Tables

Executive Summary

TABLE A
Total resource requirements of CAADP's priority areas, 2002-2015

Pillar/Subsector	US$ billion				
	Immediate 2002-2005	Short-Term 2006-2010	Medium-Term 2011-2015	Total 2002-2015	Annual Average
Land and water	12.1	31.7	24.7	68.5	4.9
Rural infrastructure and trade- related capacities	29.7	49.2	49.7	128.6	9.2
Food supply & safety nets	13.4	17.9	18.3	49.6	3.4
Research & technology	0.9	1.5	2.2	4.6	0.3
Livestock subsector	2.8	6.8	11.6	21.2	1.8
Forestry subsector	7.7	20.5	18.7	46.9	3.9
Fisheries subsector	2.4	16.5	16.4	35.3	2.9
TOTAL	**69.0**	**144.1**	**141.6**	**354.7**	**26.4**

Short term period covers 2004-2005 for livestock, forestry and fisheries investments.

Chapter 3

TABLE 1
Share of livestock food products in agricultural GDP *(%)*

Region	Agric. popul. *(%)*	Livestock GDP in agric.	Contribution to livestock GDP by			
			Cattle[1]	Sheep & Goats[1]	Pigs[2]	Poultry[3]
Central	58.7	24.8	61.1	18.7	8.4	11.8
Eastern	75.9	30.0	70.9	20.6	1.8	6.7
North	30.9	37.8	45.0	19.9	0.1	35.0
Southern	50.6	41.9	60.1	6.8	5.0	28.1
Western	50.5	17.7	42.9	26.3	6.2	24.6
TOTAL	**54.7**	**30.1**	**56.5**	**18.2**	**3.2**	**22.2**

[1] Meat and milk; [2] meat; [3] meat and eggs.
Source: FAO.

TABLE 2
Relative importance of agro-ecological zones for livestock production

Agro-ecological zones	Prop of land area *(%)*	Prop of people *(%)*	Prop of livestock[1] *(%)*	People per sqkm	LUs per sqkm	LU/100 people	Prop of meat[2] *(%)*	Prop of milk[2] *(%)*
Desert & arid	48.5	19.3	26.1	10.9	3.2	29.0	25.0	26.6
Semi-arid	15.4	22.4	30.0	39.8	11.4	28.7	29.3	24.9
Subhumid	17.3	24.8	21.3	39.2	7.2	18.4	22.7	22.6
Humid	13.9	19.5	6.9	38.4	2.9	7.6	8.6	3.3
Highland	4.8	14.0	15.7	80.4	19.2	23.9	14.3	22.6
TOTAL	**100.0**	**100.0**	**100.0**	**27.4**	**5.9**	**21.4**	**100.0**	**100.0**

[1] In terms of livestock units; [2] in value terms.
Source: FAO.

TABLE 3
Annual growth rates in meat, milk and egg production, 1993-2003 *(%)*

Region	Meat	Milk	Eggs	Aggregate
Central	1.6	0.8	-0.6	1.3
Eastern	2.4	3.5	2.5	3.2
North	3.6	4.5	2.8	4.1
Southern	1.4	1.0	4.2	1.3
Western	2.7	2.6	1.9	2.5
TOTAL	**2.4**	**3.2**	**2.7**	**2.9**

Source: FAO.

TABLE 4
Estimated annual growth rates to acquire self-sufficiency by 2015 *(%)*

Region	Meat	Milk	Eggs	Aggregate
Central	2.1	7.8	7.0	4.3
Eastern	3.2	4.6	7.1	4.4
North	4.1	4.3	4.0	4.2
Southern	1.6	3.2	3.1	2.6
Western	2.7	8.1	4.1	5.6
TOTAL	**2.5**	**4.9**	**4.4**	**4.2**

Source: FAO.

Chapter 4

TABLE 5
Trends in industrial roundwood production incl. projections up to 2020 *(million m³)*

Subregion	1980	1990	2000	2010	2020
North Africa	2.4	3.0	3.8	5.2	6.2
East Africa	6.3	8.1	10.1	10.2	10.3
Southern Africa	16.5	17.5	24.0	28.3	32.3
Central Africa	7.9	10.7	12.7	15.7	19.2
West Africa	16.9	17.4	18.2	19.7	20.7
TOTAL Africa	**50.0**	**56.7**	**68.8**	**79.1**	**88.7**

Source: FAO, 2002a; Rytkönen, 2001.

TABLE 6
Estimates of woodfuel consumption in Africa *(million m³)*

Subregion	2000	2010	2020
North Africa	60.08	67.29	72.22
East Africa	199.21	233.73	268.87
Southern Africa	84.32	99.05	115.79
Central Africa	116.42	137.16	157.83
West Africa	175.09	204.29	235.49
TOTAL Africa	**635.12**	**741.53**	**850.19**

Source: FAO, 2002.

