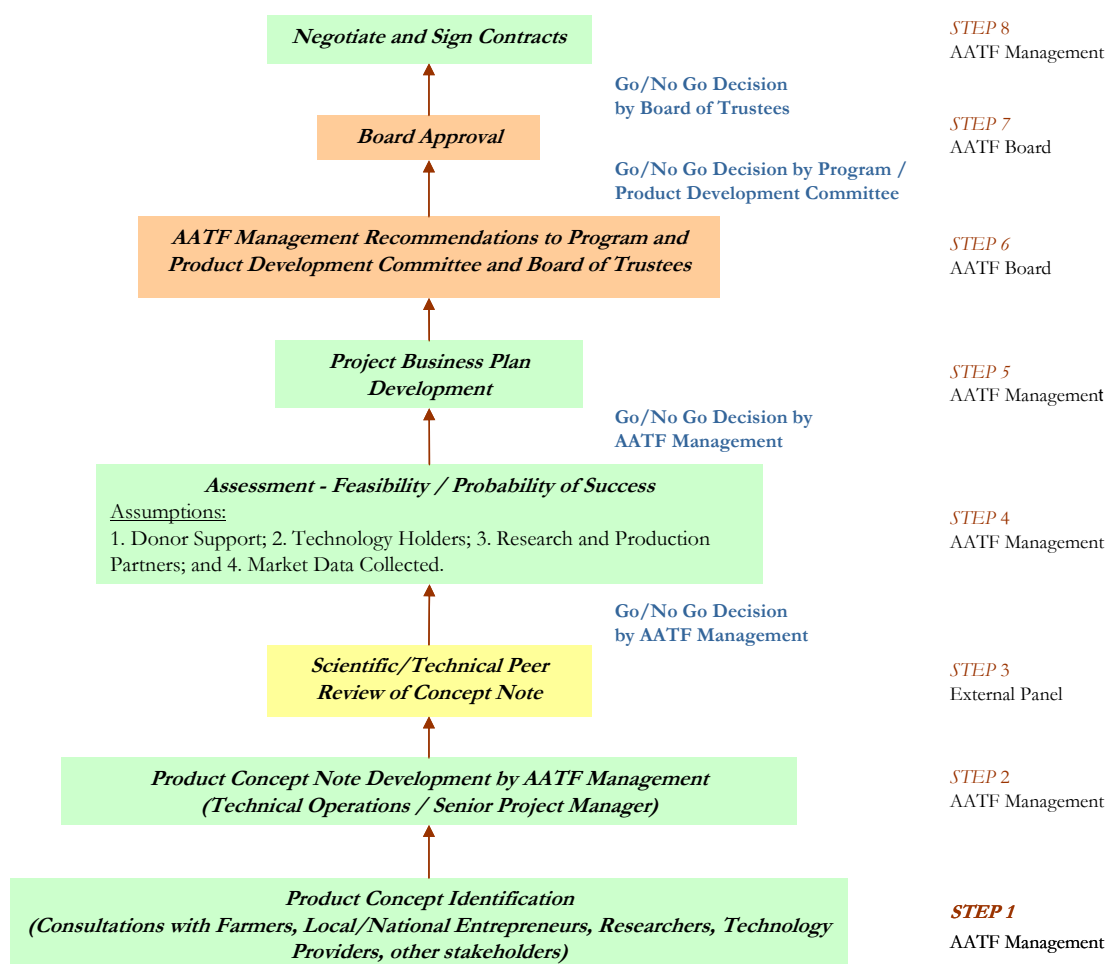
Committee. Funds permitting, the Advisory Committee will be convened approximately every two years.

## 6. OPERATING MODEL

The AATF will pursue its objectives through three principal areas of activity: (i) the identification of opportunities and product concepts; (ii) the development of these concepts into fully specified project plans; (iii) and implementation of the plans by facilitating, managing and monitoring of the planned activities. In general, care will be taken to make sure that the identification and development of project plans will not be of a top-down process but will involve a wide spectrum of stakeholders.

Figure 3 summarises these points, primarily focusing on (i) and (ii), and breaks the process down into 8 steps. The figure includes details of key decision points and who has responsibility for decisions at each step. The rest of this section describes the scope of these activities and the role that the AATF expects to play in mobilising funding for these activities. It concludes with an examination of potential risks and suggests mitigation strategies.

Figure 3: Simplified Project Flow Diagram



### 6.1 Identification and Development of Opportunities

The AATF will select projects through a demand-driven process, based on the needs of smallholders, including resource-poor farmers, and the projects' potential to reduce poverty.

#### 6.1.1 Identification of Opportunities (Step 1)

Product opportunities will be identified through AATF's network of partners in Africa and elsewhere:

- AATF staff will consult extensively within the African agricultural community through regular in-country visits and facilitation of meetings with local experts.
- AATF will draw on existing work (including national and regional strategies, CGIAR needs assessments and private sector analysis of priority targets for technology intervention) and where appropriate commission additional work to assess needs and demand.
- AATF management will maintain regular bilateral (and multilateral) contact with potential technology providers and key donors.

#### 6.1.2 Development of Product Concept and Assessment of Feasibility/Probability of Success (Steps 2, 3 and 4)

AATF Management will prioritise the opportunities to be analysed and developed. The AATF prioritisation will take account of existing available technologies and the cost-benefit analysis of the opportunity. For each potential project:

- AATF's Technical Operations / Senior Project Manager will be responsible to lead the development of the product concepts (from AATF's perspective). Assuming approval he/she will have overall responsibility for the subsequent development of the project plan.
- Product concept notes will be developed in close consultation with key stakeholders. The concept will cover the key commercial (including demand), technical, financial and regulatory issues associated with the product. Box 6 sets out the expected contents of a Product concept note. Interaction with stakeholders will vary project by project. In some cases AATF will be working on an existing projects, and therefore product concepts (and plans) will either already exist or will be developed jointly. In other cases, the AATF will take a greater lead in project development, based on its own project identification work (6.1.1 above).
- Product concept notes will be subject to an external Scientific/Technical peer review and where appropriate review by the Programme / Product Development Committee (assessment of feasibility / probability of success).

*Box 6: Product Concept Note*

Area	Content
Product description	Details of the product and the territory.
Demand (effective or otherwise)	Evidence from consultations/experts/participatory methods. To include description of expected markets/value chain.
Impact on food security/incomes	Headline assessment of expected usage/impact on crop losses and incomes.
Technical feasibility/key stages	Technology requirements (covering process, products and technical information).
Risk management approach	Description of critical sensitivities, environmental hazards and performance milestones (which will form the basis for project monitoring).
Preliminary forecast costing	Early estimates of the project related costs, including the costs of developing the full project plan.
Funding/technology sources	Indication of initial potential funders/technology licensors. Details of potential revenue generation (if any). Funding strategy, including potential for matched funding.
Partner requirements	Expected partnering arrangements for adaptive research, regulatory approval, production, distribution and market development. Initial indication of commercial basis of licensing.
Key AATF actions	Summary implementation timetable.

## 6.2 Project Plan Stages (Steps 5, 6 and 7)

Development of a fully specified project plan takes place in two stages. The first stage involves carrying out initial analysis of the project and entering preliminary partnering agreements. The second involves drawing up the full project plan and legal documentation.

