Annex 3

Participants in the validation workshops

KENYA

Jan Vandenabeele Better Globe Forestry Langoya Council Dickson CAMDA Consult

Simmone Rose FAO
Edward Kilawe FAO
John Ngatia FAO
Judy Chege FAO
Dan Rugabira FAO

Kanyinke Sena Forest Action Network
Prof. Donald Ogweno Kenya Forest College
Carolyne Wanjiku Forestry Society of Kenya
Samuel Ihure Kenya Forest Service
Anthony Muysoka Kenya Forest Service
Paul Ndungu Karanja Kenya Forest Service
Joseph Kamondo Kenya Forest Service

Dr. Joshua Cheboiywo
Simon Gathara
Reter Mbadi
George Oselu

Kenya Forestry Research Institute
Kenya Meteorological Department
Kenya Tea Development Authority
Kenya Tea Development Authority

Alice Kaudia Ministry of Environment

Gideon Gathaara Ministry of Forestry and Wildlife

Adata Margaret Ministry of Water and Environment, Uganda

Mwajuma Abdi National Alliance of Community Forestry Associations

Florian Mkeya Tanzania Forest Service

Edgar Masunga Tanzania Forest Research Institute

PERU

Percy Recavarren
Cristina Del Águila Arévalo
Elizabeth Silvestre
Haydeé Suárez
Mary Menton
Oseas Barbarán
AIDER
AMPA
CAN
CESVI
CESVI
CIFOR
CONAP

Manuel de los Heros Consultor independiente

PERU (continued)

FAO María Capatinta José Dancé **FAO** Jorge Elgegren **FAO** Alfredo Gaviria **FAO** Tatiana Lapeyre FAO Carlos A. Llerena FAO Carla Ramírez **FAO** Cesar Sabogal FAO Ángel Salazar **IIAP** Ymber Flores **INIA**

Roberto Kometter Intercooperation

Carlos Linares MINAG
Sara Yalle MINAG
Eduardo Durand MINAM
Daniel Matos MINAM

Javier Arce Rainforest Alliance

Jorge Eliott Soluciones Prácticas (ITDG)

Walter Roncal **UNC** Marco Chota UNU Greta Román WWF Patricia Huertas UTC Berioska Quispe UTC Jaziel Blanco UTC **Ihaqueline Contreras** UTC Patricia Durán UTC

FAO FORESTRY PAPERS

1	Forest utilization contracts on public land, 1977 (E F S)	17 Sup.2	Economic analysis of forestry projects: readings, 1980 (C E)
2	Planning forest roads and harvesting systems, 1977 (E F S)	18	Forest products prices 1960-1978, 1980 (E F S)
3	World list of forestry schools, 1977 (E F S)	19/1	Pulping and paper-making properties of fast-growing plantation wood species –
3 Rev.1	World list of forestry schools, 1981 (E F S)	19/2	Vol. 1, 1980 (E) Pulping and paper-making properties of
3 Rev.2	World list of forestry schools, 1986 (E F S)		fast-growing plantation wood species – Vol. 2, 1980 (E)
4/1	World pulp and paper demand, supply and trade – Vol. 1, 1977 (E F S)	20 20/2	Forest tree improvement, 1985 (C E F S) A guide to forest seed handling, 1985
4/2	World pulp and paper demand, supply and trade – Vol. 2, 1977 (E F S)	21	(E S) Impact on soils of fast-growing species
5	The marketing of tropical wood in South America, 1976 (E S)	22/1	in lowland humid tropics, 1980 (E F S) Forest volume estimation and yield
6 7	National parks planning, 1976 (E F S) Forestry for local community	,	prediction – Vol. 1. Volume estimation, 1980 (C E F S)
	development, 1978 (Ar E F S)	22/2	Forest volume estimation and yield
8	Establishment techniques for forest plantations, 1978 (Ar C E* F S)		prediction – Vol. 2. Yield prediction, 1980 (C E F S)
9	Wood chips – production, handling, transport, 1976 (C E S)	23	Forest products prices 1961-1980, 1981 (E F S)
10/1	Assessment of logging costs from forest inventories in the tropics – 1. Principles	24 25	Cable logging systems, 1981 (C E) Public forestry administrations in Latin
	and methodology, 1978 (E F S)		America, 1981 (E)
10/2	Assessment of logging costs from forest inventories in the tropics – 2. Data	26	Forestry and rural development, 1981 (E F S)
11	collection and calculations, 1978 (E F S)	27 28	Manual of forest inventory, 1981 (E F) Small and medium sawmills in
11	Savanna afforestation in Africa, 1977 (E F)	20	developing countries, 1981 (E S)
12	China: forestry support for agriculture, 1978 (E)	29	World forest products, demand and supply 1990 and 2000, 1982 (E F S)
13	Forest products prices 1960-1977, 1979 (E F S)	30 31	Tropical forest resources, 1982 (E F S) Appropriate technology in forestry,
14	Mountain forest roads and harvesting,		1982 (E)
14 Rev.1	1979 (E) Logging and transport in steep terrain,	32	Classification and definitions of forest products, 1982 (Ar E F S)
15	1985 (E) AGRIS forestry – world catalogue	33	Logging of mountain forests, 1982 (E F S)
	of information and documentation	34	Fruit-bearing forest trees, 1982 (E F S)
	services, 1979 (E F S)	35	Forestry in China, 1982 (C E)
16	China: integrated wood processing industries, 1979 (E F S)	36	Basic technology in forest operations, 1982 (E F S)
17	Economic analysis of forestry projects, 1979 (E F S)	37	Conservation and development of tropical forest resources, 1982 (E F S)
17 Sup.1	Economic analysis of forestry projects: case studies, 1979 (E S)	38	Forest products prices 1962-1981, 1982 (E/F/S)