Chapter 5

TABLE 7
Largest inland fisheries producing countries

Country	Production in metric tonnes					
	1980	1985	1990	1995	2000	2002
Egypt	89 143	136 255	175 669	244 300	253 470	292 645
Tanzania	189 900	257 883	356 956	317 029	280 000	273 850
Uganda	165 840	160 800	245 223	208 789	219 356	221 898
DR Congo	101 800	146 220	159 300	154 751	205 000	215 000
Nigeria	107 530	80 141	91 617	117 903	132 315	187 233
Kenya	42 101	99 647	190 993	187 241	210 343	137 792
Mali	88 228	54 178	70 535	132 900	109 870	100 000
Chad	60 000	55 000	70 000	90 000	84 000	84 000
Ghana	40 000	43 000	58 000	60 000	74 500	74 500
Zambia	50 988	68 000	64 868	70 546	66 671	65 000

Source: FAO, 2005.

TABLE 8
Africa's main marine fisheries producers

Country	Production in metric tonnes					
	1980	1985	1990	1995	2000	2002
Morocco	334 720	476 835	573 543	855 311	901 096	900 768
South Africa	864 887	797 608	544 760	580 999	663 137	797 384
Namibia	10 200	13 000	267 233	569 432	589 233	623 891
Senegal	217 654	231 059	293 172	323 667	379 797	356 056
Ghana	192 016	233 216	337 872	292 844	377 570	296 678
Nigeria	147 735	156 838	217 364	231 579	309 062	293 823
Angola	77 585	92 593	125 088	116 781	232 351	254 797
Algeria	48 000	66 000	90 644	105 878	113 158	134 324
Egypt	32 254	37 854	75 367	91 001	130 845	132 526
Madagascar	17 373	35 189	73 640	86 627	107 959	114 219

Source: FAO, 2005.

TABLE 9

Ten biggest African aquaculture producers: last 3 years of recorded output *(t)*

Country	2001	Country	2002	Country	2003
Egypt	342 864	Egypt	376 296	Egypt	445 181
Nigeria	24 398	Nigeria	30 663	Nigeria	30 677
Madagascar	7 749	Madagascar	9 713	Madagascar	9 507
Tanzania,	7 300	Tanzania,	7 630	South Africa	7 720
Ghana	6 000	Ghana	6 000	Tanzania,	7 002
Zambia	4 520	South Africa	5 555	Uganda	5 500
South Africa	4 329	Uganda	4 915	Zambia	4 501
Dem Rep. of Congo	2 744	Zambia	4 630	Dem Rep. of Congo	2 965
Uganda	2 360	Dem. Rep. of Congo	2 965	Zimbabwe	2 600
Zimbabwe	2 285	Zimbabwe	2 213	Tunisia	2 130

Source: FAO, 2005.

TABLE 10

Total aquaculture production by environment *(metric tonnes)*

Environment	1991	1993	1995	1997	1999	2001
Brackishwater culture	36 062	34 695	41 724	65 499	191 288	302 007
Freshwater culture	49 668	47 458	51 905	52 235	76 302	90 956
Mariculture	4 934	7 223	6 664	7 393	8 154	8 890
TOTAL	**90 664**	**89 376**	**100 293**	**125 127**	**275 744**	**401 853**

Source: FAO, 2005.

TABLE 11

Trends in value of aquaculture by country *(US$'000)*

Country	1994	1997	2000	2003
Egypt	103 432	183 879	815 046	615 011
Nigeria	40 065	58 368	56 630	77 253
Madagascar	6 637	20 840	27 720	39 035
South Africa	8 501	9 179	13 785	29 912
Tunisia	7 548	9 489	7 107	10 182
Seychelles	2 132	7 008	4 098	10 050
Democratic Rep.Congo	715	2 000	5 193	7 419
Zambia	12 458	14 159	6 996	5 669
Uganda	157	302	820	5 500
Zimbabwe	523	590	4 577	5 460
Morocco	11 014	8 907	5 054	4 726

Source: FAO, 2005.

TABLE 12
Foreign trade and food fish balance *(million tonnes)*

	1969	1979	1989	1999
Total fish production	4.2	3.8	5.0	6.3
Non-food use	2.1	0.9	0.7	0.7
Imports	0.4	1.3	1.6	1.8
Exports	0.3	0.4	0.6	1.2
Total food fish supply	2.1	3.7	5.2	6.2
Per caput food fish supply (kg/year)	6.0	8.2	8.6	8.0

Source: FAO, 2005.