### 6.2.1 Initial Project Analysis and Partnering

Once the AATF management has approved the project concept (in line with its delegated authority), the project manager will carry out additional due diligence as follows:

- Initial market testing with key stakeholders, involving wide circulation of the project concept note, meetings with smallholder farmers and farmers groups - to determine whether the proposed project meets farmers' needs and will be adopted and further assessment of the expected benefits (See Box A4.3).
- Confirmation of the availability of technology for the project and the willingness of the technology owners (private and public sector) to cooperate (through licensing of technology and research expertise/resource sharing). This stage should include a risk

analysis to assess the likelihood of successful adaptation at reasonable cost (See Box A4.4).

- Where the AATF is not already working with partners, it will shortlist potential project partners (for adaptive research and regulatory approval, and, where possible, production, distribution and market development). These include NARS, CG Centres, Universities and the public and private sector in Africa and elsewhere. Selection of partners will take account of (i) ability to deliver project outputs in a cost-effective and timely fashion; and (ii) potential to build SSA capacity.
- Approach potential funders (including African governments, OECD donors and private sector foundations) to gauge level of interest and commitment.

Subject to senior management approval to proceed, AATF will request and receive letters of intent from key technology providers and (if possible) potential funders before moving to the project planning stage. Letters of intent will indicate willingness on the part of technology providers to licence technology to the AATF subject to the Project Plan, contract and internal processes.

### 6.2.2 Project Plan

The Project Plan will serve as the point of reference throughout the life of the project, including after product launch when it is necessary to determine how a product performs and its acceptability to farmers and consumers. To create the Plan, AATF will establish and oversee a project team, including scientific, regulatory, marketing, project management and legal expertise. The Plan will include:

- Details of each of the stages of the project, including the key performance milestones for project monitoring, and the technical research requirements.
- An assessment of the costs and benefits of the project (including impacts on both food security and poverty reduction) including a full statement of assumptions and a risk analysis. This assessment would form the benchmark for re-evaluation at periodic milestones in light of research results and evolving demand.
- A full description of the parties involved and the responsibilities attributed to each. The Plan would also specify the main contractual terms expected for licensing and sub-licensing, and be a key attachment to such contracts.

Because of the expected length of the research phase of some projects, downstream elements of the project may be difficult to specify in full in the Project Plan unless the adaptation / consent stage is expected to be short. Nevertheless consideration of downstream elements should be included in each Plan including details of:

- The partnership between the AATF and research institutes/companies, including rights in relation to the technology and the products created. The Plan would specify the technical steps required to deliver the product and the sources of funding.

- The strategy, mechanisms and costs to the AATF of forming partnerships and monitoring to achieve the production and distribution of products to smallholder farmers and, where appropriate, address affordability.

On completion, Project Plans will be submitted for approval by the full Board (on recommendation from the Programme / Product Development Committee). See Box A4.6 for more details.

### **6.3 Implementation Stage**

#### **6.3.1 Negotiate Contracts, Signing and Funding (Step 8)**

The AATF will enter into contractual agreements with the various parties. The Legal Counsel will lead the drafting of documentation, (based on standard Heads of Terms for licences/contracts and key commercial terms will be set out in the Project Plan). Appendix 1 sets out the key clauses expected to be included in: (1) the License agreement between technology owner(s) and AATF; (2) the Sub-licence agreement between AATF and recipient research institutes, including research facilities that will conduct regulatory testing; (3) A production/distribution agreement. In some instances, the AATF may also enter into project funding agreements (see Section 6.4 below),

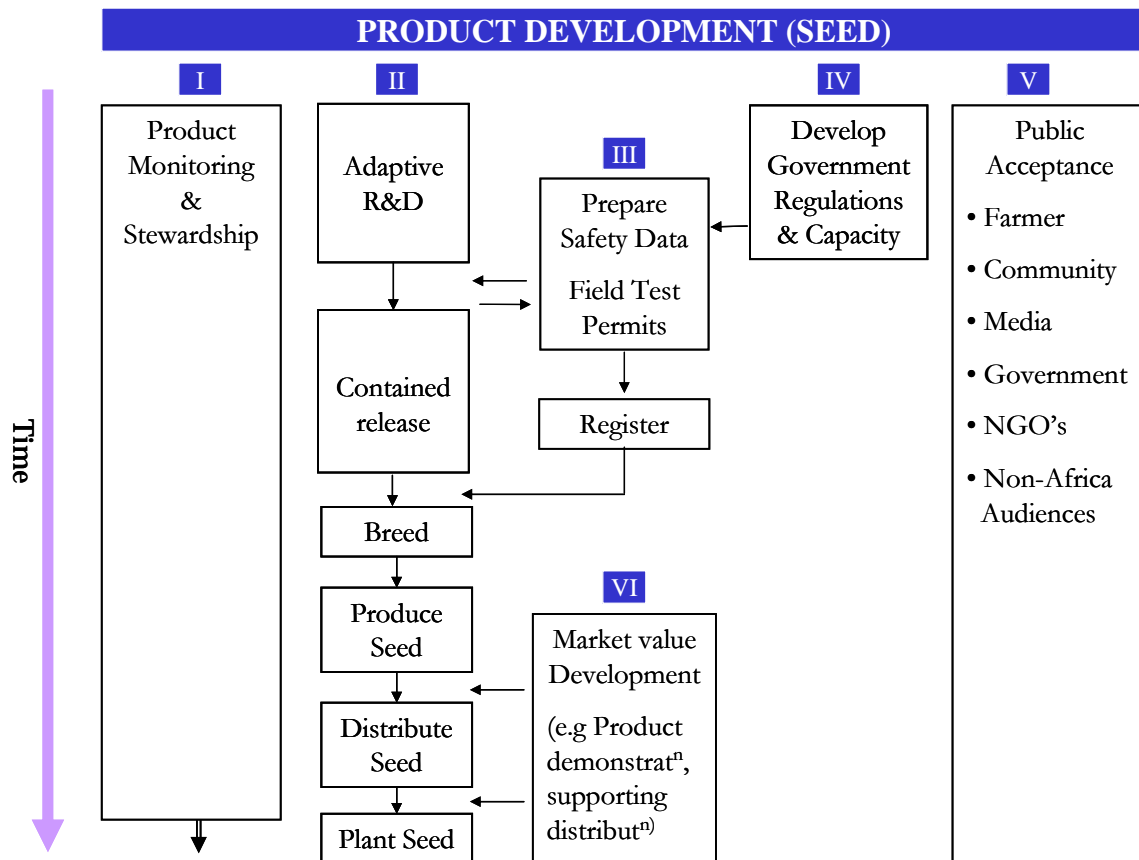
#### **6.3.2 Project Oversight**

Project oversight and evaluation at milestones will take up a significant proportion of AATF staff time. Possible projects are discussed in more detail in section 8. Figure 4 outlines the major elements of an illustrative project (in this case the development of a new seed variety). It identifies 6 related areas of activity. The discussion following the figure expands on AATF's role in each of these areas of activity. AATF projects may cover all or a subset of these groups of activities.

##### *Product Monitoring and Stewardship (I)*

Ensuring appropriate monitoring and stewardship of licensed technologies and the resulting products is at the heart of the AATF's role, and will be ongoing throughout the project period. AATF will ensure that appropriate agreements are obtained, regulations for production are observed and licence requirements in relation to the use of the technology (e.g. territory and crop) are enforced.

Figure 4: Product Development Example



### Technology Creation and Delivery (II)

Facilitation of the creation, regulatory approval and delivery of the final product are the central functions of the AATF. Adaptive R&D will not always result in success. AATF will therefore carry out rigorous evaluation of projects at milestones set out in the project plan. This evaluation will consider expected performance against the original cost-benefit assumptions and where appropriate may result in adjustments or potentially termination of the project.

In cases where AATF is leading a project it will put in place and manage the downstream contract (research, regulatory approval, production and distribution). Agreements to licence a product for production and distribution will be negotiated during the adaptive research and testing phases.