39	Frame saw manual, 1982 (E)	60	Monitoring and evaluation of
40	Circular saw manual, 1983 (E)		participatory forestry projects, 1985
41	Simple technologies for charcoal		(E F S)
	making, 1983 (E F S)	61	Forest products prices 1965-1984, 1985
42	Fuelwood supplies in the developing		(E F S)
	countries, 1983 (Ar E F S)	62	World list of institutions engaged in
43	Forest revenue systems in developing		forestry and forest products research,
	countries, 1983 (E F S)		1985 (E F S)
44/1	Food and fruit-bearing forest species –	63	Industrial charcoal making, 1985 (E)
	1. Examples from eastern Africa, 1983	64	Tree growing by rural people, 1985
	(E F S)		(Ar E F S)
44/2	Food and fruit-bearing forest species –	65	Forest legislation in selected African
	2. Examples from southeastern Asia,		countries, 1986 (E F)
	1984 (E F S)	66	Forestry extension organization, 1986
44/3	Food and fruit-bearing forest species –		(C E S)
	3. Examples from Latin America, 1986	67	Some medicinal forest plants of Africa
	(E S)		and Latin America, 1986 (E)
45	Establishing pulp and paper mills, 1983	68	Appropriate forest industries, 1986 (E)
	(E)	69	Management of forest industries, 1986
46	Forest products prices 1963-1982, 1983		(E)
	(E/F/S)	70	Wildland fire management terminology,
47	Technical forestry education – design		1986 (E F S)
40	and implementation, 1984 (E F S)	71	World compendium of forestry and
48	Land evaluation for forestry, 1984		forest products research institutions,
40	(CEFS)	70	1986 (E F S)
49	Wood extraction with oxen and	72 72	Wood gas as engine fuel, 1986 (E S)
Ε0	agricultural tractors, 1986 (E F S)	73	Forest products: world outlook
50	Changes in shifting cultivation in Africa,	74	projections 1985-2000, 1986 (E F S) Guidelines for forestry information
50/1	1984 (E F) Changes in shifting sultivation in Africa	74	processing, 1986 (E)
30/1	Changes in shifting cultivation in Africa – seven case-studies, 1985 (E)	75	Monitoring and evaluation of social
51/1	Studies on the volume and yield of	75	forestry in India – an operational guide,
31/1	tropical forest stands – 1. Dry forest		1986 (E)
	formations, 1989 (E F)	76	Wood preservation manual, 1986 (E)
52/1	Cost estimating in sawmilling industries:	70 77	Databook on endangered tree and
32/1	guidelines, 1984 (E)	,,	shrub species and provenances, 1986 (E)
52/2	Field manual on cost estimation in	78	Appropriate wood harvesting in
3212	sawmilling industries, 1985 (E)	70	plantation forests, 1987 (E)
53	Intensive multiple-use forest	79	Small-scale forest-based processing
	management in Kerala, 1984 (E F S)		enterprises, 1987 (E F S)
54	Planificación del desarrollo forestal,	80	Forestry extension methods, 1987 (E)
	1984 (S)	81	Guidelines for forest policy formulation,
55	Intensive multiple-use forest		1987 (C E)
	management in the tropics, 1985 (E F S)	82	Forest products prices 1967-1986, 1988
56	Breeding poplars for disease resistance,		(E F S)
	1985 (E)	83	Trade in forest products: a study of
57	Coconut wood – Processing and use,		the barriers faced by the developing
	1985 (E S)		countries, 1988 (E)
58	Sawdoctoring manual, 1985 (E S)	84	Forest products: World outlook
59	The ecological effects of eucalyptus,		projections – Product and country tables
	1985 (C E F S)		1987-2000, 1988 (E F S)