TABLE 13
Contribution of fisheries and aquaculture to NEPAD strategic objectives

NEPAD Strategic Objectives	Inland Fisheries	Coastal and Marine Fisheries	Aquaculture
THE COMPREHENSIVE AFRICA AGRICULTURE DEVELOPMENT PROGRAMME (CAADP)			
Pillar 1: Extending the area under sustainable land management and reliable water control systems.	Improve integrated water management at basin and community levels; increased water productivity; livelihood support to resource poor populations; broaden income base of communities.	Long-term management plans for coastal and marine resources; need to rationalize economic costs and benefits of controlling fishing effort; scope to improve and diversify benefits for local and regional stakeholders.	Improve water management practices at community and farm level, increasing returns from crop production in drought prone regions in southern Africa, improving viability of investment.
Pillar 2: Improving rural infrastructure and trade-related capacities for market access.	Marketing fish products, especially from small-scale fisheries, has opened many remote areas to wider markets; enhancing market involvement of rural producers; potential for further market development exists.	Products from coastal and marine fisheries reach local, regional and global markets; in many countries they are main export commodities; significant investments in processing, marketing and related industries have spurred wider commercial development.	Marketing fish products, also from aquaculture, with infrastructure development, has opened many remote areas to wider markets, enhancing market involvement of rural producers.
Pillar 3: Increasing food supply and reducing hunger.	Inland fisheries provide fish products to many millions of Africans, reaching food insecure populations with affordable products; well established regional distribution networks.	Coastal and marine fisheries provide over 60 percent of African fish; coastal fisheries feed millions of small-scale fishers and consumers; well-established local, urban and regional trade.	Small and medium-scale enterprises provide affordable fish products to rural and urban consumers. Integrated systems also increase crop and livestock production.
Pillar 4: Agricultural research, technology dissemination and adoption.	Research into integrated water management and water productivity of growing significance beyond fisheries sector; post-harvest technologies offer further scope for R&D.	Research into Coastal Zone Management and Marine Protected Areas has scope for Africa-wide application and technology transfer; sustainable fishing gear and post-harvest technology development of growing importance as catch limits are being reached.	Success of commercial aquaculture in Egypt, now at over 50 percent of domestic fish supply, suggests good opportunities for regional technology transfer. Innovations in biotechnology of potential importance for the wider agriculture and food sector.
MARKET ACCESS INITIATIVE			
Strengthen regional economic integration through intra-African trade; diversification of product range, especially for agricultural products.	Inland fisheries products widely traded between African countries; wide participation of women; product range is changing; scope for expansion not fully explored .	Products from small-scale and industrial fisheries important regional commodities; removing regional barriers to trade can further strengthen regional markets.	Resource base may provide key global advantages, internal markets also expanding. Full potential not yet realized.
Enhance access and competitiveness of African products in global markets.	Examples of international exports from inland fisheries (e.g. Nile Perch from Great Lakes); increasing global demand provides further scope for investment in export capacity; opportunities for targeting niche markets.	Marine products provide bulk of African fish exports valued at US$2.7bn/yr; preferential access to some markets, but to be reviewed; target markets are shifting and larger south-south trade expected.	Global demand to rise substantially, long-term prospects very promising. aquaculture plays minor role but could add 20-30 percent if developed, mainly with higher value products. Aquaculture production can link with fish process/trade networks, particularly high value, traceable products.

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TABLE 13 *(cont.)*

Contribution of fisheries and aquaculture to NEPAD strategic objectives

NEPAD Strategic Objectives	Inland Fisheries	Coastal and Marine Fisheries	Aquaculture
ENVIRONMENT ACTION PLAN			
Conservation and sustainable use of marine, coastal and freshwater resources.	Inland fisheries key component of integrated water management; significant investments and capacity in improved fisheries management benefit overall environmental management; fisheries production offers incentive for sustainable resource use.	Fisheries is a main user of coastal and marine resources and offers effective entry point for investing in sustainable use; with production reaching limit, these investments become critical for future of fisheries; Marine Protected Areas a key conservation tool.	Sector development would increase use of resources – land, water, possibly impact biodiversity, but good strategies and well managed systems could deliver benefits without unacceptable impacts.
Cross-border conservation or management of natural resources.	Most large inland water systems cross national borders; ecosystem approach increasingly adopted; transboundary management mechanisms emerging.	Large Marine Ecosystems and many economic important fish stocks require cross-border management; regional fisheries bodies provide fora for coordination.	Role of aquaculture in major shared water bodies and catchments – environmental capacity, aquatic animal health, and biodiversity.