The precise nature of AATF activities will vary according to the project and technology type. For example, an AATF project might simply be to provide access to high throughput assays – to facilitate existing research and development activity into a particular product. For example where transaction costs associated with regulatory approval are the key obstacle to private sector involvement, AATF's activity might focus on only this, leaving production and distribution to existing private sector providers.

### *Field-Testing and Regulatory Approval (III)*

Use of technology not involving GMOs will substantially reduce requirements in relation to testing, regulatory approval and product stewardship.

### *Developing Regulatory Environment and Capacity (IV)*

AATF will not be directly engaged in support of this process, but it will play a role in assisting and co-ordinating other technical support for the development of regulation of the agricultural sector (including bio-safety regimes) in target countries and regions

### *Public Acceptance Work (V)*

Because AATF projects will be selected based on smallholder needs, it will begin at the pre-concept note stage to assess the functional and cultural acceptability of a crop or other project outcome.

### *Market Value Development (VI)*

A key element of the rationale for AATF is its focus on the entire value chain. Achieving the pro-poor potential of research and development and technology transfer relies on downstream delivery mechanisms being in place. The mechanisms and approaches that AATF will use to add value – ensuring efficient transfer of technology and facilitating links in the downstream - will vary project by project. Box A4.9 (Appendix 4) sets out a number of potential mechanisms that it might employ in different circumstances. These include:

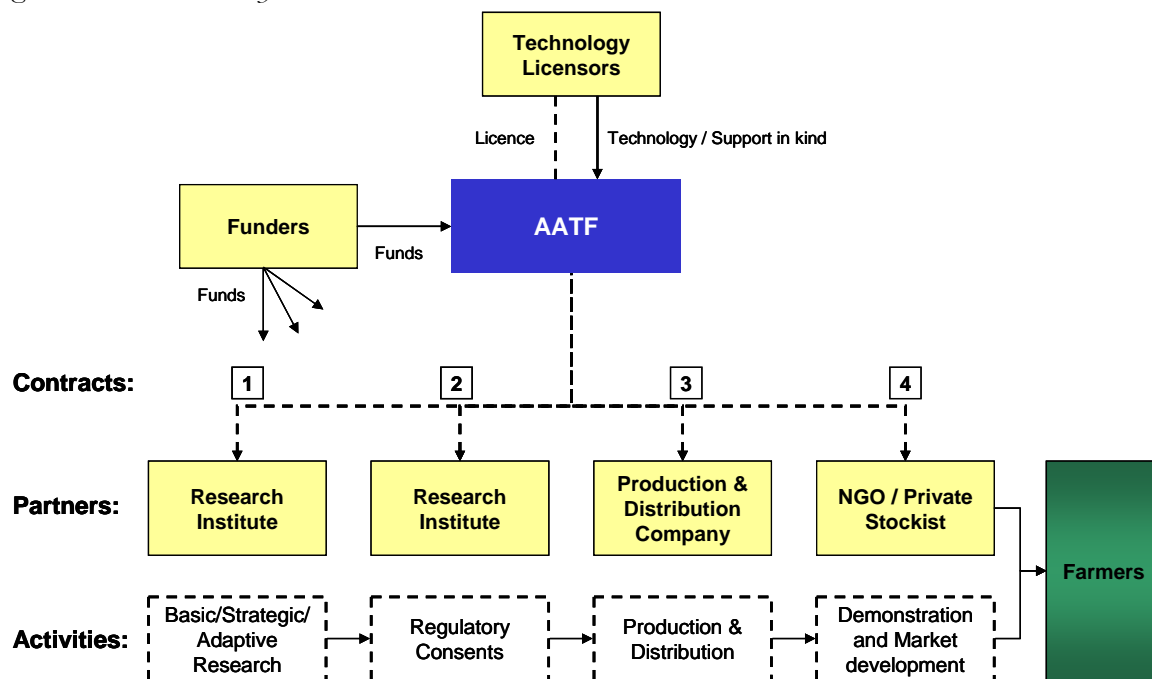
- Funding (or part funding) of regulatory consent processes.
- Offering minimum purchase guarantees to underwrite demand risk in the production / multiplication and distribution of technology products with significant scale economies.
- Provide market rebates / subsidy to suppliers to encourage the development of markets. (Such rebates would be tapered over time.)
- Contracting with the product developer / seed company to undertake an agreed programme of demonstration projects over several growing cycles at agreed sites in areas where resource-poor farmers predominate.
- Contracting with the private sector to establish quality control systems to raise consumer confidence in markets for new agricultural technologies.
- Entering into contracts with the national private sector (or PPPs) to perform agreed information and extension services in support of demonstration and uptake of a portfolio of pro-poor agricultural technologies.

## **6.4 Funding AATF Project Activity**

Figure 5 illustrates the set of relationships and activities that AATF would expect to facilitate. Within the AATF's portfolio some projects will involve activity along the entire value chain, others (e.g. transfer of technology that does not require major adaptation or regulatory approval such as mechanical/tissues culture laboratories) will focus on facilitating production, distribution and market development activities. In this illustration AATF enters four contracts with various partners, in addition to the main licence agreement with the technology provider(s):

- Contract 1: AATF sub-licences the Technology to a research institute to carry out the required adaptive research.
- Contract 2: AATF sub-licences the Technology to a research institute (which would be within the relevant country or region) to carry out regulatory testing and product registration.
- Contract 3: AATF sub-licences the registered product to one or more companies (public or private) to produce and distribute the product in the relevant territory. Heads of Terms for this licence are set out in Appendix 1. In practice these may be separate agreements in different countries.
- Contract 4: AATF (as appropriate) could put in place output-based contracts or provide other assistance to private stockists/NGOs to help develop the market, e.g. by (i) carrying out demonstration projects; and / or (ii) provide targeted rebates to poorer farmers.

Figure 5: AATF Activity



AATF’s role in mobilising project funding will vary project-by-project. It will also vary in relation to the different activities that it undertakes through the value chain for a given project.

- In many cases, AATF’s prime involvement in research activities (adaptive and regulatory consents) will be achieved through its licensing and sub-licensing arrangements. However, as part of its project planning function, it will work with partners to mobilise funding directly for the delivery of these stages. Where necessary and appropriate it will seek funding from donors and enter bilateral funding arrangements directly with project partners. In other cases it may rely on existing or additional lines of funding from donors to project partners.

- AATF's involvement with production and distribution will vary project to project. For products where the market exists and is able to sustain private sector production and distribution, the expectation is that AATF will achieve its activities through its sub-licensing arrangements with manufacturers and distributors. These will define the terms and conditions on which the sub-licensee is able to exploit the technology. In cases where the market does not provide a sufficiently strong commercial case for production, or for distribution to target users (e.g. resource poor and other smallholder farmers) AATF's involvement would be through both licensing of the technology and contracts with partners. For the latter, AATF would expect to mobilise funding and support from donors, governments and NGOs. Again, such funding could be routed through the AATF and or disbursed directly by donors to project partner(s).

### 6.5 Risks and Mitigation Strategies

We have assessed the risks to AATF under four headings: project selection risks; project implementation risks; operational risks and donor risks. This assessment will inform AATF management and donors in the development and monitoring of AATF's activities. Box 7 sets out the key risks.