85	Forestry extension curricula, 1988 (E F S)	109	Directory of forestry research
86	Forestry policies in Europe, 1988 (E)		organizations, 1993 (E)
87	Small-scale harvesting operations of	110	Proceedings of the Meeting of Experts
	wood and non-wood forest products		on Forestry Research, 1993 (E F S)
	involving rural people, 1988 (E F S)	111	Forestry policies in the Near East
88	Management of tropical moist forests in		region – Analysis and synthesis, 1993 (E)
	Africa, 1989 (E F P)	112	Forest resources assessment 1990 –
89	Review of forest management systems		Tropical countries, 1993 (E)
	of tropical Asia, 1989 (E)	113	Ex situ storage of seeds, pollen and in
90	Forestry and food security, 1989 (Ar E S)		vitro cultures of perennial woody plant
91	Design manual on basic wood harvesting		species, 1993 (E)
	technology, 1989 (E F S) (Published only	114	Assessing forestry project impacts:
	as FAO Training Series, No. 18)		issues and strategies, 1993 (E F S)
92	Forestry policies in Europe – An analysis,	115	Forestry policies of selected countries in
	1989 (E)		Asia and the Pacific, 1993 (E)
93	Energy conservation in the mechanical	116	Les panneaux à base de bois, 1993 (F)
	forest industries, 1990 (E S)	117	Mangrove forest management
94	Manual on sawmill operational		guidelines, 1994 (E)
	maintenance, 1990 (E)	118	Biotechnology in forest tree
95	Forest products prices 1969-1988, 1990		improvement, 1994 (E)
	(E F S)	119	Number not assigned
96	Planning and managing forestry	120	Decline and dieback of trees and forests
	research: guidelines for managers, 1990		– A global overview, 1994 (E)
	(E)	121	Ecology and rural education – Manual
97	Non-wood forest products: the way		for rural teachers, 1995 (E S)
	ahead, 1991 (E S)	122	Readings in sustainable forest
98	Timber plantations in the humid tropics	422	management, 1994 (E F S)
00	of Africa, 1993 (E F)	123	Forestry education – New trends and
99	Cost control in forest harvesting and	124	prospects, 1994 (E F S)
100	road construction, 1992 (E)	124	Forest resources assessment 1990 –
100	Introduction to ergonomics in forestry in developing countries, 1992 (E F I)	125	Global synthesis, 1995 (E F S) Forest products prices 1973-1992, 1995
101	Management and conservation of	123	(E F S)
101	closed forests in tropical America, 1993	126	Climate change, forests and forest
	(E F P S)	120	management – An overview, 1995 (E F S)
102	Research management in forestry, 1992	127	Valuing forests: context, issues and
102	(E F S)	127	guidelines, 1995 (E F S)
103	Mixed and pure forest plantations in	128	Forest resources assessment 1990 –
103	the tropics and subtropics, 1992 (E F S)	120	Tropical forest plantation resources,
104	Forest products prices 1971-1990, 1992		1995 (E)
	(E F S)	129	Environmental impact assessment and
105	Compendium of pulp and paper training	.23	environmental auditing in the pulp and
	and research institutions, 1992 (E)		paper industry, 1996 (E)
106	Economic assessment of forestry project	130	Forest resources assessment 1990 –
	impacts, 1992 (E F)		Survey of tropical forest cover and study
107	Conservation of genetic resources in		of change processes, 1996 (E)
	tropical forest management – Principles	131	Ecología y enseñanza rural – Nociones
	and concepts, 1993 (E F S)		ambientales básicas para profesores
108	A decade of wood energy activities		rurales y extensionistas, 1996 (S)
	within the Nairobi Programme of	132	Forestry policies of selected countries in
	Action, 1993 (E)		Africa, 1996 (E F)

