

ANNEX 1: Kenyan Component PDM Ver. 1 (as of 28 November 2008, agreed in the Minutes of Meeting)

Executing Bodies: Ministry of Education (MOE) and Japan International Cooperation Agency (JICA)

Duration: 01 January 2009 – 31 December 2013 (5 years)

Narrative Summary	Verifiable Indicators	Means of Verification	Important Assumptions
Overall Goal Capability of young Kenyans in Mathematics and Science is upgraded.	(a) Performance in National Examinations at primary and secondary education (b) Results of original achievement tests, such as SPIAS at the secondary level	Kenya National Examinations Council SMASE M&E report	
Project Purpose Quality of Mathematics and Science education at Primary and Secondary school levels in Kenya is strengthened through INSET.	By the end of the project, the results of the lesson observation by following monitoring tools reach the targeted figures: (Primary level) (a) Lesson Innovation Index (target figure: 3.0) (b) ASEI/PDSI Check List (target figure: 2.0) (c) Lesson Observation Index (target figure: 2.0) (d) Student Participation Index (target figure: 2.5) (Secondary level) (a) ASEI/PDSI Check List (target figure: 3.0) (b) Lesson Observation Index (target figure: 3.0) (c) Student Participation Index (target figure: 3.0)	SMASE Project M&E reports	
Output 1. A system of National INSET for Regional Trainers is established at CEMASTE A.	By the end of the project: 1(a) 4 cycles of training materials and programs for the National INSET for the primary education are developed. 1(b) Over 250 Regional Trainers are trained at CEMASTE A. 1(c) National INSET for the primary education at CEMASTE A obtain mean of over 3 on the scale of 0 to 4 in the Quality of INSET Assessment Index.	SMASE Project M&E reports	Other programs do not adversely affect teachers' participation.
2. A system of Regional INSET and Regional workshop is established at PTTCs.	2(a) Regional INSET for Cluster Trainer at PTTCs is carried out four times. 2(b) At least 5,600 Cluster Trainers are trained. 2(c) Over 1,000 TAC Tutors and 8 provincial, 140 district and 1,000 Zone QASOs are trained. 2(d) Regional Trainers obtain mean of over 2.5 on the scale of 0 to 4 in the overall assessment of Capacity Building Index at the Regional INSET at PTTCs. 2(e) Regional INSET at PTTCs obtain mean of over 2.5 on the scale of 0 to 4 in the Quality of INSET Assessment Index.	SMASE Project M&E reports	
3. Existing system of cluster INSET is strengthened.	3(a) A guideline/manual on management of M/S INSET for primary school teacher is developed. 3(b) At least 60,000 primary school teachers drawn from every cluster in the country participate in Cluster INSET.	SMASE Project M&E reports	
4. Secondary M/S teachers' ASEI/PDSI practices in classroom are enhanced.	4(a) INSET and workshop contents for introducing lesson study are developed. 4(b) 360 principals are trained at National workshop. 4(c) Over 6,000 Principals are trained at District workshop.	SMASE Project M&E reports	
5. Role of CEMASTE A as resource centre for M/S education is strengthened.	5(a) At least 8 newsletters are published and distributed. 5(b) At least 2 titles on ASEI/PDSI practices are published and distributed.	SMASE Project M&E reports	
Activities 1-1 To assess INSET training needs of primary M/S teachers. 1-2 To develop manuals and materials for National/Regional/Cluster INSET. 1-3 To develop/review monitoring and evaluation tools for National/Regional/Cluster INSET. 1-4 To conduct National INSET for Regional Trainers at CEMASTE A. 1-5 To organize workshops for PTTC Principals and Deans of Curriculum/heads of M/S department on understanding 1-6 To carry out monitoring and evaluation on quality of National INSET. 1-7 To carry out monitoring and evaluation on impact of National INSET. 2-1 To conduct national sensitisation workshop for DEO, QASO, TAC Tutor. 2-2 To select Cluster Trainer. 2-3 To provide PTTCs with training materials/apparatus as necessary for regional INSET and workshop. 2-4 To develop the workshop contents and materials by CEMASTE A. 2-5 To organize Regional workshops. 2-6 To conduct Regional INSET for Cluster Trainers at PTTCs. 2-7 To carry out monitoring and evaluation on quality of Regional INSET. 2-8 To carry out monitoring and evaluation on impact of Regional INSET. 3-1 To provide training materials/apparatus as necessary for Cluster INSET and District Workshop. 3-2 To conduct Cluster INSET. 3-3 To conduct Cluster workshop. 3-4 To carry out monitoring and evaluation on quality of the cluster INSET. 3-5 To carry out monitoring and evaluation. 3-6 To develop handbook on management of primary INSET system in accordance with MOE policy. 4-1 To assess the current situation of M/S teachers' ASEI/PDSI classroom practices. 4-2 To develop INSET content for lesson study. 4-3 To assess the current situation of capacity of school leadership on supervision of ASEI/PDSI classroom 4-4 To develop workshop content for principals. 4-5 To conduct National workshop for selected principals. 4-6 To conduct District workshop for all principals. 4-7 To carry out monitoring and evaluation on ASEI/PDSI classroom practices. 5-1 To publish newsletters, manuals and reports. 5-2 To establish networks with agencies/institutions involved in related activities. 5-3 To organize symposia on good ASEI/PDSI classroom practices. 5-4 To compile good practices of ASEI/PDSI and disseminate.	Inputs Kenyan side: 1. Buildings, Offices and other facilities necessary for INSET activities. 2. Assignment of adequate Kenyan full-time academic counterpart personnel at CEMASTE A. 3. Assignment of adequate non-academic personnel at CEMASTE A. 4. Expenses necessary for the project activities to be implemented in Kenya. 5. Expenses for repair, maintenance and improvements of CEMASTE A facilities. Japanese side: 1. Dispatch of long-term experts. 2. Dispatch of short-term experts. 3. Training of Kenyan counterpart personnel in Japan and in third countries. 4. Provision of training materials and equipment for INSET activities. 5. Expenses necessary for SMASE-WECSA activities. 6. Local operation cost for administration of the Project	The counterparts at CEMASTE A and key trainers in the developed cascade levels will be motivated enough to continue to work for the project. Preconditions Teachers' union support the project.	

ANNEX 2: WECSA Component PDM Ver. 1 (as of 28 November 2008, agreed in the Minutes of Meeting)

Executing Bodies: Ministry of Education (MOE) and Japan International Cooperation Agency (JICA)
Duration: 01 January 2009 – 31 December 2013 (5 years)

Narrative Summary	Verifiable Indicators	Means of Verification	Important Assumptions
Overall Goal Quality of Teaching and Learning of Mathematics and Science in member countries is improved.	(a) Practice of ASEI/PDSI Index obtain a mean of 2.5 on a scale of 0-4. (b) Quality of Learning Index attains a mean of 2.5.	M&E Reports	
Project Purpose Capability of INSET providers to implement ASEI/PDSI based INSET in member countries is strengthened	By the end of the project period: (a) Lesson Innovation Index attains a mean of 2.5. (b) INSET providers obtain a mean of 2.5 on a scale of 0-4 in the overall assessment of Capacity Building Index for INSET provision.	SMASE Project Monitoring and Evaluation Reports	Policy frameworks in participating countries will be supportive of INET for Mathematics and Science teachers
Output 1. ASEI/PDSI based INSET provides from member countries are trained.	1. By the end of the project period: a) TCTP at CEMASTE A is carried out five times. b) At least 400 participants attend the TCTP at CEMASTE A. c) At least 40 sets of training materials are produced. d) M&E tools applicable to member countries are developed and used.	SMASE Project M&E reports	
2. SMASE-WECSA network is strengthened.	2. By the end of the project period: a) Regional conference and SMASE-WECSA delegates meetings are held at least four times. b) Increased number of countries participating in SMASE-WECSA activities and implementing INSET. c) Technical exchange notes: LOU, MOU etc.	SMASE Project M&E reports	
3. Role of CEMASTE A is strengthened as resource centre for Mathematics and Science education in Africa.	3. By the end of project period: a) ASEI/PDSI prototype lesson plans, developed by member countries, are compiled and disseminated. b) At least 4 SMASE-WECSA newsletters are published.	SMASE Project M&E reports	
Activities 1-1 To assess the current situation and needs of INSET system in SMASE-WECSA member countries. 1-2 To review and develop TCTP course content for mathematics and science educators from SMASE-WECSA member countries. 1-3 To review and develop training manuals and materials for the TCTP. 1-4 To train INSET providers from SMASE-WECSA member countries. 1-5 To offer technical support in the construction and strengthening of INSET system for mathematics and science education for member countries. 1-6 To monitor and evaluate the quality of TCTP. 1-7 To monitor and evaluate the impact of TCTP. 2-1 To sensitise officials of education ministries in member countries on ASEI-PDSI classroom practices as need arises. 2-2 To conduct technical exchange visits with member countries as need arises. 2-3 To promote joint workshops with member countries as need arises. 2-4 To organise and participate in SMASE-WECSA Regional conference and other activities. 2-5 To participate in relevant regional and international conferences and other activities. 3-1 To establish/strengthen networks with Regional and International organisations involved in related activities. 3-2 To collect materials and reference books for SMASE-WECSA activities. 3-3 To establish/equip a library. 3-4 To disseminate information on SMASE-WECSA activities through the website, newsletters and other publications.	Inputs 1. Kenyan side: a Buildings, Offices and other facilities necessary for the project at CEMASTE A b Assignment of adequate Kenyan full-time counterpart personnel at CEMASTE A. c Assignment of adequate support personnel at CEMASTE A.	Inputs 1. Japanese side: a Dispatch of long term experts b Expenses necessary for Training of SMASE-WECSA Counterpart personnel at CEMASTE A c Expenses necessary for dispatch of terms for Technical exchange visits, Technical assistance and Third Country Expertise among member countries d Expenses necessary for holding Regional conferences and SMASE-WECSA delegates meetings e Expenses necessary for SMASE-WECSA counterparts to attend international conferences f Provision of machinery, equipment and materials to CEMASTE A as resource centre	Support and understanding are obtained from member countries to sustain SMASE-WECSA activities. Preconditions Member countries have or will have plans of improving Mathematics and Science Education at basic level.

ANNEX 3: Schedule (Kenya Component)

Date	Time	Activities	Stay	
2011/09/18	Sun	14:45	Arrival (EK719)	Nairobi
		16:30	Orientation and briefing (JICA Education Officer, Chief Advisor)	
2011/09/19	Mon	07:50	First meeting and interview to Mr. Kimathi M'Nkanata, DFOS, MOE	Nairobi
		09:00	Interview to Mr. Kawa Otiano Moses, Deputy Director, CEMASTE A	
		11:00	Interview to Mr. Garise Omara, SMASE Desk Officer (Secondary), DFOS, MOE	
		15:00	Meeting with JICA Kenya Office	
2011/09/20	Tue	17:00	Visit to KSTC Office	Nairobi
		09:00	First meeting with Ms. Cecilia Ng'etich, Director, CEMASTE A	
		10:00	Interview to CEMASTE A staff	
2011/09/21	Wed	17:30	Interview to JICA expert	Nairobi
		08:20	Interview to Ms. Cecilia Ng'etich, Director, CEMASTE A	
		10:00	Interview to CEMASTE A staff	
		13:30	Interview to JICA expert	
2011/09/22	Thu	14:30	Interview to CEMASTE A staff	Nairobi
		08:00	Interview to DFID	
		11:00	Interview to Aga Khan Foundation	
2011/09/23	Fri	15:30	Interview to UNICEF	Nairobi
		07:50	Interview to Mr. Enos Oyaya, Director, DGAS, MOE	
2011/09/24	Sat	10:00	Interview to JICA expert	Nairobi
2011/09/25	Sun		Report writing	Nairobi
2011/09/26	Mon		Report writing	Naivasha
		09:30	Meeting with DQUASOs, TAC Tutors, DPC Treasury, Machakos District	
2011/09/27	Tue	12:00	Visit to Mumbuni Primary School	Keiyo-Eldoret
		08:00	Meeting with DEO, DDQUASO, TAC Tutor, Head Teachers, Principals, Naivasha District	
2011/09/28	Wed	12:00	Visit to Naivasha Boarding School	Keiyo-Eldoret
		08:30	Visit to Kaptagat Girls High School (District Center, Provincial school)	
		10:00	Visit to Atnas Kandie Secondary School (District school)	
		11:00	Visit to Flax Mixed Day/Boarding Primary School	
		12:00	Meeting with DQUASO, TAC Tutor, Head Teachers, Keiyo South District	
2011/09/29	Thur	15:30	Visit to Tambach PTTC (Meeting with Secondary Principals)	Nairobi
		08:30	Meeting with Principal, Dean of Curriculum, Tambach PTTC	
		10:00	Observation of Pincipal Workshop	
		11:00	Interview to Representative of District Trainers	
2011/09/30	Fri	09:00	Meeting with field trip team	Nairobi
2011/10/01	Sat		Report writing	Nairobi
2011/10/02	Sun		Report writing	Nairobi
2011/10/03	Mon	12:30	TV conference with JICA HQ	Nairobi
2011/10/04	Tue	14:00	Interview with JICA Expert	Nairobi
2011/10/05	Wed	14:00	Clarification of several issues with personnel concerned	Nairobi
2011/10/06	Thur	09:00	Discussion with MOE, CEMASTE A, JICA Experts on Achievement of the Project	Nairobi
2011/10/07	Fri	09:00	Discussion with MOE, CEMASTE A, JICA Experts on Implementation Process	Nairobi
2011/10/08	Sat		Report writing	Nairobi
2011/10/09	Sun		Report writing	Nairobi
2011/10/10	Mon	14:00	Discussion with MOE, CEMASTE A, JICA Experts on Evaluation by the 5 Criteria	Nairobi
2011/10/11	Tue	10:00	TV conference with JICA HQ	Nairobi
		14:00	Discussion with CEMASTE A	
2011/10/12	Wed	14:00	Discussion with MOE	Nairobi
		18:15	Discussion with JICA Experts	
2011/10/13	Thur	08:00	Report to Mr. Kimathi M'Nkanata, DFOS, MOE	Nairobi
2011/10/14	Fri	10:00	Discussion with JICA Experts	Nairobi
		16:00	Report to JICA Kenya Office	
2011/10/15	Sat	16:40	Departure (EK720)	