In all of its activities a key risk faced by AATF will be in the negotiation, implementation and enforcement of licences and contracts. In relation to its 'upstream' activities, AATF will licence technology from private sector providers and enter sub-licences with local research institutes, the private sector and NGOs. In its 'downstream' projects, the contracts may involve sharing demand risk with private sector providers and / or contracting with companies or NGOs to deliver services on an output basis. To mitigate these risks all project plans will give particular attention to the AATF's role in ensuring that contracts are workable within target countries. For example AATF would expect to put in place appropriate monitoring arrangements (e.g. by independent NGOs) to verify compliance with the terms of any agreements. Project costs will include monitoring and enforcement of projects (estimated in the 10 year projections to be \$30,000 per annum per project). This funding is in addition to the costs of employing a legal counsel as part of the senior management team.

Box 7: Risk analysis

<b>Risks</b>	<b>Mitigation Strategy</b>
<b>Project (selection) risks</b>	
1. Technology is not the most cost-effective means for addressing an identified constraint	Projects will be designed in conjunction with key stakeholders and end-users, and the relevance and cost-effectiveness of technologies developed and promoted will be reviewed at milestones throughout the project.
2. The solution is not pro-poor (e.g. due to incorrect analysis / assumptions on affordability, relevance or 'taste')	AATF's focus is on resource-poor and smallholder farmers. Projects undertaken will need to demonstrate ex ante a high pro-poor impact and substantial cost-benefit ratios.
3. The project has unidentified economic, social or environmental side effects	The design of projects will give explicit consideration to enabling environment issues.
<b>Project (implementation) risks</b>	
1. AATF's ability to project manage disparate partners within time and budget	AATF will recruit individuals with appropriate skills and track record in project management of technology development.
2. Changes in the political, economic and regulatory environment within a beneficiary country	Changes in the enabling environment and projects will be reviewed at major milestones throughout the project's life.
3. AATF fails to mobilise funding for projects.	In principle commitment to fund projects is required before AATF commences project activities in 2003.
4. Failure or cost overruns associated with the R&D element of the technology transfer process	Contracts with partners should be designed to minimise the risk of cost overruns. Cost will be reviewed at each milestone.
5. Monitoring and enforcing contracts in target countries	Country specific arrangements will be agreed and put in place at the outset of the project.
<b>Operational risks</b>	
1. Ability of AATF to recruit and retain staff with the appropriate skills at reasonable cost	The recruitment strategy will be designed to attract high quality staff with a wide range of expertise, including project management, science and economics. Board recruitment, may be staggered so as to maximise access to the best candidates.
2. Conflicts of interest at Board or partner level	Board members will be appointed in personal capacity. Members will be required to declare areas of potential conflicts of interest.
3. Failure of the governance structure to provide effective, strategic management of the AATF	The governance arrangements are in line with the best practice in public and private sector, but will be kept under review, including at annual stakeholder/donor meetings.
<b>Donor / political risks</b>	
1. Hostile press coverage in relation to	AATF will develop a communications strategy and will

<b><i>Risks</i></b>	<b><i>Mitigation Strategy</i></b>
AATF involvement with multinationals / GMOs	operate within clear-defined policies on technology choices and in the interests of Africa.
2. High transaction costs associated with donor monitoring / information requirements	AATF will agree to a common set of monitoring requirements with donors, and will organise a single annual review meeting.
3. Conflicts with (potentially) competing institutions.	The Executive Director and Chair will actively coordinate the AATF's activities with existing institutions.

### 7. STAFFING AND ORGANISATIONAL STRUCTURE

#### 7.1 Management Structure

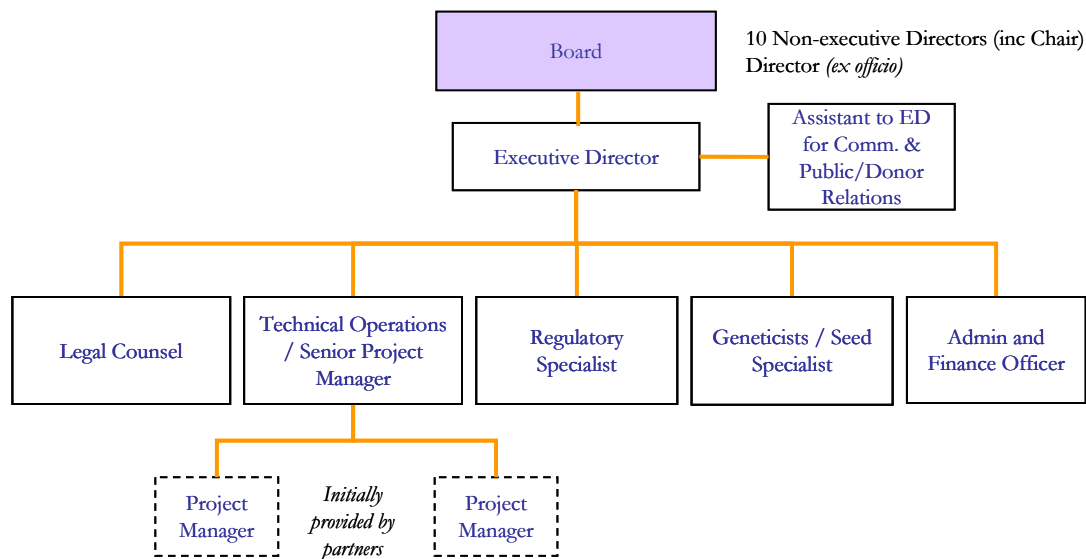
Figure 6 summarises AATF's initial management structure. Key staff include:

- An Executive Director with overall responsibility for the activities of the AATF. The Executive Director will have extensive and rounded experience in agricultural science and technology and developing markets for agricultural products.
- A Technical Operations / Senior Manager, with responsibility for AATF's project activities. He/she will oversee the work of individual project managers. Project managers will initially be provided through partner organisations. Additional AATF project management staff will be employed, if necessary, as the scale of AATF activities increase.
- A Regulatory Specialist, reporting to the Executive Director, will provide specialist support on the regulatory approval process for all AATF projects.
- A Legal Counsel, reporting to the Executive Director, will be responsible for AATF's licensing and contract arrangements, including issues related to both IPR and liability.
- A geneticist / seed systems specialist, reporting to the Executive Director, will provide support on germplasm improvement and seed production, distribution and management systems.
- A finance, administration and human resource function. Support will be provided by an Administration and Finance officer who will report directly to the Executive Director. Marketing support will be provided, as necessary, through external consultants.
- AATF will employ an Assistant to the Executive Director who will deal with external communication and public relations issues. He/she will also manage AATF's relations with international donors.

The structure will evolve over time in line with the activities of the AATF. A key competence required from the outset will be legal expertise. External lawyers may be required from time to time to supplement the work of the Legal Counsel.

The Implementing Director will be responsible for recruiting only one of the long-term professional staff (i.e. the Technical Operations / Senior Project Manager). The Executive Director (who will join in September 2003) will recruit the remaining permanent staff. In the interim, individuals on short-term contracts or consultants will fill the other professional staff posts.

Figure 6: AATF organisation structure



## 7.2 Staffing

### 7.2.1 Professional Staff

#### *Executive Director*

The Executive Director has overall executive responsibility for the activities of the AATF, reporting directly to the Chair of the Board. The Executive Director will:

- Provide leadership, direction and control for all aspects of the AATF.
- Be responsible for reporting operational and financial performance to the board.
- Develop networks and manage the principal relationships with the major stakeholders.
- Be responsible for promoting the AATF and fundraising.
- Ensure that projects are selected with the intent of creating sustainable markets and managed to time and budget.

The individual recruited to this position will have a strong background in African agriculture. The ideal individual would be a native of Africa with a minimum of twenty years work experience with exposure to both agricultural research and developing markets for agricultural products.