133	Forest codes of practice – Contributing to environmentally sound forest	151	Fire management – Global assessment 2006, 2007 (E)
134	operations, 1996 (E) Estimating biomass and biomass change	152	People, forests and trees in West and Central Asia – Outlook for 2020, 2007
135	of tropical forests – A primer, 1997 (E) Guidelines for the management of tropical forests – 1. The production of	153	(Ar E R) The world's mangroves 1980–2005, 2007 (E)
126	wood, 1998 (E S)	154	Forests and energy – Key issues, 2008
136	Managing forests as common property, 1998 (E)	155	(Ar C E F R S) Forests and water, 2008 (E F S)
137/1	Forestry policies in the Caribbean – Volume 1: Proceedings of the Expert	156	Global review of forest pests and diseases, 2009 (E)
137/2	Consultation, 1998 (E) Forestry policies in the Caribbean –	157	Human-wildlife conflict in Africa – Causes, consequences and management
13772	Volume 2: Reports of 28 selected		strategies, 2009 (E F)
138	countries and territories, 1998 (E) FAO Meeting on Public Policies	158	Fighting sand encroachment – Lessons from Mauritania, 2010 (E F)
	Affecting Forest Fires, 2001 (E F S)	159	Impact of the global forest industry on
139	Governance principles for concessions and contacts in public forests, 2003 (E F S)	160	atmospheric greenhouse gases, 2010 (E) Criteria and indicators for sustainable woodfuels, 2010 (E)
140	Global Forest Resources Assessment	161	Developing effective forest policy –
	2000 – Main report, 2002 (E F S)	450	A guide, 2010 (E F S)
141	Forestry Outlook Study for Africa – Regional report: opportunities and	162	What woodfuels can do to mitigate climate change, 2010 (E)
142	challenges towards 2020, 2003 (Ar E F) Cross-sectoral policy impacts between	163	Global Forest Resources Assessment 2010 - Main report (Ar C E F R S)
142	forestry and other sectors, 2003 (E F S)	164	Guide to implementation of
143	Sustainable management of tropical forests in Central Africa – In search of		phytosanitary standards in forestry, 2011 (C E F R)
144	excellence, 2003 (E F) Climate change and the forest sector	165	Reforming forest tenure – Issues, principles and process, 2011 (E S)
	Possible national and subnational legislation, 2004 (E)	166	Community-based fire management – A review (E)
145	Best practices for improving law	167	Wildlife in a changing climate (E)
	compliance in the forest sector, 2005 (E F R S)	168	Soil carbon monitoring using surveys and modelling – (E)
146	Microfinance and forest-based small- scale enterprises, 2005 (Ar E F S)	169	Global forest land-use change 1990–2005 (E F S)
147	Global Forest Resources Assessment 2005 – Progress towards sustainable	170	Sustainable management of Pinus radiata plantations (E)
	forest management, 2006 (E F S)	171	Edible insects – Future prospects for
148	Tendencias y perspectivas del sector forestal en América Latina y el Caribe, 2006 (S)		food and feed security (E)
149	Better forestry, less poverty – A		
450	practitioner's guide, 2006 (Ar E F S)		
150	The new generation of watershed management programmes and projects, 2006 (E F S)		

Ar – Arabic

Multil – Multilingual

C – Chinese

* - Out of print

E – English

I – Italian

F - French

P – Portuguese

S - Spanish

R - Russian

FAO Forestry Papers are available through the authorized FAO Sales Agents, directly from Sales and Marketing Group, FAO, Viale delle Terme di Caracalla, 00153 Rome, Italy, or at www.fao.org/forestry/58718/en/.

Climate change guidelines for forest managers

The effects of climate change and climate variability on forest ecosystems are evident around the world and further impacts are unavoidable, at least in the short to medium term. Addressing the challenges posed by climate change will require adjustments to forest policies, management plans and practices.

These guidelines have been prepared to assist forest managers to better assess and respond to climate change challenges and opportunities at the forest management unit level. The actions they propose are relevant to all kinds of forest managers – such as individual forest owners, private forest enterprises, public-sector agencies, indigenous groups and community forest organizations. They are applicable in all forest types and regions and for all management objectives.

Forest managers will find guidance on the issues they should consider in assessing climate change vulnerability, risk and mitigation options, and a set of actions they can undertake to help adapt to and mitigate climate change. Forest managers will also find advice on the additional monitoring and evaluation they may need to undertake in their forests in the face of climate change.

This document complements a set of guidelines prepared by FAO in 2010 to support policy-makers in integrating climate change concerns into new or existing forest policies and national forest programmes.