ANNEX 4: Major Interviewees

	Kenyan side
Ministry of Education	
Mr. Enos Oyaya	Director of Quality Assurance and Standards
Mr. Kimathi M'Nkanata	Director of Field and Other Services
Mr. Garise Omara	SMASE Desk Officer (Secondary), Directorate of Field and Other Services
Mr. Charles Kanja	Official, Directorate of Field and Other Services
CEMASTE A	
Ms. Cecilia Ng'etich	Director
Mr. Kawa Otieno Moses	Deputy Director
Mr. Patrick Kogolla	Programme Coordinator
Mr. Chesire Beregge	Dean-Physics Department
Mr. Samuel K. Gachuhi	Dean-Chemistry Department
Mr. Kithaka Njogu	Dean-ICT
Mr. Daniel Muraya	Coordinator-Research and Development
Mr. Kiruja Kiria	Head of Department-Biology
Mr. Joseph Kamau Mathenge	Head of Department-Chemistry
Mr. Matembo Lukongo	Head of Department- Mathematics
Mr. Ernest Ngeny	Head of Department-Physics
Mr. Paul Waibochi	Head of Department-ICT
Mr. Paul Kibanya	Ag. Head of Department-Physics
Ms. Mary Wakhaya	Lecture of Department- Mathematics
Ms. Lucy Waweru	Accountant
Mr. Stepheno Kyengo	Accountant
Machako District	
Mr. Abedingo C. Shadrace	Deputy DQUASO, DEO's Office
Mr. Benei Samuel Gitonza	Deputy DQUASO, DEO's Office
Ms. Benson Kikunda	Senior Education Officer, DEO's Office
Mr. Famas N'Ndambzi	SQASO, Kalema
Mr. Francs M'Ndunda	ZTAC Tutor, Kola Zone
Mr. Charles Muema	ZTAC Tutor, Mumbuni Zone
Mr. Michel Ilekyo	ZTAC Tutor, Kalama Zone
Ms. Mariana Kakonzi	ZTAC Tutor, Muvuti Zone
Mr. Paszw Munyao	ZTAC Tutor, Mutituni Zone
Ms. Grace W'Muin	ZTAC Tutor, Muumatin Zone
Mr. Wanibuas Kyaho	Principal, Kyanguli Secondary School (Chairman, KSSHA/Treasury of DPC)
Mr. Jonathan M. Mulli	Head Teacher, Mumbuni Primary School
Ms. Elizabeth Mathula	Teacher (4th standard), Mumbuni Primary School (Cluster Trainer)
Naivasha District	
Mr. Mathews Is Aboka	DEO
Mr. Abrahams Wachira	Deputy DQASO
Mr. Peter Njoroqe	TSC Tutor Maiella/Lowgonot
Mr. Naftali Chege Hawangi	Principal, Maai-Maihu Boys Secondary School (District Secondary School)
Mr. Thomas Meth Gatimu	Principal, Kinungi Secondary School (District Secondary School)
Mr. Macharia Nimbuth	Principal, Nyajoro Secondary (District Secondary School)
Mr. Ndungu K. Robert	Principal, Ndabibi District Secondary (District Secondary School)
Ms. Kibaya M. Christopher	Head Teacher, Ngeya Primary School
Mr. Kaigua Joseph	Head Master, Maua Primary School
Mr. Daniel W. Ngurura	Head Teacher, Naivasha Boarding School
Mr. Mwaugi Macharia	Science teacher, Naivasha Boarding School (Cluster Trainer)
Keiyo South District	
Ms. Jane Locho	DQUASO, Keiyo South
Mr. Morris Rotich	Principal, Tambach A. School (Chairman, KESSA-Eldoret Marakwet)
Ms. Perpetja Chehmo	Principal, Kaptagat Girls High School (District Center)
Ms. Jane Rotich	Principal, Kapkenda Girls (Chair Person, KESSA-Keiyo South)
Mr. Christopher K. Sereem	Principal, Kipsosen Secondary School (Chairman, KESSA-Keiyo/Treasury of DPC)
Mr. Benjamin K. Mosof	Principal, Queen of Peace (Chairman, KESSHA-Marakwet East)
Ms. Dinah Cherokitot	Principal, Moi Kaptowar Girls (Vice Chairperson, KESSHA-Marakwet West)
Ms. Elima J. Kirui	Deputy Principal, Kaptagat Girls High School (District Center)
Mr. Rotich Wycliffe	HOD Science, Teacher, Kaptagat Girls High School (District Center)
Mr. Kibet Norestes	Teacher, Kaptagat Girls High School (District Center)
Mr. Kimutai Kenneth	Teacher, Kaptagat Girls High School (District Center)
Mr. Shadraek Keitany	Teacher, Kaptagat Girls High School (District Center)
Mr. Chemmeiro Samuel	Deputy Principal, Atnas Kandie Secondary School (District Secondary School)
Mr. Moses K. Komen	Head Teacher, Sitotwo Primary School
Mr. Moses B. Igplagat	Head Teacher, Kapigton Primary School
Mr. Sammy K. Kangogo	Head Teacher, Tulwobet Primary School
Mr. Samuel K. Kiboay	Head Teacher, Flax Mixed Day School
Mr. Musa U. Uramau	TAC Tutor Chepllorio
Ms. Zeddy Jepakogei Toroitich	Deputy Head Teacher, Flax Mixed Day/Boarding Primary School
Ms. Beatrice Tuitdeu	Assistant Teacher, Flax Mixed Day/Boarding Primary School
Ms. Margaretu Kandie	Assistant Teacher, Flax Mixed Day/Boarding Primary School
Ms. Jane J. Cheplyeng	Assistant Teacher, Flax Mixed Day/Boarding Primary School
Ms. Charith J. Maiha	Assistant Teacher, Flax Mixed Day/Boarding Primary School
Mr. Robert K. Malakwen	Assistant Teacher, Flax Mixed Day/Boarding Primary School
Mr. Kingo John	Principal, Tambati Primary Teacher Training Colledge
Mr. Moses O Ouko	Dean of Curriculum, Tambati Primary Teacher Training Colledge
Mr. Tanoi Eric K.	Teacher, Singore Girls (District Trainers' representative)
	Japanese side
JICA Kenya Office	
Mr. Sei Kimura	Representative
Mr. S. K. Kibe	Education Advisor
SMASE Project	
Mr. Keiichi Naganuma	Chief Advisor
Mr. Atsushi Matachi	Academic Advisor
Ms. Hazuki Uchiyama	Science Education
Mr. Noriaki Tanaka	Project Coordinator
	International cooperations
Mr. Mark Waltham	Senior Education Advisor, DFID Kenya & Somalia
Ms. Evelyn Kemunto	Programme Officer-Education, Aga Khan Foundation, East Africa
Dr. Suguru Mizunoya	Chief of Education and Young People Section, unicef
Ms. Kerstin Karlstrom	Education Specialist, Education and Young People Program, unicef
	Others
Mr. Shinpei Taguchi	JICA ex Expert (Mathematics Education)

ANNEX 5: Documents Required and Archived

Output	Activities	Required documents	States	
1	National INSET	1-1 Needs Survey 2009 report	Complete	
		1-2 National INSET manual(write-up) 2010	Complete	
		National INSET manual(write-up) 2011	Complete	
		1-3 M&E Tools for National INSET	Complete	
		1-4 National INSET 2010 report	Draft version (Session evaluation is missing.)	
		National INSET 2011 report	Draft version (Session evaluation is missing.)	
		1-5	PTTC principal WS 2009 (held with DEO) Report	Complete
			PTTC principal WS 2009 (held with DEO) Manual	Complete
			PTTC principal WS 2010 Report	Draft version (Participants list is missing.)
			PTTC principal WS 2010 Manual	Complete
			PTTC principal WS 2011 Report	Complete
			PTTC principal WS 2011 Manual	Complete
		1-6	PTTC Dean of curriculum WS 2011 Report	Draft version (Session evaluation is missing.)
PTTC Dean of curriculum WS 2011 Manual	Complete			
1-6	M&E report for National INSET 2010	Draft version (Included in the document 1-4)		
	M&E report for National INSET 2011	Draft version (Included in the document 1-4)		
1-7	M&E report on impact of National INSET	Complete (Included in the document 2-8, 2-7)		
2	Regional INSET	2-1 DEO Workshop 2009 report (held with PTTC principal)	Complete	
		DEO Workshop 2010 report	Complete	
		DEO Workshop 2011 report	Complete	
		D-QASO WS 2010 report	Complete	
		TAC Tutor & Z-QASO WS 2009 report	Complete	
		TAC Tutor & Z-QASO WS 2010 report	Complete	
		2-2	List of Cluster Trainers 2010 (registration of R-WS 2009)	Complete
			List of Cluster Trainers 2011 (registration of R-WS 2010)	Complete
		2-3	R-INSET 2010 manuals (write-up)	Complete
			R-INSET 2011 manuals (write-up)	Complete
		2-4	DEO Workshop 2009 manuals (write-up) (held with PTTC principal)	Complete (Included in the document 1-5)
			DEO Workshop 2010 manuals (write-up)	Complete
			DEO Workshop 2011 manuals (write-up)	Complete
			D-QASO WS 2010 manuals (write-up)	Complete
			TAC Tutor & Z-QASO WS 2009 manuals (write-up)	Complete
			TAC Tutor & Z-QASO WS 2010 manuals (write-up)	Complete
		2-5	R-WS 2009 report from 9 PTTC	Complete
			R-WS 2010 report from 5 PTTC	Complete
		2-6	R-INSET 2010 report from 18 PTTC	Complete
			R-INSET 2011 report from 18 PTTC	Complete
2-7	M&E report for R-WS 2009 report by CEMASTE A	Complete (Included in the document 2-5)		
	M&E report for R-WS 2010 report by CEMASTE A	Complete (Included in the document 2-5)		
	M&E report for R-INSET 2010 report by CEMASTE A	Complete		
	M&E report for R-INSET 2011 report by CEMASTE A	Complete		
2-8	M&E report on impact of R-INSET	Draft version (Included in the document 3-2, 3-4)		
3	cluster INSET	3-1 Cluster INSET 2010 manual (write-up)	Complete	
		Cluster INSET 2011 manual (write-up)	Complete	
		D-WS 2009 manual (write-up)	Complete	
		D-WS 2010 manual (write-up)	Complete	
		3-2	Cluster INSET 2010 report from primary 274 DEO	Waiting for reports from DPC
			Cluster INSET 2011 report from primary 285 DEO	Waiting for reports from DPC
		3-3	D-WS 2009 report from primary 274 DEO + by CEMASTE A	Waiting for reports from DPC
			D-WS 2010 report from primary 285 DEO + by CEMASTE A	Waiting for reports from DPC
		3-4	M&E report for Cluster INSET 2010 from primary 274 DEO	Waiting for reports from DPC
			M&E report for Cluster INSET 2011 from primary 285 DEO	Waiting for reports from DPC
M&E report for Cluster INSET 2010 by CEMASTE A	Complete			
	M&E report for Cluster INSET 2011 by CEMASTE A	In the process of elaboraion		
3-5	M&E report 2011 for classroom practices by CEMASTE A	In the process of elaboraion		
3-6	Handbook on management of primary INSET	Draft version		
4	Secondary	4-1 Situational analysis 2009 report (current classroom practices)	Complete	
		4-2 Lesson study content for D-INSET manual (write-up) 2011	Complete	
		4-3 Situational analysis 2009 report (supervision of ASEI-PDSI)	Complete (Included in the document 4-1)	
		4-4 Principal WS 2010 manual (write-up)	Complete	
		4-5 National principal WS 2010 report	Complete	
		4-6 District principal WS 2010/2011 report	In the process of elaboraion	
		4-5	M&E report 2011 August for classroom practices by CEMASTE A	In the process of elaboraion
		5	Resource centre	5-1 CEMASTE A Newsletter
	5-2 Minutes of meeting with other agencies and institutions	Not archived yet		
	5-3 Symposia 2011 report	Not implemented yet		
	5-4 Publication on good practices of ASEI-PDSI 2011	Not collected yet		

Source: Project document.