#### *Technical Operations / Senior Project Manager*

The Technical Operations / Senior Project Manager will:

- Be responsible for AATF's project development activities, working closely with the Executive Director and the Legal Counsel as appropriate.
- Oversee the activities of the project managers. They will be expected to be involved on a day-to-day basis in developing project plans through liaison with key stakeholders in SSA and the OECD scientific community.

## Section 7: Staffing and Organisation Structure

- Have ultimate responsibility for monitoring the progress of implemented projects, including managing project managers and relationships with contracted partners.
- Oversee the development of product concepts and project plans, drawing on the expertise of both the regulatory and seed system specialist.
- Monitor approved projects - which will involve updating the management team on the status and budget of a project at various intervals in the process.
- Be actively engaged in sourcing new ideas by travelling regularly throughout the region and building a strong network of contacts with stakeholders.

This individual will have an excellent background in agricultural science and at least fifteen years work experience acquired in African agricultural science – preferably with experience in both the public and private sectors. Knowledge of the African research environment (including technology, products and institutions) and proven project management skills are a pre-requisite.

### *Regulatory Specialist*

The regulatory specialist will:

- Be responsible for advising on and developing the product regulation elements of product concepts and project plans.
- Work with the Technical Operations / Senior Project Manager to monitor AATF projects.
- Provide advice to local partners on regulatory approval and testing issues.

The regulatory specialist will have at least fifteen years experience in the agricultural sector, either as an agricultural market development professional or a scientist in the public/private sector. The individual will have experience of managing and delivering regulatory approval for agricultural products, if possible in Africa.

### *Geneticist / Seed systems specialist*

The geneticist / seed systems specialist, will:

- Be responsible for advising on and developing the germplasm improvement and maintenance, and seed production and distribution elements of product concepts and project plans.
- Work with the Technical Operations / Senior Project Manager to monitor AATF projects.
- Advise local partners on seed management issues.

The seed specialist will have at least fifteen years experience in the agricultural sector, either as a scientist in the public/private sector or as agricultural market development professional. The individual will have experience of seed systems in Africa.

### *Administration and Finance Officer*

The Administration and Finance officer will report directly to the Executive Director. The individual will be responsible for:

## Section 7: Staffing and Organisation Structure

- Day-to-day management of the finances of the AATF, including cash flow, invoicing, payroll and accounting.
- Preparation and development of monthly management accounts and managing the preparation of the annual audited accounts.
- Supporting project development staff in financial projections and analysis.
- The day-to-day management of the AATF office.
- Supporting the Executive Director on human resource issues.
- Management of the support staff.

### *Assistant to Executive Director (and Implementing Director while applicable) for Communication and Public/Donor Relations*

The Assistant will report directly to the Executive Director and provide support in managing AATF's public relations activities as well as approaching donors and sourcing funds for AATF overheads and programme expenditure. They will:

- Support the Executive Director in his/her advocacy role
- Research donors' interests and project funding guidelines.
- Maintain donor and PR records.

### *Legal Counsel*

The Legal Counsel will answer directly to the Executive Director and will have responsibility for all of AATF's commercial legal negotiations, contracts and licences. He/she will:

- Advise the Executive Director and Board on all legal issues concerning AATF, with particular reference to IPR, liability and enforceability issues.
- Lead the legal component of negotiations with public and private sector parties on specific projects – in close co-operation with the Technical Operations / Senior Project Manager (and individual project managers).
- Advise local partners on relevant legal issues.

The Legal Counsel will have 10 to 15 years legal experience, with expertise in issues related to IPR, licensing and commercialisation of agriculture, preferably in developing countries context. He/she will have worked for an international law firm as a specialist in this area. He/she will also possess sufficient knowledge/experience of the African legal systems and will be able to apply international legal standards to projects in SSA.

### **7.2.2 Support staff**

#### *Support Staff*

Five secretaries / administrative staff as follows:

- Secretary to the Executive Director – to provide general secretarial assistance.

## Section 7: Staffing and Organisation Structure

- Secretary, administration and finance – to provide clerical and accounting assistance to the Administration and Finance officer.
- Three ‘pool’ secretaries / administrative assistants – to provide general secretarial and administrative support.

Three drivers will also be employed.

## 8. EVOLUTION OF THE AATF

Section 3 sets out the AATF's Strategy for delivering its mission and objectives. It defines the key principles underlying its activities and the boundaries of these activities in terms of stages in the value chain, technology type, product, and geographical market. The boundaries are set widely in order to give AATF the flexibility to maximise the impact of its activities on food security and poverty reduction.

It is the intention to commence activities with a tight focus and evolve over time in the light of experience. The initial focus will be on: food crops produced, consumed and sold by smallholders; in royalty-free licensing of proprietary technologies and use of publicly available technologies; and on products where delivery and use can be anticipated in a reasonable time frame (i.e. adaptation of existing products, not 'very early' upstream R&D). Over time it is expected, as appropriate, to expand the scale and scope of the AATF to encompass: non-food crops and livestock-related technologies; export products produced and sold by both smallholders and commercial producers; accessing proprietary technologies on advantageous, but not necessarily royalty-free terms; and a broader R&D focus addressing specific pro-poor 'early technologies' (e.g. nutritionally enhanced or drought resistant crops).

### 8.1 Project Selection and Scale of Activities

The selection of initial projects will aim to demonstrate a range technologies that can be adapted for African conditions and that are valued by smallholders. It will also allow the AATF and its partners to test and refine the processes at all levels.

#### 8.1.1 AATF Project Selection

The AATF will develop a portfolio of projects to generate a flow of results over time. The criteria for selection include both overall portfolio balance and project-specific considerations.

##### (i) *Portfolio Balance Considerations*

The project portfolio will be selected to:

- Combine projects with different overall size, expenditure profiles and risk. The aim is to create a balanced portfolio in terms of risk and expected outcomes.
- Develop synergies (technical or institutional) between projects.
- Promote the AATF and subsequent resource mobilization, e.g. by including projects that are relatively easy to manage and are expected to deliver 'quick wins', and/or by including high profile projects that attract public attention and interest.
- To achieve a geographic balance that ensures benefits to farmers in Central, East, Southern and West Africa.

### (ii) *Project-Specific Considerations*

The criteria for project selection reflect the AATF's overall principles:

- Projects must address high priority constraints hindering access to and use technologies that would otherwise not be available (particularly those held or used by the private sector) Emphasis will be on food security and poverty reduction for both smallholders in general and resource-poor farmers in particular, with a special focus on women. In particular, projects selected will need to demonstrate the contribution of the technology to AATF objectives, the additionality of the proposed intervention, and deliverability within reasonable time frames and reasonable costs.
- The constraints to be tackled must involve potential end-users in problem definition, selection of technology interventions, project planning, implementation, monitoring and evaluation.
- Consideration will be given to enabling environment issues (including national/regional consumer acceptance of the technology; efficient national/regional biosafety regulatory systems and mechanisms for compliance with intellectual property rights (IPRs) protection; adequate capacity in seed production; seed input markets; and effective demand for the product.) Projects will only be selected in countries / regions where enabling environment constraints to sustainable and profitable use by smallholders are either being tackled or where AATF can facilitate the process of putting the conditions in place within a reasonable time and at a reasonable cost.
- Potential for attracting matched funding (in cash or contributions in kind) from public and private sector partners.

### (iii) *Illustrative Project Portfolio*

Box 8 below provides details of an illustrative portfolio of technology projects, based on six generic project types, selected in line with the portfolio balance considerations above. It shows the number of projects assumed to be underway and completed by 2012 (Year 10 of operations) and the average assumed upstream project cost. Details of downstream project costs (e.g. to support production and access by smallholders) are set out with other assumptions in Appendix 6.