Source: NEPAD Action Plan for the Development of African Fisheries and Aquaculture, NEPAD, 2005

TABLE 14

Future scenarios for the fisheries subsector

Current status	Desired outcomes		
	1 year	5 years	15 years
PURPOSE: TO INCREASE AND SUSTAIN THE CONTRIBUTIONS OF FISHERIES AND AQUACULTURE TO AFRICA'S SOCIO-ECONOMIC DEVELOPMENT AND FOOD SECURITY			
Increasing awareness of issues and challenges, and series of instruments and protocols developed; there is a momentum of change, policies being reviewed, but implementation needs to be defined.	Coherent, co-ordinated approach is agreed at regional level, targets and indicators defined, stake-holders committed to implementation, and investors are aware of options and opportunities in public, private and other sectors.	Cross-sector investments and programs are in place, important actions taken to secure longer-term aims; measurable development gains have been achieved; case for further investment is made and accepted.	Achievement of major defined targets, all sector elements fully institutionalized, secure base and processes are in place for continued benefit delivery.
1. HUMAN AND INSTITUTIONAL CAPACITY			
Fragmented sectoral approach, lack of regional and national capacity, and limited linkages with stakeholders.	Identify regional, national and local capacity in management and development. Linkages with private sector and civil society agents are developed. Strategies for sector resource management defined. Capacity building targets determined.	Increased capacity to manage sector resources. Structures oversee resource management, with linkages to stake-holders. Increased production and value addition due to capacity building.	Structures with resident capacity capable of achieving sectoral goals. Structures with robust linkages with relevant stakeholders.
2. MANAGEMENT TOOLS AND IMPLEMENTATION			
Poor understanding of stock and resource status. Limited capacity to manage stocks and develop resources. Significant pressure to exploit certain resources.	Best practice management defined. Key resources identified for development of management plans. Capacity needs for implementation assessed. Strategies developed for better understanding of stocks/ resources.	Major fisheries and resource systems under best practice management. Management plans implemented by stakeholders. Total resource value and capacity better understood.	As pressure to exploit resources increase, management strategies are further developed and adapted to ensure sustainability of resources utilization.
3. SUSTAINING AND INCREASING PRODUCTION			
Capture fisheries production stagnating, with limited underexploited fisheries; limited aquaculture production, with centres of growth and innovation emerging; scope for fisheries enhancement not fully understood.	Priority zones and targets for aquaculture development identified and investment strategy developed between public and private sector; priority areas for fisheries enhancement identified and intervention plans agreed; opportunities for fuller exploitation of natural stocks ascertained and strategies for utilization agreed.	Medium term targets for aquaculture in priority zones achieved (production increase, diversification, type of enterprise); zones for further expansion identified; Fisheries enhancement delivering medium term production increases; scope for further expansion understood; Investments in full exploitation of natural stocks established and well integrated into management.	Diversified aquaculture sector established and well-integrated markets (domestic, region, export); generating significant employment; sustainability of aquaculture production systems understood; capture fisheries production stabilized at sustainable levels; fisheries enhancement generates production increase over 2005 levels.

(cont.)

TABLE 14 *(cont.)*

Future scenarios for the fisheries subsector

Current status	Desired outcomes		
	1 year	**5 years**	**15 years**
4. DEVELOPING AND ADDING VALUE			
Total value of sector supply chain not well understood, but probably significant scope for increasing value through investments in technologies, infra-structure and policy.	Value chain approach to sector development adopted and targets and investment strategies identified; roles of public and private investors clarified; baseline established for total economic value in national accounts.	Post-harvest losses in small-scale and industrial fisheries reduced; diversified value-added and processing sector emerging in fisheries and aquaculture; significant increase in value of product chains; trade and market conditions improved to attract further investments in supply chain (domestic, regional, international).	Value addition, processing and service industry contribute at significantly to sector value; domestic and regional markets and trade provide enhanced food security and employment; well-established access to export markets for range of products and producers.
5. SHARING BENEFITS			
Poverty, food security, health and livelihoods issues emerging but limited understanding of benefit distribution; recognition of equity, access and rights issues, but no strategy for action.	Raised awareness at all levels of social development issues; sectoral options for addressing equity, potential links with MDGs; potential food security impact understood; agreements to develop and apply targeted approaches; recognition of linkages with other sectors.	Range of examples of securing and enhancing equity, rights access, reducing vulnerability in all major sub sectors/ resource domains; food security impact of investment well established; strategies in place to scale up to more substantial MDG impact.	Significant contribution of sector to achieving MDGs and putting in place longer term mechanisms for securing human development gains.
6. LEARNING AND EXCHANGING KNOWLEDGE			
Limited and unorganized functions in place, though recognized that monitoring roles are increasingly required; knowledge scattered and poorly accessible.	Framework and processes established for defining change, monitoring indicators, building and exchanging knowledge; parameters for ICT, knowledge links, decision-making, accountability.	Range of monitoring processes operational, definable change in information and knowledge content and exchange across stakeholders, resulting in improved decision-making, resource allocation, management action.	Well-developed, fully institutionalised process linking sector and operational levels, clear understanding of benefits, long-term commitment to support and extend; lessons widened outside sector.

Source: NEPAD Action Plan for the Development of African Fisheries and Aquaculture, NEPAD, 2005.