ANNEX 6: Result of Questionnaire Survey for the Mid-term Review Study (To: CEMASTEА CP)

General information

Position:

Position	Administrative		Dean		HOD		Lecturer		N/A	
	f	%	f	%	f	%	f	%	f	%
	1	3.7	2	7.4	2	7.4	20	74.1	2	7.4

Subject:

Subject	Mathematics		Physics		Biology		Chemistry		Others	
	f	%	f	%	f	%	f	%	f	%
	4	14.8	8	29.6	6	22.2	7	25.9	2	7.4

Years participated in CEMASTEА:

Years in SMASE	-3		4-9		10-		Total	
	f	%	f	%	f	%	f	%
	2	7.4	17	63.0	8	29.6	27	100.0

1. Achievement of the Project

Question 1: Has the quality of mathematics and science education strengthened in Kenya during this phase of the Project (2009–present)?

Primary	Secondary
<input type="checkbox"/> Significantly strengthened	<input type="checkbox"/> Significantly strengthened
<input type="checkbox"/> Slightly strengthened	<input type="checkbox"/> Slightly strengthened
<input type="checkbox"/> Not strengthened at all	<input type="checkbox"/> Not strengthened at all

Q1	Significantly strengthened		Slightly strengthened		Not strengthened at all		N/A		Total	
	f	%	f	%	f	%	f	%	f	%
Primary	4	14.8	21	77.8	0	0.0	2	7.4	27	100.0
Secondary	11	40.7	14	51.9	0	0.0	2	7.4	27	100.0

Explanation (selected):

- Attitude towards the teaching has significantly changed.
- Behavior change takes place. Accordingly, M&S teachers are now sensitive to their classroom practice, which affects quality.
- Primary SMASE started in 2010, hence impact yet to be measured.
- The practice of ASEI-PDSI is not fully enhanced in the classroom.
- Not all teachers have been trained.
- Not all trained teachers are applying skills in class.

Question 2: Do you think that teachers' capacity on mathematics and science has improved through the SMASE INSET during this phase (2009–present)? Here, “teachers” mean those who are NOT serving as District/Cluster trainers.

Primary	Secondary
<input type="checkbox"/> Significantly improved	<input type="checkbox"/> Significantly improved
<input type="checkbox"/> Slightly improved	<input type="checkbox"/> Slightly improved
<input type="checkbox"/> Not improved at all	<input type="checkbox"/> Not improved at all

Q2	Significantly improved		Slightly improved		Not improved at all		N/A		Total	
	f	%	f	%	f	%	f	%	f	%
Primary	7	25.9	20	74.1	0	0.0	0	0.0	27	100.0
Secondary	11	40.7	15	55.6	0	0.0	1	3.7	27	100.0

Explanation (selected):

- Primary teachers have a very positive attitude and are enthusiastic. This makes it easy to enhance their

- capacities.
- Involvement of learners has increased significantly.
 - A few teachers are using ASEI-PDSI in the teaching.

Question 3: Do you think that the students' class participation has been increased by any changes of teachers caused by the SMASE INSET during this phase (2009-present)?

Primary	Secondary
<input type="checkbox"/> Significantly increased	<input type="checkbox"/> Significantly increased
<input type="checkbox"/> Slightly increased	<input type="checkbox"/> Slightly increased
<input type="checkbox"/> Not increased at all	<input type="checkbox"/> Not increased at all

Q3	Significantly increased		Slightly increased		Not increased at all		N/A		Total	
	f	%	f	%	f	%	f	%	f	%
Primary	5	18.5	22	81.5	0	0.0	0	0.0	27	100.0
Secondary	12	44.4	13	48.1	0	0.0	2	7.4	27	100.0

Explanation (selected):

- Students participate actively due to exposure to more classroom activities.
- Group work and activities enhance student participation.
- Most secondary school teachers are now making learners to be active participant in learning.
- Hands-on activities invested schools, but performances remain a big challenge.

2. Important Assumptions

Question 4: Do you think that other programs adversely affect teachers' participation in SMASE INSET?

Primary	Secondary
<input type="checkbox"/> Yes, they do. Namely: _____	<input type="checkbox"/> Yes, they do. Namely: _____
<input type="checkbox"/> No, any programs do not affect.	<input type="checkbox"/> No, any programs do not affect.

Q4	Yes		No		N/A		Total	
	f	%	f	%	f	%	f	%
Primary	22	81.5	4	14.8	1	3.7	27	100.0
Secondary	23	85.2	3	11.1	1	3.7	27	100.0

Explanation (selected):

- Kenyan teachers are keen to attain higher academic qualification that lead to promotion. They therefore undertake degree courses during the school holidays when SMASE training is going on.
- Teachers prefer programs that will benefit them in terms of promotion especially in primary.

3. Inputs

Were the quantity, specifications and input timing of the following Inputs of the Project adequate?

Question 5: <Dispatch of Long-term JICA Experts>

- Completely adequate
- Mostly adequate
- Mostly inadequate

Q5	Completely adequate		Mostly adequate		Mostly inadequate		Total	
	f	%	f	%	f	%	f	%
Long-term JICA Experts	3	11.1	18	66.7	6	22.2	27	100.0

If your choice is either "mostly adequate" or "mostly inadequate", please choose the terms (you can choose more than one choice):

- in terms of number of JICA Experts

- () in terms of their experience/skill
- () in terms of their behavior
- () in terms of a period of stay
- () in terms of timing of stay
- () others: _____

Q5-2		
	f	%
Number of JICA Experts	6	22.2
Their experience/skill	20	74.1
Their behavior	6	22.2
A period of stay	5	18.5
Timing of stay	4	14.8
Others	2	7.4

Explanation (selected):

- Have done a good job.
- Need for subject specialists who can guide the academic staff.
- In general, the Experts participated in the INSET activities. However, greater involvement would be required.
- The long-term experts' participation is not very clear.
- The mathematics education expert left and has not been replaced.
- There is need to dispatch an monitoring and evaluation expert to work alongside the Project staff.

Question 6: <Dispatch of Short-term JICA Experts>

- () Completely adequate
- () Mostly adequate
- () Mostly inadequate

Q6	Completely adequate		Mostly adequate		Mostly inadequate		Total	
	f	%	f	%	f	%	f	%
Short-term JICA Experts	6	22.2	14	51.9	7	25.9	27	100.0

If your choice is either "mostly adequate" or "mostly inadequate", please choose the terms (you can choose more than one choice):

- () in terms of number of JICA Experts
- () in terms of their experience/skill
- () in terms of their behavior
- () in terms of a period of stay
- () in terms of timing of stay
- () others: _____

Q6-2		
	f	%
Number of JICA Experts	4	14.8
Their experience/skill	11	40.7
Their behavior	2	7.4
A period of stay	7	25.9
Timing of stay	5	18.5
Others	2	7.4

Explanation (selected):

- Short-term stay objective may not be clear.
- They left when they had started understanding the programme.
- Some are difficult to get along with.

Question 7: <Counterpart Training in Japan, if the respondent has participated in any training in Japan>

- () Completely adequate
- () Mostly adequate

() Mostly inadequate

Q7	Completely adequate		Mostly adequate		Mostly inadequate		N/A		Total	
	f	%	f	%	f	%	f	%	f	%
Training in Japan	6	22.2	7	25.9	3	11.1	11	40.7	27	100.0

Explanation (selected):

- The course was relevant and customized to my needs at the time.
- More training is necessary. (Not trained in Japan after 10 years.)
- Valuable exposure in schools. However, the theory and principles behind the practice was not explained.

Question 8: <Counterpart Training in the Third Countries, if the respondent has participated in any training in the Third Countries>

() Completely adequate

() Mostly adequate

() Mostly inadequate

Q8	Completely adequate		Mostly adequate		Mostly inadequate		N/A		Total	
	f	%	f	%	f	%	f	%	f	%
Training in Third countries	4	14.8	9	33.3	0	0.0	14	51.9	27	100.0

Explanation (selected):

- Training in Philippines was well designed to address specific challenges.
- The needs of the countries were not established. Sometimes programs were based only on Kenyan needs.

Question 9: <Provision of training material and equipment by JICA to Primary INSET and workshops>

() Completely adequate

() Mostly adequate

() Mostly inadequate

Q9	Completely adequate		Mostly adequate		Mostly inadequate		Total	
	f	%	f	%	f	%	f	%
JICA's material provision	4	14.8	16	59.3	7	25.9	27	100.0

If your choice is either "mostly adequate" or "mostly inadequate", please choose the terms (you can choose more than one choice):

- () in terms of specification of the equipment
- () in terms of quantity of the provision
- () in terms of maintenance troubles of the equipment
- () in terms of timing of the provision
- () in terms of frequency/utility of use
- () others: _____

Q9-2

	f	%
Specification of equipment	4	14.8
Quantity of the provision	22	81.5
Maintenance troubles	6	22.2
Timing of the provision	4	14.8
Frequency/utility of use	3	11.1
Others	0	0.0

Explanation (selected):

- Whatever is requested for is usually provided.
- In some instances, there has been misunderstanding as to what materials JICA should provide.
- Primary INSET system at district and regional level requested more equipment.
- There is shortage of materials for INSET, and amount distributed is very limited.
- Training materials supplied especially in primary are of very poor quality and not adequate.

Question 10: <Necessary expenses by JICA>

- Completely adequate
 Mostly adequate
 Mostly inadequate

Q10	Completely adequate		Mostly adequate		Mostly inadequate		N/A		Total	
	f	%	f	%	f	%	f	%	f	%
JICA's expenses	4	14.8	15	55.6	3	11.1	5	18.5	27	100.0

If your choice is either "mostly adequate" or "mostly inadequate", please choose the terms (you can choose more than one choice):

- in terms of way of use of the expenses
 in terms of volume of expenses
 in terms of timing of provision
 others: _____

Q10-2	f	%
Way of use of expenses	3	11.1
Volume of expenses	10	37.0
Timing of provision	5	18.5
Others	2	7.4

Explanation (selected):

- JICA meets its obligation.
- Too few items for Cluster Trainers.
- The wages and allowances paid are lower than those used by GOK. This affects staff employed by JICA.

Question 11: <CEMASTEAcademic staff>

- Completely adequate
 Mostly adequate
 Mostly inadequate

Q11	Completely adequate		Mostly adequate		Mostly inadequate		Total	
	f	%	f	%	f	%	f	%
CEMASTEAcademic staff	7	25.9	16	59.3	4	14.8	27	100.0

If your choice is either "mostly adequate" or "mostly inadequate", please choose the terms (you can choose more than one choice):

- in terms of number
 in terms of expertise/skill
 in terms of timing of assigned
 others: _____

Q11-2	f	%
Numbers	15	55.6
Expertise/skill	11	40.7
Timing of assigned	3	11.1
Others	0	0.0

Explanation (selected):

- There is a shortfall of academic staff and due to study leave and others who have left without replacement.
- Most have experience of over 10 years in teaching and have had several capacity building course.
- We do not have enough trainers who are primary specialization.
- Further and continuous training is needed to continue strengthening the capacity of trainers.