In summary, the business plan projections envisage:

- 9 projects established over the first 5 years, with the first 4 starting in 2004. Thereafter, the number of additional projects is assumed to be between one and two per annum.
- Based on the assumed mix of projects and expected timescales, AATF reaches a steady state of 13 or 14 active projects by year 2008 and onwards.

The scale of AATF's activities is expected to grow over time, thereby spreading operating costs across a broader portfolio of activities. If initial activities prove successful then substantial future growth will be justified.

*Box 8: Project Portfolio*

<b>Generic Project Types</b>	<b>Project Costs</b>	<b>Project life</b>	<b>No Projects (by 2012)</b>
Development of new transgenic crop variety	US\$4.0m	11 Years	2 underway
Transfer of existing transgenic for local adaptation	US\$1.8m	9 Years	2 underway
Marker aided selection and conventional breeding	US\$1.5m	5 Years	4 underway (1 complete)
Tissue culture project for new product	US\$1.4m	4 Years	6 underway (2 complete)
Transfer of mechanical technology / product	US\$0.5m	2 Years	5 underway (2 complete)
Transfer of existing chemical / biochemical product	US\$1.2m	4 Years	5 underway (4 complete)

*Note: The assumptions are for illustrative purposes only and should be treated with appropriate caution.*

### 8.1.2 AATF project evaluation

All major AATF projects will be subject to evaluation. These evaluations will be carried out on project completion (or at an earlier stage as appropriate), and will include an impact assessment, consideration of lessons to be learnt, and an assessment of the potential to replicate in different countries / sectors.

## 8.2 Funding Strategy

For the medium-term AATF activities will need to be funded by grant funding, reflecting the ‘public good’ nature of the interventions to facilitate technology development and delivery, which would not otherwise reach the poor. However, as a public-private partnership, donor funding is expected to leverage substantial contribution from the private sector. This will include:

- Proprietary technology held by the public and private sectors in OECD and other countries. Placing a value on this technology in SSA markets is likely to be difficult – the expectation is that much of it will be licensed at zero royalty initially. However, the elapsed time and costs associated with publicly funded development of equivalent technology (assuming that public institutions have the appropriate capacity) is likely to run into hundreds of US\$ms. It is anticipated that the companies will contribute in kind to AATF’s projects through the provision of knowledge and time by appropriate specialists.
- Investment by the national (and potentially international) private sector in production and distribution.

In the longer-term, as the AATF evolves, it will seek to generate revenues that cover the costs of some of its operating activities. The fundamental aim of AATF’s involvement along the value

chain is to seek to encourage the development of sustainable agribusiness in Africa – in which product pricing is sufficient to cover the full costs of production and distribution. For certain crops in certain countries or regions it may also be possible for AATF to levy royalty payments for its technology to recover some or all of its expenditure. However, pricing strategies will need to be developed taking into account the following key principles.

- AATF will seek to encourage the development of sustainable markets – i.e. in which product pricing covers the costs of production and distribution.
- AATF will seek to avoid creating pricing differentials for the same product between different categories of users. (It would be possible to give preference to smallholders through differential product pricing. However this approach risks distorting markets and increasing opportunities for arbitrage and corruption.)
- Pricing strategies will have to be developed taking account of the affordability to smallholders and especially resource poor farmers and may need to be combined with initiatives to develop smallholder demand.

In addition revenues and intellectual property would be shared, on a case-by-case basis with partner research organisations.

### **8.3 Research Capacity in Africa**

As set out in the Mission, AATF will seek to contribute to capacity building in Africa by engaging African public and private sector agents, wherever cost-effective, to execute and deliver the tasks. It will also play a role in assisting and co-ordinating other technical support for the development of regulatory capacity necessary to achieve its project objectives.

In the longer-term, AATF might play an increased role in the development, co-ordination and (potentially) funding of African private and public sector scientific and business capacity required to transfer and adapt and deliver appropriate agricultural technologies.

### **8.4 Review of Performance and ‘Sunset’ Clause**

The AATF will put in place procedures to meet donor requirements for financial reporting and review. As far as possible, these processes will draw on existing material produced for internal management and review processes. A multi-donor report will be produced annually. The form of this report will be agreed in advance with donors. Its purpose will be to review the AATF’s progress against objectives, and present funding proposals for new projects. The AATF will convene an annual donor meeting to present and discuss the report.

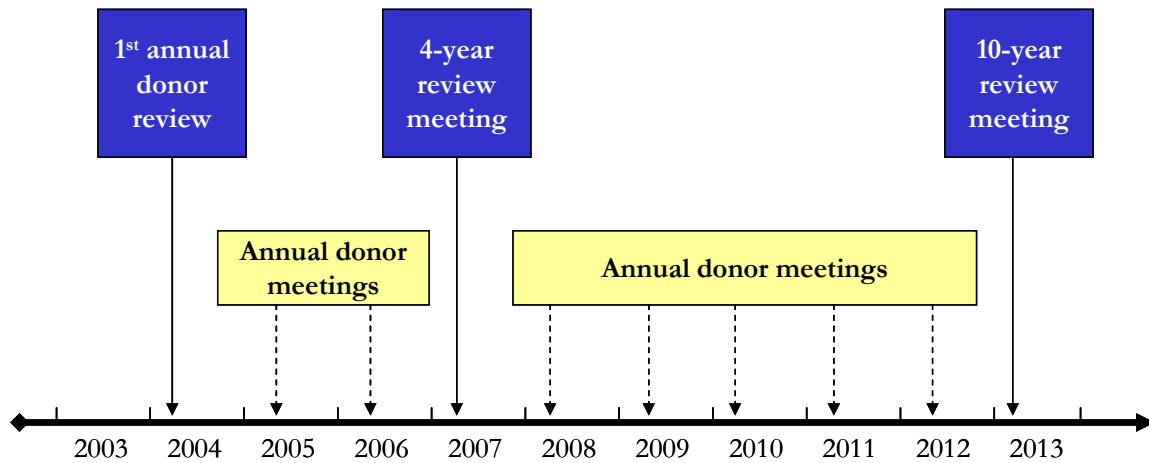
The main donor report will be supplemented by individual arrangements for financial reporting – reflecting the different requirements of donors. (In order to minimise the workload associated with financial reporting, AATF will consider establishing an intermediary mechanism to handle donor contributions and reporting. AATF will consult with donors on the appropriate mechanism.)

Figure 7 sets out the proposed donor review schedule. Key points to note are as follows:

- AATF will present a detailed 5-year funding proposal for its initial project portfolio at the 2003 Review meeting (expected in early Spring 2004).

- AATF will commission an independent review of its activities in 2006 covering the first 4 years of AATF activity, reporting to the 2007 annual donor meeting. This review will evaluate progress against objectives at programme and project level, including an initial assessment of impact. In the light of this evidence it will make recommendations on future activity and organisational issues.
- AATF will carry out a ‘zero’ based review of the AATF’s activities, and its impact in 2012. Although an unconditional sunset clause is not proposed, this review is intended inform a discussion with donors at the 2013 review meeting on the continuation and added value of AATF. It would also consider whether AATF would either (i) withdraw from activities when capacity has been developed in its areas of competence (ii) increase its capacity building function over time.

Figure 7 – Proposed review schedule



## 9. FINANCIAL PROJECTIONS

This section sets out the detailed budget for 2003 and 10-year financial projections based on the illustrative project portfolio referred to in Section 8. AATF's expenditure will depend on the scale, nature and timing of its activities. As assumptions change, so will the financial projections.