Question 12: <CEMASTEA Non academic staff>

- () Completely adequate
 () Mostly adequate
 () Mostly inadequate

Q12	Completely adequate		Mostly adequate		Mostly inadequate		N/A		Total	
	f	%	f	%	f	%	f	%	f	%
CEMASTEA Non aca. staff	5	18.5	13	48.1	8	29.6	1	3.7	27	100.0

If your choice is either “mostly adequate” or “mostly inadequate”, please choose the terms (you can choose more than one choice):

- () in terms of number
 () in terms of expertise/skill
 () in terms of timing of assigned
 () others: _____

Q12-2		
	f	%
Numbers	13	48.1
Expertise/skill	9	33.3
Timing of assigned	1	3.7
Others	0	0.0

Explanation (selected):

- Only half of the approved establishment has been employed.
- The process of recruiting non-academic staff started last year hence not all have been recruited.
- Some of them had no previous experience hence they are now acquiring the skills.
- Permanent and capacity built personnel especially for laboratories are needed.

Question 13: <Expenses for the Primary INSET from Government of Kenya>

- () Completely adequate
 () Mostly adequate
 () Mostly inadequate

Q13	Completely adequate		Mostly adequate		Mostly inadequate		N/A		Total	
	f	%	f	%	f	%	f	%	f	%
GOK expenses for Primary	2	7.4	8	29.6	16	59.3	1	3.7	27	100.0

If your choice is either “mostly adequate” or “mostly inadequate”, please choose the terms (you can choose more than one choice):

- () in terms of amount
 () in terms of way to be used
 () in terms of timing
 () others: _____

Q13-2		
	f	%
Amount	21	77.8
Way to be used	5	18.5
Timing	12	44.4
Others	0	0.0

Explanation (selected):

- In the 1st year, the counterpart funds were not released. Currently Ksh. 38 million has not been released.
- There are several items which are critical but no budgetary provisions have been made.

Question 14: <Expenses for the Secondary INSET from Government of Kenya>

- () Completely adequate
 () Mostly adequate
 () Mostly inadequate

Q14	Completely adequate		Mostly adequate		Mostly inadequate		Total	
	f	%	f	%	f	%	f	%
GOK expenses for Secondary	14	51.9	10	37.0	3	11.1	27	100.0

If your choice is either “mostly adequate” or “mostly inadequate”, please choose the terms (you can choose more than one choice):

- () in terms of amount
 () in terms of way to be used
 () in terms of timing
 () others: _____

Q14-2	f	%
Amount	9	33.3
Way to be used	8	29.6
Timing	1	3.7
Others	0	0.0

Explanation (selected):

- Input by GOK is complete.
- If planned well, the funds are adequate for the INSET.
- Expenditure is sometimes exaggerated.
- Not used as expected.
- No proper auditing is done.

4. INSET

Question 15: Do you think that the following INSET trainers have developed/are developing capacities to continue serving as trainer (including development of the training content) after the termination of the Project?

	Necessary capacity	Completely developed	Mostly developed	Not developed at all
CEMASTEA lecturers as national trainers	Knowledge	()	()	()
	Facilitation skill	()	()	()
	Motivation	()	()	()
PTTC lectures as regional trainers	Knowledge	()	()	()
	Facilitation skill	()	()	()
	Motivation	()	()	()
Cluster trainers at primary level	Knowledge	()	()	()
	Facilitation skill	()	()	()
	Motivation	()	()	()
District trainers at secondary level	Knowledge	()	()	()
	Facilitation skill	()	()	()
	Motivation	()	()	()

Q15		Completely developed		Mostly developed		Not developed at all		N/A		Total	
		f	%	f	%	f	%	f	%	f	%
CEMASTEAs lecturers	Knowledge	9	33.3	18	67.7	0	0.0	0	0.0	27	100.0
	Facilitation	8	29.6	19	70.4	0	0.0	0	0.0	27	100.0
	Motivation	1	3.7	17	63.0	9	33.3	0	0.0	27	100.0
PTTC lecturers	Knowledge	6	22.2	19	70.4	2	7.4	0	0.0	27	100.0
	Facilitation	3	11.1	21	77.8	2	7.4	1	3.7	27	100.0
	Motivation	0	0.0	12	44.4	14	51.9	1	3.7	27	100.0
Cluster trainers	Knowledge	2	7.4	23	85.2	2	7.4	0	0.0	27	100.0
	Facilitation	1	3.7	21	77.8	5	18.5	0	0.0	27	100.0
	Motivation	0	0.0	7	25.9	19	70.4	1	3.7	27	100.0
District trainers	Knowledge	5	18.5	21	77.8	1	3.7	0	0.0	27	100.0
	Facilitation	5	18.5	20	74.1	2	7.4	0	0.0	27	100.0
	Motivation	0	0.0	11	40.7	16	59.3	0	0.0	27	100.0

Any comments (selected):

- JICA has reduced the capacity building courses such as those of Malaysia, Philippines and Japan. Continuous professional development is required.
- Need for continuous skill development, e.g. lesson study and lesson observation skills are still weak.
- Regional, Cluster and District Trainers' capacity to develop training content and facilitation skill are still very low.
- Trainers at the Regional, District and Cluster level are not motivated because of lack of recognition in terms of promotion.
- Trainer at National level do not enjoy equal changes of promotion as their colleagues at other educational institutions.

Question 16: Do you think that the management personnel have developed/are developing capacities to continue organizing INSET after the termination of the Project?

		Management personnel	Completely developed	Mostly developed	Not developed at all
National INSET	MOE FS Department staff		()	()	()
	CEMASTEAs BOG		()	()	()
Primary INSET	PTTC principals		()	()	()
	DPC		()	()	()
	DEO		()	()	()
	D-QASO		()	()	()
	TAC Tutors		()	()	()
	School principals		()	()	()
Secondary INSET	DPC		()	()	()
	DEO		()	()	()
	School principals		()	()	()

Q16		Completely developed		Mostly developed		Not developed at all		N/A		Total	
		f	%	f	%	f	%	f	%	f	%
National INSET	MOE DFOS	4	14.8	17	63.0	6	22.2	0	0.0	27	100.0
	CEMASTEAs BOG	1	3.7	18	66.7	7	25.9	1	3.7	27	100.0
Primary INSET	PTTC principal	1	3.7	22	81.5	4	14.8	0	0.0	27	100.0
	DPC	1	3.7	15	55.6	9	33.3	2	7.4	27	100.0
	DEO	4	14.8	19	70.4	4	14.8	0	0.0	27	100.0
	DQASO	4	14.8	17	63.0	5	18.5	1	3.7	27	100.0
	TAC Tutor	4	14.8	18	66.7	5	18.5	0	0.0	27	100.0
	Head teacher	4	14.8	15	55.6	6	22.2	2	7.4	27	100.0
	Principal	4	14.8	15	55.6	6	22.2	2	7.4	27	100.0
Secondary INSET	DPC	6	22.2	16	59.3	5	18.5	0	0.0	27	100.0
	DEO	6	22.2	17	63.0	4	14.8	0	0.0	27	100.0
	Principal	4	14.8	20	74.1	3	11.1	0	0.0	27	100.0

Any comments (selected):

- The INSET system is fully established.

- There is need to strengthen the system from the National to District level. I propose an independent Directorate at the Ministry to deal with Teacher Education.
- More sensitisation required.
- CEMASTEBA BOG may require to change style and management of CEMASTEBA by embracing INSET users and supporting staff.

Question 17: Do you think that the current 3-tier cascade INSET system at primary level will be adequate in the future to improve lessons in terms of the following criteria?

	Completely adequate	Mostly adequate	Mostly inadequate
Management system	()	()	()
Funding system	()	()	()
Duration (5 days to teachers)	()	()	()
Contents	()	()	()
Effectiveness to change the class	()	()	()

Q17	Completely adequate		Mostly adequate		Mostly inadequate		N/A		Total	
	f	%	f	%	f	%	f	%	f	%
Management system	2	7.4	15	55.6	9	33.3	1	3.7	27	100.0
Funding system	1	3.7	5	18.5	20	74.1	1	3.7	27	100.0
Duration (5 days)	5	18.5	13	48.1	8	29.6	1	3.7	27	100.0
Contents	5	18.5	13	48.1	8	29.6	1	3.7	27	100.0
To change the class	1	3.7	12	44.4	11	40.7	3	11.1	27	100.0

Explanation (selected):

- It is the most viable option given the large number of primary school teachers.
- There is need to seriously re-engineer the whole process and involve all teachers.
- The funding system needs to be based on per-capital and sent directly to schools for effective management and efficiency.
- Quality of INSET content is diluted through the 3-tier cascade system.
- TAC Tutors should be brought on board.

Question 18: Do you think that the current 2-tier cascade INSET system at secondary level will be adequate in the future to improve lessons in terms of the following criteria?

	Completely adequate	Mostly adequate	Mostly inadequate
Management system	()	()	()
Funding system (SMASSE Fund)	()	()	()
Duration (10 days annually)	()	()	()
Contents	()	()	()
Effectiveness to change the class	()	()	()

Q18	Completely adequate		Mostly adequate		Mostly inadequate		N/A		Total	
	f	%	f	%	f	%	f	%	f	%
Management system	7	25.9	13	48.1	6	22.2	1	3.7	27	100.0
Funding system	11	40.7	12	44.4	3	11.1	1	3.7	27	100.0
Duration (10 days annually)	2	7.4	15	55.6	9	33.3	1	3.7	27	100.0
Contents	2	7.4	20	74.1	4	14.8	1	3.7	27	100.0
To change the class	2	7.4	16	59.3	5	18.5	4	14.8	27	100.0

Explanation (selected):

- This is the best at the moment.
- Transparency in use of funds is of concern.
- The INSET can be enhanced by introducing lesson study and other school based INSETs.

- Reduce 10 days training to 5 days.

5. CEMASTEIA

Question 19: Do you think that the Project management structure in CEMASTEIA is appropriate in terms of the following criteria?

	Completely adequate	Mostly adequate	Mostly inadequate
Decision making process	()	()	()
Monitoring system	()	()	()
Communication between CEMASTEIA and MOE	()	()	()
Communication between Academic staff of CEMASTEIA and JICA Experts	()	()	()
Communication between CEMASTEIA and local parties such as DPC, PTTC, DEO and schools	()	()	()

Q19	Completely adequate		Mostly adequate		Mostly inadequate		Total	
	f	%	f	%	f	%	f	%
Decision making process	7	25.9	16	59.3	4	14.8	27	100.0
Monitoring system	8	29.6	17	63.0	2	7.4	27	100.0
Communication between CEMASTEIA and MOE	8	29.6	14	51.9	5	18.5	27	100.0
Communication bet. CEMASTEIA staff and JICA Experts	3	11.1	15	55.6	9	33.3	27	100.0
Communication bet. CEMASTEIA and local parties	5	18.5	17	63.0	5	18.5	27	100.0

Any comments (selected):

- There is delayed decision making where at involves MOE.
- Needs strengthening and streamlining.
- The "Matrix structure" to project management is too complex to manage for the existing organization at CEMSTEIA.

Question 20: What kind of external assistance would CEMASTEIA require in order to fulfill its mandates as a national training institution?

In the short run (in 2 or 3 years) (selected):

- Enhance physical, human and financial resources so that all programmes can be implemented smoothly.
- More collaboration with the other African countries.
- Training to the staff such as lesson observation, lesson study and digital teaching.
- More Japanese experts both short-term and long-term.
- Scholarships for further education.
- Equipment including vehicles and materials.
- Additional accommodation facilities for participants, conference hall and laboratories.
- Upgrade Cluster centers with facilities necessary for INSET.
- Improved funding for the activities.
- Recognition.

In the long run (in 5 or 10 years) (selected):

- Assist CEMASTEIA to be a center of excellence in INSET in Africa.
- Transform the Centre to offer mandatory INSET to all primary and secondary school teachers of all subjects.
- Establish CEMASTEIA at the county level.
- Scholarships for further education.
- Capacity development in the area of INSET content.
- Funds for scientific researches.
- Funds for publishing and training materials.
- Support Regional, District and Cluster centers.

6. Others

Question 21: Do you think that INSET is necessary to be continued in Kenya?

<u>Primary</u>	<u>Secondary</u>
() Necessary indeed	() Necessary indeed
() Is not necessary in some parts	() Is not necessary in some parts
() Is not necessary at all	() Is not necessary at all

Q21	Necessary		Not necessary in some parts		Not necessary at all		Total	
	f	%	f	%	f	%	f	%
Primary	26	96.3	1	3.7	0	0.0	27	100.0
Secondary	26	96.3	1	3.7	0	0.0	27	100.0

Explanation (selected):

- No education system can improve quality without improving teacher capacity.
- INSET should be part of continuous professional development.
- The society, technology and processes are ever changing.
- It is not necessary for INSET to be annually activity.

Any comments to improve SMASE Project (selected):

- Revive policy on INSET.
- Need to enhance the mutual relationship between the partners (JICA and MOE/CEMASTE A); both are beneficiaries and equal partners.
- Enhance the management system, especially at regional and cluster level.
- If the GOK can provide adequate budget for the Project, it can be very successful.
- Change cascade system to direct. INSET at CEMASTE A or reduce the 3-tier to 2-tier for primary programme.
- Needs-based INSET should be considered seriously so that teachers willingly participate.
- Materials development as content for INSET needs to be published as booklets.
- Continuous monitoring to see whether there is impact. If not, change strategy.
- Opportunities to CEMASTE A staff to follow-up on trainings in other countries of Africa.
- Annual attendance caused fatigue to participants.
- The welfare of CEMASTE A staff and trainers should be worked into. This will greatly increase staff motivation and dedication/commitment.

ANNEX 7: Result of Questionnaire Survey for the Mid-term Review Study (To: District management personnel)

General information

Name of District/School:

District	Machakos		Naivasha		Keiyo South		Total	
	f	%	f	%	f	%	f	%
Primary	13	35.1	10	27.0	14	37.8	37	100.0
Secondary	6	25.0	9	37.5	9	37.5	24	100.0

Position:

Position	DEO		QASO		TAC Tutor		Head teacher/Principal		Deputy principal	
	f	%	f	%	f	%	f	%	f	%
Primary	2	5.4	6	16.2	10	27.0	19	51.4	0	0.0
Secondary	2	8.3	5	20.8	1	4.2	13	54.2	3	12.5

Years participated in SMASE/SMASSE:

Years in SMASE	1		2		3-5		6-		N/A	
	f	%	f	%	f	%	f	%	f	%
Primary	6	16.2	19	51.4	5	13.5	1	2.7	6	16.2
Secondary	2	8.3	4	16.7	7	29.2	8	33.3	3	12.5

1. Evaluation on workshop that you attended

Question 1: Did you attend workshop organized by the SMASE Project?

Yes → Please go to **Question 2**.

No → Please jump to **Question 4**.

Q1	Yes		No		Total	
	f	%	f	%	f	%
Primary	28	75.7	9	24.3	37	100.0
Secondary	19	79.2	5	20.8	24	100.0

Question 2: Do you think that the workshop that you attended was adequate in terms of the following criteria?

	Completely adequate	Mostly adequate	Mostly inadequate
Management and logistics	()	()	()
Timing	()	()	()
Content	()	()	()

Q2		Completely adequate		Mostly adequate		Mostly inadequate		N/A	
		f	%	f	%	f	%	f	%
Primary	Management and logistics	10	35.7	14	50.0	4	14.3	28	100.0
	Timing	7	25.0	12	42.9	9	32.1	28	100.0
	Content	12	42.9	14	50.0	2	7.1	28	100.0
Secondary	Management and logistics	6	31.6	11	57.9	2	10.5	19	100.0
	Timing	6	31.6	11	57.9	2	10.5	19	100.0
	Content	10	52.6	7	36.8	2	10.5	19	100.0

Question 3: Were you content with the workshop that you attended?

Significantly content

Mostly content

Not content at all

Q3	Significantly content		Mostly content		Not content at all		Total	
	f	%	f	%	f	%	f	%
Primary	11	39.3	14	50.0	3	10.7	28	100.0
Secondary	9	47.4	9	47.4	1	5.3	19	100.0

How can the organizer improve the quality of workshop?

- Streamline financial logistics (instant payment of allowances to teachers, trainers, TAC Tutors and QASO (Primary).
- Change training time from holidays to term dates.
- Proper time management.
- Improve on venue (a spacious room with adequate furniture).
- Accommodation is not adequate.
- More practical examples.
- Call fewer participants at a time to avoid overcrowding and to allow effective interaction.
- More training on ICT integration.
- Invite external motivational speakers.
- Not repeating what has already been covered.
- Improve on the interactive sessions rather than lecture methods.
- Provides hand-outs and other reading materials that would be of great importance to the Project.
- Identify the areas of need.
- Doing more research on challenges facing learning and teaching of mathematics and science.
- Supply more materials.
- Give certificate.
- Make it 2 weeks workshop to enable non-science Principals get more details on content.
- Parents should be met like other civil servants.

2. Evaluation on SMASE INSET of primary teachers (grade 6, 7, 8)

Question 4: Do you think that primary teachers changed their teaching methods through SMASE INSET?

- () Significantly changed
 () Slightly changed
 () Not changed at all

Q4	Significantly changed		Slightly changed		Not changed at all		N/A		Total	
	f	%	f	%	f	%	f	%	f	%
Primary	8	21.6	28	75.7	0	0.0	1	2.7	37	100.0

Question 5: Do you think that primary teachers are motivated to participate in SMASE INSET?

- () Significantly motivated
 () Slightly motivated
 () Not motivated at all

Q5	Significantly motivated		Slightly motivated		Not motivated at all		N/A		Total	
	f	%	f	%	f	%	f	%	f	%
Primary	10	27.0	19	51.4	7	18.9	1	2.7	37	100.0

Question 6: Do you think that primary teachers are conscious of their necessity to improve their teaching methods?

- () Significantly conscious
 () Slightly conscious
 () Not conscious at all

Q6	Significantly conscious		Slightly conscious		Not conscious at all		N/A		Total	
	f	%	f	%	f	%	f	%	f	%
Primary	15	40.5	21	56.8	0	0.0	1	2.7	37	100.0

Question 7: Do you think that primary teachers should attend more INSET in mathematics and science?

- () Absolutely should attend
- () Can attend if they would like
- () Not necessary at all

Q7	Absolutely should attend		Can attend if they would like		Not necessary at all		N/A		Total	
	f	%	f	%	f	%	f	%	f	%
Primary	36	97.3	0	0.0	0	0.0	1	2.7	37	100.0

Question 8: Do you think that the SMASE INSET contributes to the improvement of mathematics and science lessons at primary school?

- () Significantly contributes
- () Slightly contributes
- () Not contributes at all

Q8	Significantly contributes		Slightly contributes		Not contributes at all		N/A		Total	
	f	%	f	%	f	%	f	%	f	%
Primary	31	83.8	4	10.8	1	2.7	1	2.7	37	100.0

Question 9: Do you think that the improvement of the quality lessons, as a result of the SMASE INSET, contribute to the quality of learning of students at primary school?

- () Significantly contributes
- () Slightly contributes
- () Not contributes at all

Q9	Significantly contributes		Slightly contributes		Not contributes at all		N/A		Total	
	f	%	f	%	f	%	f	%	f	%
Primary	27	73.0	9	24.3	0	0.0	1	2.7	37	100.0

3. Evaluation on SMASE INSET of secondary mathematics and science teachers

Question 10: Do you think that secondary mathematics and science teachers changed their teaching methods through SMASE INSET?

- () Significantly changed
- () Slightly changed
- () Not changed at all

Q10	Significantly changed		Slightly changed		Not changed at all		Total	
	f	%	f	%	f	%	f	%
Secondary	4	16.7	20	83.3	0	0.0	24	100.0

Question 11: Do you think that secondary mathematics and science teachers are motivated to participate in SMASE INSET?

- () Significantly motivated
- () Slightly motivated
- () Not motivated at all

Q11	Significantly motivated		Slightly motivated		Not motivated at all		Total	
	f	%	f	%	f	%	f	%
Secondary	1	4.2	18	75.0	5	20.8	24	100.0

Question 12: Do you think that secondary mathematics and science teachers are conscious of their necessity to improve their teaching methods?

- () Significantly conscious
- () Slightly conscious
- () Not conscious at all

Q12	Significantly conscious		Slightly conscious		Not conscious at all		Total	
	f	%	f	%	f	%	f	%
Secondary	16	66.7	7	29.2	1	4.2	24	100.0

Question 13: Do you think that secondary mathematics and science teachers should attend more INSET in mathematics and science?

- () Absolutely should attend
 () Can attend if they would like
 () Not necessary at all

Q13	Absolutely should attend		Can attend if they would like		Not necessary at all		Total	
	f	%	f	%	f	%	f	%
Secondary	22	91.7	1	4.2	1	4.2	24	100.0

Question 14: Do you think the SMASE INSET contributes to the improvement of mathematics and science lessons at secondary school?

- () Significantly contributes
 () Slightly contributes
 () Not contributes at all

Q14	Significantly contributes		Slightly contributes		Not contributes at all		Total	
	f	%	f	%	f	%	f	%
Secondary	17	70.8	6	25.0	1	4.2	24	100.0

Question 15: Do you think the improvement of the quality lessons, as a result of the SMASE INSET, contribute to the quality of learning of students at secondary school?

- () Significantly contributes
 () Slightly contributes
 () Not contributes at all

Q15	Significantly contributes		Slightly contributes		Not contributes at all		Total	
	f	%	f	%	f	%	f	%
Secondary	18	75.0	6	25.0	0	0.0	24	100.0

4. Other elements to upgrade capability of young Kenyans in mathematics and science

Question 16: Do you think that principals encourage teachers in mathematics and science teaching more than before?

- () Encourage much more than before
 () Encourage slightly more than before
 () No change

Q16	Much more than before		Slightly more than before		No change		N/A		Total	
	f	%	f	%	f	%	f	%	f	%
Primary	7	46.7	3	20.0	1	6.7	4	26.7	15	100.0
Secondary	10	41.7	13	54.2	1	4.2	0	0.0	24	100.0

Question 17: Did education authorities and/or schools recently organize any promotion activities to make family members recognize and support students?

- () Yes
 () No, I do not know any

Q17	Yes		No		N/A		Total	
	f	%	f	%	f	%	f	%
Primary	7	46.7	5	33.3	3	20.0	15	100.0
Secondary	15	62.5	9	37.5	0	0.0	24	100.0

If the answer is Yes, please identify the activity:

- | |
|---|
| <ul style="list-style-type: none"> - Prize giving at district division and zonal levels. - Parents' capacity building to participate more in education matters. |
|---|

Question 18: Do you think that there is any improvement recently in terms of the following items?

	Significantly improved	Slightly improved	Not improved at all
Availability of textbooks for students	()	()	()
Attendance of students in the class	()	()	()
Sufficient time to do home work	()	()	()

Q18		Significantly improved		Slightly improved		Not improved at all		N/A	
		f	%	f	%	f	%	f	%
Primary	Availability of textbooks	7	46.7	7	46.7	0	0.0	1	6.7
	Attendance of students	7	46.7	7	46.7	0	0.0	1	6.7
	Sufficient time to do homework	0	0.0	13	86.7	1	6.7	1	6.7
Secondary	Availability of textbooks	16	66.7	8	33.3	0	0.0	0	0.0
	Attendance of students	16	66.7	8	33.3	0	0.0	0	0.0
	Sufficient time to do homework	6	25.0	17	70.8	1	4.2	0	0.0

ANNEX 8: Result of Questionnaire Survey for the Mid-term Review Study (To: Primary and secondary teachers)

Name of District:

District	Machakos		Naivasha		Keiyo South		Total	
	f	%	f	%	f	%	f	%
Primary	5	22.7	2	9.1	15	68.2	22	100.0
Secondary	1	4.0	0	0.0	24	96.0	25	100.0

Subject:

Subject	Mathematics		Science		Math & Science		N/A		Total	
	f	%	f	%	f	%	f	%	f	%
Primary	10	45.5	12	54.5	0	0.0	0	0.0	22	100.0
Secondary	6	24.0	15	60.0	4	16.0	0	0.0	25	100.0

Age:

Age	21-30		31-40		41-50		51-		N/A	
	f	%	f	%	f	%	f	%	f	%
Primary	1	4.5	12	54.5	6	27.3	1	4.5	2	9.1
Secondary	4	16.0	9	36.0	8	32.0	1	4.0	3	12.0

Sex:

Sex	Female		Male		Total	
	f	%	f	%	f	%
Primary	13	59.1	9	40.9	22	100.0
Secondary	9	36.0	16	64.0	25	100.0

Years participated in SMASE/SMASSE:

Years in SMASE	1		2		3-5		6-		N/A	
	f	%	f	%	f	%	f	%	f	%
Primary	3	13.6	18	81.8	0	0.0	0	0.0	1	4.6
Secondary	0	0.0	1	4.0	14	56.0	7	28.0	3	12.0

1. Evaluation on SMASE INSET that you received

Question 1: Did you serve as a SMASE in-service training (INSET) trainer?

- () Yes → Please go to **Question 2**.
 () No → Please jump to **Question 4**.