### 9.1 2003 Budget

Table 1 sets out AATF total expenditure in 2003, expected to be US\$2.473m. This covers:

- Overheads (including staff, operating expenditure, direct costs and set-up expenditure).
- Pilot project expenditure.

Table 1: AATF 2003 Budget

2003 Budget US Dollars '000s	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2003
<b>Total Overheads</b>	<b>(326)</b>	<b>(21)</b>	<b>(29)</b>	<b>(180)</b>	<b>(189)</b>	<b>(149)</b>	<b>(149)</b>	<b>(115)</b>	<b>(285)</b>	<b>(139)</b>	<b>(113)</b>	<b>(115)</b>	<b>(1,811)</b>
<b>AATF Staff</b>	<b>(21)</b>	<b>(21)</b>	<b>(29)</b>	<b>(62)</b>	<b>(80)</b>	<b>(82)</b>	<b>(82)</b>	<b>(82)</b>	<b>(95)</b>	<b>(102)</b>	<b>(81)</b>	<b>(81)</b>	<b>(819)</b>
Direct	(12)	(12)	(16)	(36)	(46)	(48)	(48)	(48)	(56)	(60)	(48)	(48)	(479)
Indirect	(9)	(9)	(12)	(26)	(33)	(34)	(34)	(34)	(40)	(42)	(33)	(33)	(341)
<b>Operating Expenditure</b>	<b>(305)</b>	<b>0</b>	<b>0</b>	<b>(64)</b>	<b>(95)</b>	<b>(13)</b>	<b>(14)</b>	<b>(13)</b>	<b>(13)</b>	<b>(13)</b>	<b>(13)</b>	<b>(13)</b>	<b>(557)</b>
Insurance	0.0	0.0	0.0	(2.0)	(2.0)	(2.0)	(2.0)	(2.0)	(2.0)	(2.0)	(2.0)	(2.0)	(18)
Office Overheads	0.0	0.0	0.0	(5.1)	(12.6)	(5.1)	(5.1)	(5.1)	(5.1)	(5.1)	(5.1)	(5.1)	(53)
IT	0.0	0.0	0.0	(5.6)	(3.8)	(4.6)	(5.1)	(4.3)	(4.3)	(4.3)	(4.3)	(4.3)	(40)
Office Supplies	0.0	0.0	0.0	(1.1)	(1.4)	(1.5)	(1.8)	(1.8)	(1.9)	(1.9)	(1.9)	(1.9)	(15)
Consultants	(305)	0	0	(50)	(75)	0	0	0	0	0	0	0	(430)
<b>Direct costs</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>(21)</b>	<b>(15)</b>	<b>(19)</b>	<b>(23)</b>	<b>(17)</b>	<b>(177)</b>	<b>(21)</b>	<b>(19)</b>	<b>(21)</b>	<b>(332)</b>
Staff travel	0	0	0	(21)	(15)	(19)	(23)	(17)	(21)	(21)	(19)	(21)	(176)
Participant travel	0	0	0	0	0	0	0	0	(156)	0	0	0	(156)
<b>Set-up Expenditure</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>(33)</b>	<b>0</b>	<b>(35)</b>	<b>(30)</b>	<b>(3)</b>	<b>0</b>	<b>(3)</b>	<b>0</b>	<b>0</b>	<b>(104)</b>
<b>Pilot Project</b>	<b>(36)</b>	<b>(85)</b>	<b>(191)</b>	<b>0</b>	<b>(235)</b>	<b>0</b>	<b>0</b>	<b>(45)</b>	<b>(70)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>(662)</b>
<b>TOTAL</b>	<b>(362)</b>	<b>(106)</b>	<b>(220)</b>	<b>(180)</b>	<b>(424)</b>	<b>(149)</b>	<b>(149)</b>	<b>(160)</b>	<b>(355)</b>	<b>(139)</b>	<b>(113)</b>	<b>(115)</b>	<b>(2,473)</b>

#### 9.1.1 Overheads

##### (i) Staff

Staff expenditure in 2003 will total US\$0.82m. Key assumptions about staff numbers and costs are set out in Appendix 5.

##### (ii) Operating Expenditure

Total operating expenditure is US\$0.56m, and includes:

- Office and related costs, such as office rent, insurance, utilities, vehicles, computers and IT support, office supplies, publications and telecommunications (US\$0.13m).
- Consultant expenses, which include an allowance for legal marketing and other consultants, and an allocation for non-staff costs of project managers provided as in-

kind contributions by partners (US\$0.43m). It also includes the recruitment costs associated with selection of the substantive Executive Director (US\$0.13m).

### *(iii) Direct Costs*

Direct costs include the cost of all staff travel (US\$0.18m), as well as one Board meeting and one stakeholders' meeting associated with a Board meeting (US\$0.16m). The total direct cost estimate for these activities is US\$0.3m.

### *(iv) Set-up Expenditure*

The first year set-up capital expenditure is assumed to be US\$0.1m and covers costs of purchasing IT equipment, and a limited number of vehicles. (Capital costs throughout the business period to upgrade technical equipment are taken into account.)

## **9.1.2 Pilot Project**

Pilot project development and implementation costs are estimated to be around US\$0.66m. These activities include an allowance for training in the use of computerized business planning process and a contingency budget to fund laboratory and fieldwork.

## **9.2 10-Year Projections**

Table 2 is a summary of projected expenditures and sources of funding over a 10-year period. It covers AATF operating and capital expenditures (together 'overheads') and AATF project expenditure.

AATF's overheads over the 10 years amount to US\$21.5m. The projections do not assume any material increase in the staff complement or overhead costs of the Foundation but do take into account 2.5% inflation p.a. AATF's overheads, as a proportion of total project costs, fall to 13% by the end of the 10-year time period.

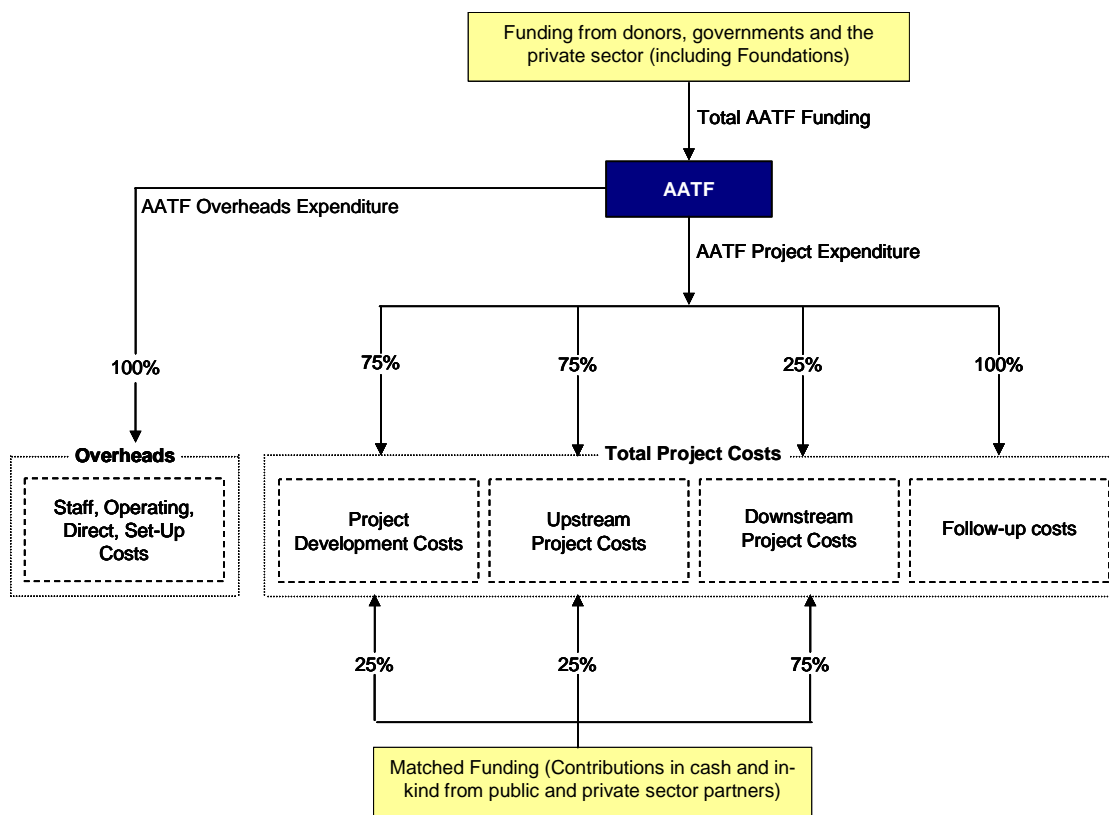
AATF project expenditure covers only a proportion of the total project costs that the AATF is assumed to undertake with its partners. The project funding assumptions are outlined in the lower part of Table 2. The total cost of the illustrative project portfolio is around US\$102m (undiscounted). This figure breaks down as follows:

- Project development costs, covering the costs incurred in developing project plans (at US\$150,000 per project), are around US\$5m.
- Upstream project costs relate to the various upstream stages of projects (including transfer, adaptation and achieving regulatory consent for new technologies). On the basis of the assumed project portfolio, these costs total US\$28m over the first 10 years.
- Downstream project costs, which relate to AATF activity in ensuring that technology reaches smallholder farmers and supporting the development of private sector capacity, are identified separately. The financial model assumes that all projects include this production/distribution support component (which is US\$750,000 per annum in the first year of production, declining by 50% in each subsequent year). These costs total US\$67m over the 10 years.
- Project follow-up costs are to ensure compliance with licence terms, to deliver product stewardship obligations and any other follow-up/project assessment work. These costs

are assumed to be US\$30,000 per annum for each completed project. This component comprises US\$2m of costs over the 10-year period.

AATF’s funding is expected to cover 75% of the project development costs and the upstream project costs, 25% of the downstream project costs and all of the project follow-up costs. AATF will seek the remaining (matched) funding from other public and private sources (e.g. NARIs, CGIAR centres, NGOs, the private sector, existing multilateral and bilateral aid programmes) as part of its project selection and development processes. It is expected to be in the form of contributions in cash and in-kind. Figure 8 summarises assumptions about sources of funding for overheads and projects.

Figure 8: AATF Expenditure Map



In summary, AATF expenditure on overheads and projects over the 10 years is projected to be US\$21.5m and US\$44m, respectively (totalling around US\$65.5m). Project costs covered by matched funding is assumed to be US\$58.5m

### 9.2.1 Revenues

The financial projections assume that the AATF does not receive any revenues (e.g. from product royalties) over the first 10 years of activity.

## 9.3 10-Year Financial Projections: Summary

Table 2: Financial Projections

<b>Summary Table</b>	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Total
US Dollars 000's	Dec-03	Dec-04	Dec-05	Dec-06	Dec-07	Dec-08	Dec-09	Dec-10	Dec-11	Dec-12	(Undiscounted)
<b>Total Overheads</b>	<b>(1,811)</b>	<b>(1,983)</b>	<b>(2,032)</b>	<b>(2,073)</b>	<b>(2,124)</b>	<b>(2,176)</b>	<b>(2,230)</b>	<b>(2,286)</b>	<b>(2,342)</b>	<b>(2,400)</b>	<b>(21,458)</b>
AATF staff costs	(819)	(998)	(1,023)	(1,049)	(1,075)	(1,102)	(1,130)	(1,158)	(1,187)	(1,216)	(10,757)
Operating costs	(557)	(482)	(494)	(507)	(520)	(533)	(546)	(560)	(574)	(588)	(5,361)
Direct costs	(332)	(482)	(494)	(496)	(508)	(521)	(534)	(547)	(561)	(575)	(5,049)
Capital expenditure (set-up)	(104)	(21)	(21)	(21)	(21)	(21)	(21)	(21)	(21)	(21)	(291)
<b>AATF Project Expenditure</b>	<b>(662)</b>	<b>(1,583)</b>	<b>(2,295)</b>	<b>(3,086)</b>	<b>(4,104)</b>	<b>(5,408)</b>	<b>(7,234)</b>	<b>(6,490)</b>	<b>(6,072)</b>	<b>(6,989)</b>	<b>(43,923)</b>
Project development costs	(592)	(563)	(338)	(338)	(338)	(450)	(450)	(450)	(450)	(225)	(4,192)
Upstream project costs	(70)	(1,020)	(1,365)	(1,845)	(2,100)	(2,880)	(3,285)	(2,955)	(2,715)	(2,730)	(20,965)
Downstream project costs	0	0	(563)	(844)	(1,547)	(1,898)	(3,199)	(2,725)	(2,487)	(3,494)	(16,756)
Project follow up costs	0	0	(30)	(60)	(120)	(180)	(300)	(360)	(420)	(540)	(2,010)
<b>Total AATF Funding Requirement</b>	<b>2,473</b>	<b>3,566</b>	<b>4,327</b>	<b>5,159</b>	<b>6,228</b>	<b>7,585</b>	<b>9,465</b>	<b>8,775</b>	<b>8,414</b>	<b>9,389</b>	<b>65,381</b>

## Project Funding Assumptions

<b>Summary Table</b>	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Total
US Dollars 000's	Dec-03	Dec-04	Dec-05	Dec-06	Dec-07	Dec-08	Dec-09	Dec-10	Dec-11	Dec-12	(Undiscounted)
<b>Total Project Costs</b>	<b>(662)</b>	<b>(2,110)</b>	<b>(4,550)</b>	<b>(6,345)</b>	<b>(9,558)</b>	<b>(12,214)</b>	<b>(18,077)</b>	<b>(15,798)</b>	<b>(14,589)</b>	<b>(18,455)</b>	<b>(102,357)</b>
Project development costs	(592)	(750)	(450)	(450)	(450)	(600)	(600)	(600)	(600)	(300)	(5,392)
Upstream project costs	(70)	(1,360)	(1,820)	(2,460)	(2,800)	(3,840)	(4,380)	(3,940)	(3,620)	(3,640)	(27,930)
Downstream project costs	0	0	(2,250)	(3,375)	(6,188)	(7,594)	(12,797)	(10,898)	(9,949)	(13,975)	(67,025)
Project follow up costs	0	0	(30)	(60)	(120)	(180)	(300)	(360)	(420)	(540)	(2,010)
<b>AATF Project Funding</b>	<b>(662)</b>	<b>(1,583)</b>	<b>(2,295)</b>	<b>(3,086)</b>	<b>(4,104)</b>	<b>(5,408)</b>	<b>(7,234)</b>	<b>(6,490)</b>	<b>(6,072)</b>	<b>(6,989)</b>	<b>(43,923)</b>
<b>Matched Funding Requirement</b>	<b>0</b>	<b>528</b>	<b>2,255</b>	<b>3,259</b>	<b>5,453</b>	<b>6,805</b>	<b>10,843</b>	<b>9,309</b>	<b>8,517</b>	<b>11,466</b>	<b>58,434</b>