Q1	Yes		No		Total	
	f	%	f	%	f	%
Primary	5	22.7	17	77.3	22	100.0
Secondary	8	32.0	17	68.0	25	100.0

Question 2: Do you think that the SMASE INSET that you received was adequate to develop a trainer at the next cascade-tier?

- () Completely adequate
 () Mostly adequate
 () Not adequate at all

Q2	Completely adequate		Mostly adequate		Not adequate at all		N/A		Total	
	f	%	f	%	f	%	f	%	f	%
Primary	0	0.0	5	100.0	0	0.0	0	0.0	5	100.0
Secondary	2	20.0	7	70.0	0	0.0	1	10.0	10	100.0

Question 3: Are you confident to serve as a trainer at the next cascade-tier?

- () Completely confident
 () Mostly confident
 () Not confident at all

Q3	Completely confident		Mostly confident		Not confident at all		Total	
	f	%	f	%	f	%	f	%
Primary	2	40.0	3	60.0	0	0.0	5	100.0
Secondary	5	50.0	4	40.0	1	10.0	10	100.0

Question 4: Do you think that the SMASE INSET that you received was adequate in terms of the following criteria?

	Completely adequate	Mostly adequate	Not adequate at all
Management and logistics	()	()	()
Duration	()	()	()
Content	()	()	()

Q4		Completely adequate		Mostly adequate		Mostly inadequate		N/A		Total	
		f	%	f	%	f	%	f	%	f	%
Primary	Management and logistics	3	13.6	10	45.5	8	36.4	1	4.6	22	100.0
	Duration	8	36.4	8	36.4	5	22.7	1	4.6	22	100.0
	Content	6	27.3	15	68.2	0	0.0	1	4.6	22	100.0
Secondary	Management and logistics	6	24.0	14	56.0	3	12.0	2	8.0	25	100.0
	Duration	7	28.0	13	52.0	3	12.0	2	8.0	25	100.0
	Content	5	20.0	15	60.0	3	12.0	2	8.0	25	100.0

Question 5: Do you think that the INSET that you received is better than other INSET programmes/university training programmes?

- () Significantly better
 () More or less the same
 () Worse

Q5	Significantly better		More or less the same		Worse		Total	
	f	%	f	%	f	%	f	%
Primary	16	72.7	5	22.7	1	4.6	22	100.0
Secondary	11	44.0	14	56.0	0	0.0	25	100.0

Please explain the reason of your answer:

<p>(Primary)</p> <ul style="list-style-type: none"> - The focus was more on the child. - The INSET is more practical and related to science activities. - Understanding is easier. - The content was adequate. - The presentation is the same in terms of skills and methodology. - Lack of training materials, i.e., stationary. - Poor teachers' incentives. <p>(Secondary)</p> <ul style="list-style-type: none"> - Hands-on activities are very adequate and doing small experiment is ideal for students. - There was no lesson study and ICT integration in the university. - Though previous training was adequate, there are a number of emerging issues and changing trends which are effectively addressed in the INSET. - University programmes were lecturer centered but SMASE is relevant. - Content is the same except experiments. - Facilitators and professionals as well as content are at same level as university INSET.
--

Question 6: Would you like to participate more in SMASE INSET?

- () Absolutely would like
- () If there are certain change, maybe
- () Not at all

Q6	Absolutely would like		If there are certain change		Not at all		Total	
	f	%	f	%	f	%	f	%
Primary	18	81.8	4	18.2	0	0.0	22	100.0
Secondary	8	32.0	14	56.0	3	12.0	25	100.0

Please explain the reason of your answer:

(Primary)

- It makes teaching interesting to both teachers and pupils.
- It helps teachers to give quality teaching.
- To enable the teacher to acquire more skills and knowledge to handle the science topics.
- The trainers were well equipped with the materials.
- The training was real and practical.
- We are updated with current needs to impact to pupils in this world of modern technology.
- It involves more in terms of research and teaching of science.
- If the programme is not scheduled for the school holidays, because I am undergoing a course at university.
- If the content covered is more and the training session is short.
- Lack of breakfast and lunch.

(Secondary)

- It has helped me a lot to be a better classroom teacher and do more activities to students.
- It has made attitude change in me.
- Dynamics of changing learning/teaching environment together with the need to share experiences and challenges.
- Changes like production of teaching and learning materials are welcome.
- I would like more training in ICT.
- If there are new ideas.
- If the INSET produces upward mobility for the teachers.
- If the content is improved, it would be more relevant.
- Adjustment of timing is necessary.
- If the venue for training was improved.
- Improvement of accommodation is necessary.
- Need to be harmonized with curriculum in schools. If fully implemented, syllabus coverage will not be possible.
- Most of the content taught is a repetition.
- If they try and motivate the teacher.
- The new teachers joining the profession should be first trained on what we have already been trained in SMASE to ensure that we are at the same level first.
- SMASE INSET does not mind about the welfare of the teacher, both financial and social.
- I feel the six cycles that I attended are enough.

Question 7: Are you PTTC teacher?

- () Yes → Please jump to Question 11.
- () No → Please go to Question 8.

Q7	Yes		No		Total	
	f	%	f	%	f	%
Primary	4	18.2	18	81.8	22	100.0
Secondary	1	4.0	24	96.0	25	100.0

2. Effect of SMASE INSET

Question 8: Do you think that teachers changed their teaching methods through SMASE INSET?

- () Significantly changed
 () Slightly changed
 () Not changed at all

Q8	Significantly changed		Slightly changed		Not changed at all		N/A		Total	
	f	%	f	%	f	%	f	%	f	%
Primary	5	27.8	12	66.7	0	0.0	1	5.6	18	100.0
Secondary	4	16.7	19	79.2	1	4.2	0	0.0	24	100.0

Question 9: Do you think that teachers are motivated to participate in SMASE INSET?

- () Significantly motivated
 () Slightly motivated
 () Not motivated at all

Q9	Significantly motivated		Slightly motivated		Not motivated at all		Total	
	f	%	f	%	f	%	f	%
Primary	8	44.4	9	50.0	1	5.6	18	100.0
Secondary	1	4.2	14	58.3	9	37.5	24	100.0

Question 10: Do you think that teachers are conscious of their necessity to improve their teaching methods?

- () Significantly conscious
 () Slightly conscious
 () Not conscious at all

Q10	Significantly conscious		Slightly conscious		Not conscious at all		Total	
	f	%	f	%	f	%	f	%
Primary	13	72.2	5	27.8	0	0.0	18	100.0
Secondary	13	54.2	11	45.8	0	0.0	24	100.0

3. Evaluation on the SMASE INSET

Question 11: Do you think that teachers should attend more SMASE INSET in mathematics and science?

- () Absolutely should attend
 () Can attend if they would like
 () Not necessary at all

Q11	Absolutely should attend		Can attend if they would like		Not necessary at all		N/A		Total	
	f	%	f	%	f	%	f	%	f	%
Primary	22	100.0	0	0.0	0	0.0	0	0.0	22	100.0
Secondary	10	40.0	8	32.0	4	16.0	3	12.0	25	100.0

Question 12: Do you think that the SMASE INSET contributes to the improvement of mathematics and science lessons?

- () Significantly contributes
 () Slightly contributes
 () Not contributes at all

Q12	Significantly contributes		Slightly contributes		Not contributes at all		N/A		Total	
	f	%	f	%	f	%	f	%	f	%
Primary	21	95.5	1	4.6	0	0.0	0	0.0	22	100.0
Secondary	11	44.0	12	48.0	0	0.0	2	8.0	25	100.0

Question 13: Do you think that the improvement of the quality lessons, as a result of the SMASE INSET, contribute to the quality of learning of students?

- () Significantly contributes
 () Slightly contributes
 () Not contributes at all

Q13	Significantly contributes		Slightly contributes		Not contributes at all		N/A		Total	
	f	%	f	%	f	%	f	%	f	%
Primary	20	90.9	2	9.1	0	0.0	0	0.0	22	100.0
Secondary	15	60.0	7	28.0	1	4.0	2	8.0	25	100.0

4. Other elements to upgrade capability of young Kenyans in mathematics and science

Question 14: Do you think that school principals encourage teachers in mathematics and science teaching more than before?

- () Encourage much more than before
 () Encourage slightly more than before
 () No change

Q14	Much more than before		Slightly more than before		No change		Total	
	f	%	f	%	f	%	f	%
Primary	10	45.5	8	36.4	4	18.2	22	100.0
Secondary	6	24.0	14	56.0	5	20.0	25	100.0

Question 15: Did education authorities and/or schools recently organize any promotion activities to make family members recognize and support students?

- () Yes
 () No, I do not know any.

Q15	Yes		No		Total	
	f	%	f	%	f	%
Primary	10	45.5	12	54.5	22	100.0
Secondary	9	36.0	16	64.0	25	100.0

If the answer is Yes, please identify the activity:

- Education day.
- Prize giving day.
- Scholarships are given to those students who perform well.
- Symposium and workshop.

Question 16: Do you think that there is any improvement recently in terms of the following items?

	Significantly improved	Slightly improved	Not improved at all
Availability of textbooks for students	()	()	()
Attendance of students in the class	()	()	()
Sufficient time to do home work	()	()	()

Q16		Significantly improved		Slightly improved		Not improved at all		Total	
		f	%	f	%	f	%	f	%
Primary	Availability of textbooks	13	59.1	9	40.9	0	0.0	22	100.0
	Attendance of students	17	77.3	5	22.7	0	0.0	22	100.0
	Sufficient time to do homework	10	45.5	7	31.8	5	22.7	22	100.0
Secondary	Availability of textbooks	16	64.0	9	36.0	0	0.0	25	100.0
	Attendance of students	16	64.0	9	36.0	0	0.0	25	100.0
	Sufficient time to do homework	8	32.0	13	52.0	4	16.0	25	100.0

ANNEX 9: Result of Questionnaire Survey for the Mid-term Review Study (To: PTTC lecturers)

General Information

Name of District/School:

School	Tambach		Total	
	f	%	f	%
PTTC	4	100.0	4	100.0

Subject:

Subject	Mathematics		Science		Total	
	f	%	f	%	f	%
PTTC	1	25.0	3	75.0	4	100.0

Age:

Age	31-40		41-50		Total	
	f	%	f	%	f	%
PTTC	1	25.0	3	75.0	4	100.0

Sex:

Sex	Female		Male		Total	
	f	%	f	%	f	%
PTTC	2	50.0	2	50.0	4	100.0

Years participated in SMASE/SMASSE:

Years in SMASE	1		2		3-5		6-	
	f	%	f	%	f	%	f	%
PTTC	0	0.0	0	0.0	3	75.0	1	25.0

1. Evaluation on SMASE INSET that you received

Question 1: Did you serve as a SMASE in-service training (INSET) trainer?

- Yes → Please go to **Question 2**.
 No → Please jump to **Question 4**.

Q1	Yes		No		Total	
	f	%	f	%	f	%
PTTC	4	100.0	0	0.0	4	100.0

Question 2: Do you think that the SMASE INSET that you received was adequate to develop a trainer at the next cascade-tier?

- Completely adequate
 Mostly adequate
 Not adequate at all

Q2	Completely adequate		Mostly adequate		Not adequate at all		Total	
	f	%	f	%	f	%	f	%
PTTC	3	75.0	1	25.0	0	0.0	4	100.0

Question 3: Are you confident to serve as a trainer at the next cascade-tier?

- Completely confident
 Mostly confident
 Not confident at all

Q3	Completely confident		Mostly confident		Not confident at all		Total	
	f	%	f	%	f	%	f	%
PTTC	3	75.0	1	25.0	0	0.0	4	100.0

Question 4: Do you think that the SMASE INSET that you received was adequate in terms of the following criteria?

	Completely adequate	Mostly adequate	Not adequate at all
Management and logistics	()	()	()
Duration	()	()	()
Content	()	()	()

Q4		Completely adequate		Mostly adequate		Mostly inadequate		Total	
		f	%	f	%	f	%	f	%
National for PTTC	Management and logistics	2	50.0	2	50.0	0	0.0	4	100.0
	Duration	2	50.0	2	50.0	0	0.0	4	100.0
	Content	2	50.0	2	50.0	0	0.0	4	100.0

Question 5: Do you think that the INSET that you received is better than other INSET programmes/university training programmes?

- () Significantly better
 () More or less the same
 () Worse

Q5		Significantly better		More or less the same		Worse		Total	
		f	%	f	%	f	%	f	%
PTTC		3	75.0	1	25.0	0	0.0	4	100.0

Please explain the reason of your answer:

- Hands-on experience and also learner centered approach.
- Minds-on and hands-on develops skills, knowledge and abilities of teaching and learning process.
- Inadequate materials at the Cluster training: End product is affected by various shortcomings.

Question 6: Would you like to participate more in SMASE INSET?

- () Absolutely would like
 () If there are certain change, maybe
 () Not at all

Q6		Absolutely would like		If there are certain change		Not at all		Total	
		f	%	f	%	f	%	f	%
PTTC		3	75.0	0	0.0	1	25.0	4	100.0

Please explain the reason of your answer:

- Interaction with other trainers and teachers of the same subject area leads to new development.
- Payment for the training is a bit little.

Question 7: Are you PTTC teacher?

- () Yes → Please jump to Question 11.
 () No → Please go to Question 8.

Q7		Yes		No		Total	
		f	%	f	%	f	%
PTTC		4	100.0	0	0.0	4	100.0

2. Evaluation on the SMASE INSET

Question 11: Do you think that teachers should attend more SMASE INSET in mathematics and science?

- () Absolutely should attend
 () Can attend if they would like
 () Not necessary at all

Q11		Absolutely should attend		Can attend if they would like		Not necessary at all		Total	
		f	%	f	%	f	%	f	%
PTTC		4	100.0	0	0.0	0	0.0	4	100.0

Question 12: Do you think that the SMASE INSET contributes to the improvement of mathematics and science lessons?

- () Significantly contributes
- () Slightly contributes
- () Not contributes at all

Q12	Significantly contributes		Slightly contributes		Not contributes at all		Total	
	f	%	f	%	f	%	f	%
PTTC	4	100.0	0	0.0	0	0.0	4	100.0

Question 13: Do you think that the improvement of the quality lessons, as a result of the SMASE INSET, contribute to the quality of learning of students?

- () Significantly contributes
- () Slightly contributes
- () Not contributes at all

Q13	Significantly contributes		Slightly contributes		Not contributes at all		Total	
	f	%	f	%	f	%	f	%
PTTC	3	75.0	1	25.0	0	0.0	4	100.0

3. Other elements to upgrade capability of young Kenyans in mathematics and science

Question 14: Do you think that school principals encourage teachers in mathematics and science teaching more than before?

- () Encourage much more than before
- () Encourage slightly more than before
- () No change

Q14	Much more than before		Slightly more than before		No change		Total	
	f	%	f	%	f	%	f	%
PTTC	1	25.0	3	75.0	0	0.0	4	100.0

Question 15: Did education authorities and/or schools recently organize any promotion activities to make family members recognize and support students?

- () Yes
- () No, I do not know any.

Q15	Yes		No		Total	
	f	%	f	%	f	%
PTTC	0	0.0	4	100.0	4	100.0

If the answer is Yes, please identify the activity:

Question 16: Do you think that there is any improvement recently in terms of the following items?

	Significantly improved	Slightly improved	Not improved at all
Availability of textbooks for students	()	()	()
Attendance of students in the class	()	()	()
Sufficient time to do home work	()	()	()

Q16		Significantly improved		Slightly improved		Not improved at all		Total	
		f	%	f	%	f	%	f	%
PTTC	Availability of textbooks	3	75.0	1	25.0	0	0.0	4	100.0
	Attendance of students	1	25.0	3	75.0	0	0.0	4	100.0
	Sufficient time to do homework	0	0.0	4	100.0	0	0.0	4	100.0

Category	Evaluation Items	Indicator	Necessary data	Data source	Reference	Method of data collection	Evaluation tool	Result of the mid-term review
Result of Inputs	Inputs by Buildings, Offices and other facilities side	R/D ANNEX V, P/D ANNEX 3-2 (District INSET Centre), 3-3 (PTTC)	List of facilities at national, regional, district level	SMASE Project Mid-term Evaluation 2011 Table 10.1, 2	-	Literature review	-	(See ANNEX 10-1) Building, offices and other facilities were provided for the project. However, there is an inconvenience of using the University of Nairobi, Kenya Science Campus office: insufficient space for experts and storages of training materials. This is due to the office space was taken over by the National ICT Innovation and Integration Centre (NIIC), MOE. The relationship between CEMASTE and NIIC is not yet clear.
	CP at national level	R/D ANNEX IV	Education Secretary	Project documents	-	Literature review	-	(See ANNEX 10-2) Although the R/D identifies the Education Secretary as only counterpart personnel from the MOE, the Permanent Secretary and staff of Directorate of Field and Other Services participate in the project activities on a regular basis.
		R/D ANNEX IV (Department and committee)	CEMASTE	SMASE Project Mid-term Evaluation 2011 Table 10.1	-	Literature review	-	(See ANNEX 10-3) At the moment, the number of administration staff is 3 and academic staff is 45, in which 9 staff in Biology Department, 12 in Chemistry, 10 in Mathematics, 11 in Physics, 1 in Research and Development and 2 in ICT. Every academic staff, other than newly posted one staff, is appointed to the 5 committees: 10 in primary committee; 9 in secondary; 9 in WECSA, 5 in R&D and 11 in ICT. Among 10 academic staff in the Primary committee, only 4 have background in PTTC. Additionally, CEMASTE has 1 more academic staff and 2 administration personnel (Director and Deputy director) that have PTTC background.
	Other personnel at national level	R/D ANNEX IV	CEMASTE non academic staff	SMASE Project Mid-term Evaluation 2011	-	Literature review	-	(See ANNEX 10-4) 24 non academic staff are working at CEMASTE as of 2011/10/01, in which the salary of 7 staff is covered by JICA side.
	Personnel related to primary INSET at regional level	R/D ANNEX IV	19 PTTC (Principals, Deans of Curriculum, Teachers)	SMASE Project Mid-term Evaluation 2011 Table 2.13, 2.14, 2.15	-	Literature review	-	(See ANNEX 10-5) At the moment, the number of personnel at regional level is: 20 PTTC Principals, 21 Deans of Curriculum (DOCs) and 98 mathematics and 154 science regional trainers, based on the number of personnel attended National INSET and workshop for PTTC.
	Personnel related to primary INSET at district level	R/D ANNEX IV	DEO, D-QASO	SMASE Project Mid-term Evaluation 2011 Table 2.16	-	Literature review	-	According to the number of district education offices, the number of District Education Officers (DEOs) is 285 and that of DQASO is 285, that should implement SMEASE INSET at district level.
		R/D ANNEX IV	Cluster Trainer, TAC Tutor and others	SMASE Project Mid-term Evaluation 2011 Table 3.4, 4.2	-	Literature review	-	(See ANNEX 10-6) The number of Cluster trainers is 4,420 in 2010 and 4,162 in 2011 based on the number of teachers attended in the Regional INSET. The number of other personnel participating in the Project at the cluster level is 1,113 in 2009 and 897 in 2010, according to the number of the participants at Regional workshop.
	Secondary education personnel at district level	R/D ANNEX IV	Renewed personnel list for INSET activities for secondary education	Handbook on Management of District SMASSE Programmes	-	Literature review	-	(See ANNEX 10-7) The DPCs established for secondary INSET during Phase 1 and 2 are working. The number of DPC is 76 and the number of district centres is 108. According to the Handbook (p. 11) each DPC consists of DEO, QASO, DSSHA Chairman/Representative, INSET Centre(s) Principal, TSC Staffing officer in the District and District Trainers Representative. Therefore, the total number of personnel related to the secondary INSET is 488 (76 DEOs, 76 QASOs, 76 DSSHA Chairmen/Representatives, 108 INSET Centre Principals, 76 TSC Staffing Officers and 76 District Trainers Representatives.)
	Expenses	PD ANNEX 5	Expenses for the Project activities by MOE, CEMASTE and DPC/FSE	CEMASTE document for the CEMASTE-BOG meeting	-	Literature review	-	(See ANNEX 10-8) According to the data submitted to CEMASTE BOG, the CEMASTE recurrent expenditure spent in Kenyan fiscal year 2008/09-2010/2011 was Ksh. 305,352,626.90 and the amount collected for SMASSE Fund by DPC was estimated to be Ksh. 918,269,200.00 based on the number of students. "Assessment Report for CEMASTE" shows necessity of better control of the equipment: "CEMASTE had a total of 166 computers, out of which 32 were not in working order. There were 33 printers, out of which 16 were in good working order and 101 UPS of which 32 were in good working condition" ("Assessment Report for CEMASTE").

Inputs by the Japanese side	Expert	R/D ANNEX II	Dispatch of experts	SMASE Project Information for Mid-term Evaluation 2011 Table 10.4, 10.5	Literature review	(See ANNEX 10-9) JICA has sent 5 long-term experts and 4 short-term experts.
Study mission			Dispatch of studies	Project document	Literature review	(See ANNEX 10-10) JICA sent 5 study missions.
Training	(Classified by budget item)		Training in Japan and third countries	SMASE Project Information for Mid-term Evaluation 2011 Table 10.2.2	Literature review	(See ANNEX 10-11) The total number of trainees is 72, in which 60 persons were trained in Japan (27 in country-focused and 35 in general training) and 12 persons were trained in Malaysia.
Training materials and equipment		R/D ANNEX III, P/D ANNEX 6	Provision of equipment	SMASE Project Information for Mid-term Evaluation 2011 Table 5.5, Project document	Literature review	(See ANNEX 10-12) The total amount spent on procurement is Ksh. 99,860,829.03. The procurement includes PC, software, stationery, reference books, a vehicle (1,500cc) to CEMASTEAs, Projector to PTTCs; and training materials to 1,052 TAC centres.
Expenses		P/D ANNEX 5 (Classified by budget item)	Expenses for the project implementation (Kenya component)	Project documents	Literature review	(See ANNEX 10-13) The total amount of JICA's operational cost is Ksh. 151,096,219.60, in which Ksh. 42,539,960.66 was for the activities in Kenya.
Progress of Activities	Activities for Output 1	1-1 To assess INSET training needs of primary M/S teachers.	Activity record	Project documents	Literature review	The survey was conducted with 52 sample schools and "Primary Mathematics and Science Education Needs Survey" was compiled by CEMASTEAs survey team in May/June 2009.
		1-2 To develop manuals and materials for National/Regional/Cluster INSET.	Activity record	SMASE Project Information for Mid-term Evaluation 2011 Table 2.2.1	Literature review	Three materials were prepared for INSET: 1) PTTC Tutors INSET write-ups for 2009, 2) Primary INSET write-ups for 2010 (National INSET manual (write-up) 2010), 3) Primary INSET write-ups for 2011 (National INSET manual (write-up) 2011).
		1-3 To develop/review monitoring and evaluation tools for National/Regional/Cluster INSET.	Activity record	SMASE Project Information for Mid-term Evaluation 2011 ANNEX 2-1	Literature review	Manuals were developed annually.
		1-4 To conduct National INSET for Regional Trainers at CEMASTEAs.	Activity record	SMASE Project Information for Mid-term Evaluation 2011 Table 2.1, 2.13	Literature review	Three 2-week National INSET for Regional Trainers were conducted at CEMASTEAs in 2009, 2010 and 2011. Among them, the training in 2009 was considered as part of activities in Phase 2. The number of participants in 2010 and 2011 was 281 and 271, respectively.
		1-5 To organize workshops for PTTC Principals and Deans of Curriculum/heads of M/S department on understanding of SMASE INSET & ASEI/PDSI classroom practices.	Activity record	SMASE Project Information for Mid-term Evaluation 2011 Table 2.2, 2.14, 2.15	Literature review	Three 5-day workshops were organized for PTTC Principals and 1 for DOCs at various venues. The number of participants were 17 Principals in 2010, 19 Principals in 2011 and 21 DOCs in 2011.
		1-6 To carry out monitoring and evaluation on quality of National INSET.	Activity record		Literature review	Monitoring and Evaluation was carried out at the National INSET.
		1-7 To carry out monitoring and evaluation on impact of National INSET.	Activity record		Literature review	Monitoring and Evaluation was carried out at the National INSET.

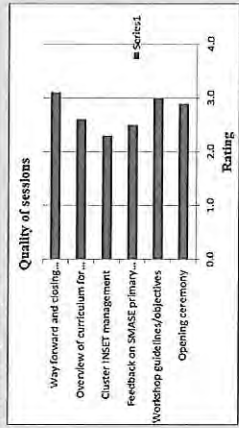
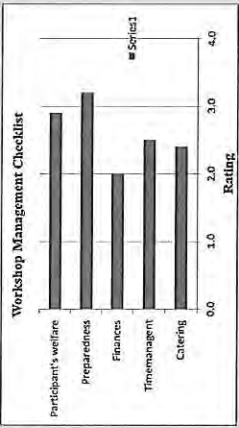
Activities for Output 2	2-1 To conduct national sensitisation workshop for DEO, QASO, TAC Tutor.	Activity record	SMASE Project Information for Mid-term Evaluation 2011 Table 2.2, 2.4, 2.16	Literature review	-	Personnel	2009	2010	2011
						1) DEO	192	267	271
						2) DGASO	-	251	-
						Source: SMASE Project (2011) "Information for Mid-term Evaluation 2011" Table 2.13, 2.14, 2.15.			
	2-2 To select Cluster Trainer.	Activity record	SMASE Project Information for Mid-term Evaluation 2011	Literature review	-	5,062 Cluster Trainers were supposed to be trained in 2010 and 5,123 in 2011. The number of trained Cluster Trainers is shown in activity 2-6.			
	2-3 To provide PTTCs with training materials/apparatus as necessary for regional INSET and workshop.	Activity record	SMASE Project Information for Mid-term Evaluation 2011 Table 3.1, 3.2, 3.3	Literature review	-	Various training materials/apparatus were provided for PTTCs. The detail is shown in "SMASE Project Information for Mid-term Evaluation 2011" Table 3.1, 3.2, 3.3.			
	2-4 To develop the workshop contents and materials by CEMASTE.A.	Activity record	SMASE Project Information for Mid-term Evaluation 2011 Table 2.2.1	Literature review	-	Six materials were prepared for workshops: 1) DEOs and PTTC Principals workshop write-ups for 2009, 2) PTTC Principals workshops write-ups 2010, 3) PTTC Principals workshop write-ups 2011, 4) DEOs workshop write-ups for 2010, 5) DEOs workshop write-ups for 2011, and 6) DDCs workshop write-up for 2011.			
	2-5 To organize Regional workshops.	Activity record	SMASE Project Information for Mid-term Evaluation 2011 Table 3.5	Literature review	-	1,113 participants attended in 2009 at 9 PTTCs, and 897 attended in 2010 at 5 PTTCs.			
	2-6 To conduct Regional INSET for Cluster Trainers at PTTCs.	Activity record	SMASE Project Information for Mid-term Evaluation 2011 Table 3.4	Literature review	-	4,420 teachers were trained as Cluster Trainer in 2010 at 18 PTTC, and 4,164 in 2011 at 18 PTTC.			
	2-7 To carry out monitoring and evaluation on quality of Regional INSET.	Activity record	-	Literature review	-	Monitoring and Evaluation was carried out at the Regional INSET.			
	2-8 To carry out monitoring and evaluation on impact of Regional INSET.	Activity record	-	Literature review	-	Monitoring and Evaluation was carried out at the Regional INSET.			
Activities for Output 3	3-1 To provide training materials/apparatus as necessary for Cluster INSET and District Workshop.	Activity record	SMASE Project Information for Mid-term Evaluation 2011 Table 4.3, 4.4	Literature review	-	Various training materials were provided for Cluster INSET. The detail is shown in "SMASE Project Information for Mid-term Evaluation 2011" Table 4.3, 4.4.			
	3-2 To conduct Cluster INSET.	Activity record	SMASE Project Information for Mid-term Evaluation 2011 Table 4.1	Literature review	-	Two 5-day INSET was conducted in 2010 and 2011. The theme of the INSET 2010 was "Managing change for effective teaching and learning of mathematics and science". The number of participants in 2010 was 55,393 in 238 districts out of 285. The number in 2011 will be presented based on the DEO reports.			
	3-3 To conduct Cluster workshop.	Activity record	SMASE Project Information for Mid-term Evaluation 2011 Table 4.1	Literature review	-	Two 1-day workshop for primary Head Teachers were conducted in 2010 and 2011 with the theme of "Effective Implementation of SMASE Primary Activities". The number of participants was 12,693 in 2009 and 13,725 in 2010.			
	3-4 To carry out monitoring and evaluation on quality of the cluster INSET.	Activity record	-	Literature review	-	Monitoring and Evaluation was carried out at the Cluster INSET. A M&E report was compiled in 2010, and the M&E report for 2010 INSET is in the process of elaboration.			

<p>3-5 To carry out monitoring and evaluation on the impact of cluster INSET and ASEI/PDSI classroom practices.</p>	<p>Activity record</p>	<p>-</p>	<p>-</p>	<p>Literature review</p>	<p>-</p>	<p>Monitoring and Evaluation was carried out at the Cluster INSET. A M&E report was compiled in 2010, and the M&E report for 2010 INSET is in the process of elaboration.</p>
<p>3-6 To develop handbook on management of primary INSET system in accordance with MOE policy.</p>	<p>Activity record</p>	<p>-</p>	<p>-</p>	<p>Literature review</p>	<p>-</p>	<p>The first draft was developed during the DEO workshop held in July 2010 and compiled by the Primary committee, but it has not been discussed yet.</p>
<p>4-1 To assess the current situation of M/S teachers' ASEI/PDSI classroom practices.</p>	<p>Activity record</p>	<p>"A Report on the Extent of Practice of ASEI-PDSI to Teaching/Learning of Mathematics and Science at Secondary School Level in Kenya: A Situational Analysis"</p>	<p>-</p>	<p>Literature review</p>	<p>-</p>	<p>The survey was conducted using structured questionnaires with 84 district education officers, 364 teachers and 380 students in 2009. The result was compiled in "A Report on the Extent of Practice of ASEI-PDSI to Teaching/Learning of Mathematics and Science at Secondary School Level in Kenya: A Situational Analysis" in 2010.</p>
<p>4-2 To develop INSET content for lesson study.</p>	<p>Activity record</p>	<p>SMASE Project Information for Mid-term Evaluation 2011 6.1.2</p>	<p>-</p>	<p>Literature review</p>	<p>-</p>	<p>"Lesson study write-ups for secondary INSET 2010" was developed.</p>
<p>4-3 To assess the current situation of capacity of school leadership on supervision of ASEI/PDSI classroom practices.</p>	<p>Activity record</p>	<p>"A Report on the Extent of Practice of ASEI/PDSI to Teaching/Learning of Mathematics and Science at Secondary School Level in Kenya: A Situational Analysis"</p>	<p>-</p>	<p>Literature review</p>	<p>-</p>	<p>The current situation of capacity of school leadership was assessed in "A Report on the Extent of Practice of ASEI/PDSI to Teaching/Learning of Mathematics and Science at Secondary School Level in Kenya: A Situational Analysis" p. 57.</p>
<p>4-4 To develop workshop content for principals.</p>	<p>Activity record</p>	<p>SMASE Project Information for Mid-term Evaluation 2011 6.1.2</p>	<p>-</p>	<p>Literature review</p>	<p>-</p>	<p>"Principal's workshop manual 2010" and "Principal's workshop manual 2011" were developed.</p>
<p>4-5 To conduct National workshop for selected principals.</p>	<p>Activity record</p>	<p>SMASE Project Information for Mid-term Evaluation 2011 5.1.2</p>	<p>-</p>	<p>Literature review</p>	<p>-</p>	<p>The National workshop for selected principals was not conducted due to the change of modality. The activity was merged with the activity 4-5. Instead of the two-tier cascade envisaged in the PDM, workshops are being conducted by GEMASTE staff in regions that were agreed upon with the DEOs during the 2010 DEOs Workshop ("Memorandum to the JCC Meeting").</p>
<p>4-6 To conduct District workshop for all principals.</p>	<p>Activity record</p>	<p>SMASE Project Information for Mid-term Evaluation 2011 Table 5.1</p>	<p>-</p>	<p>Literature review</p>	<p>-</p>	<p>The first workshop for all principals, which had been planned as an activity in 2010, was conducted for 246 districts with 3,983 principals (65% of coverage). The workshop for remaining 39 districts is being conducted by GEMASTE staff at the moment of Mid-term Review Study. The reason that the workshop has been conducted directly by GEMASTE staff is: 1) difficulty to cascade the training due to the nature of work of secondary school principals, and; 2) Principals' complaint about the facilitators in the past (Interview with GEMASTE OP). The same activity planned for 2010 has not been started yet (0% of coverage).</p>
<p>4-7 To carry out monitoring and evaluation on ASEI/PDSI classroom practices.</p>	<p>Activity record</p>	<p>-</p>	<p>-</p>	<p>Literature review</p>	<p>-</p>	<p>Monitoring and Evaluation was carried out in 2011. The M&E report is in the process of elaboration.</p>
<p>5-1 To publish newsletters, manuals and reports.</p>	<p>Activity record</p>	<p>SMASE Project Information for Mid-term Evaluation 2011 6.1.1, 6.1.2, 6.1.3.</p>	<p>-</p>	<p>Literature review</p>	<p>-</p>	<p>At the moment, there is no newsletters published, meanwhile various manuals and reports were published as seen in the previous activities</p>

	<p>5-2 To establish networks with agencies/institutions involved in related activities.</p>	<p>Activity record</p>	<p>SMASE Project Information for Mid-term Evaluation 2011 6.1.4.</p>	<p>Literature review</p>	<p>The local networks are yet to be established ("SMASE Project Information for Mid-term Evaluation 2011" 6.1.3). However, according to the observation of JICA Experts, the personal and institutional ties are developing through CEMASTEBA BOG and CEMASTEBA Re-engineering Committee with KIE, KNEC, KESI, KEPSHA and KESSHA ("Self-evaluation report for mid-term review" elaborated by JICA Experts).</p> <p>Two internal workshops were conducted, but any public symposia was not conducted yet.</p>																																								
	<p>5-3 To organize symposia on good ASE/PDSI classroom practices.</p>	<p>Activity record</p>	<p>SMASE Project Information for Mid-term Evaluation 2011 6.1.5</p>	<p>Literature review</p>	<p>Activities corresponding with this item were not planned yet. Consequently, good practices of ASE/PDSI were not collected yet.</p>																																								
	<p>5-4 To compile good practices of ASE/PDSI and disseminate.</p>	<p>Activity record</p>	<p>SMASE Project Information for Mid-term Evaluation 2011 6.1.6</p>	<p>Literature review</p>	<p>Two training materials and programs for National INSET for 2010 and 2011 were developed. It is planned to develop other two training materials and programs for 2012 and 2013 trainings.</p>																																								
<p>1. A system of National INSET for Regional Trainers is established at CEMASTEBA.</p>	<p>1(a) 4 cycles of training materials and programs for the National INSET for the primary education are developed.</p>	<p>Achievement record</p>	<p>SMASE Project Information for Mid-term Evaluation 2011 2.2.1</p>	<p>Literature review</p>	<table border="1"> <thead> <tr> <th colspan="2">Title</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>National INSET manual (write-up) 2010</td> </tr> <tr> <td>2</td> <td>National INSET manual (write-up) 2011</td> </tr> </tbody> </table>	Title		1	National INSET manual (write-up) 2010	2	National INSET manual (write-up) 2011																																		
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	<p>1(b) Over 250 Regional Trainers are trained at CEMASTEBA.</p>	<p>Achievement record</p>	<p>SMASE Project Information for Mid-term Evaluation 2011 Table 2.1, 2.13</p>	<p>Literature review</p>	<p>Indicator 1(b): Regional Trainers Trained at CEMASTEBA</p> <table border="1"> <thead> <tr> <th>Date</th> <th>Venue</th> <th>Themes</th> <th>No. of trainees</th> </tr> </thead> <tbody> <tr> <td>1 2009/03/22-2009/04/03</td> <td>CEMASTEBA</td> <td>Actualization of ASE/PDSI in the classroom</td> <td>Phase 2 activities</td> </tr> <tr> <td>2 2009/04/05-2009/04/18</td> <td>CEMASTEBA</td> <td></td> <td></td> </tr> <tr> <td>3 2009/04/19-2009/05/02</td> <td>CEMASTEBA</td> <td></td> <td></td> </tr> <tr> <td>4 2010/02/14-2010/02/27</td> <td>CEMASTEBA</td> <td>Enhancing quality in teaching and learning Mathematics and Science</td> <td>86</td> </tr> <tr> <td>5 2010/02/28-2010/03/13</td> <td>CEMASTEBA</td> <td></td> <td>76</td> </tr> <tr> <td>6 2010/03/14-2010/03/27</td> <td>CEMASTEBA</td> <td></td> <td>121</td> </tr> <tr> <td>7 2011/02/13-2011/02/26</td> <td>CEMASTEBA</td> <td></td> <td>82</td> </tr> <tr> <td>8 2011/02/27-2011/03/12</td> <td>CEMASTEBA</td> <td>Planning activities for effective teaching and learning</td> <td>73</td> </tr> <tr> <td>9 2011/03/13-2011/03/26</td> <td>CEMASTEBA</td> <td></td> <td>116</td> </tr> </tbody> </table> <p>Source: SMASE Project (2011) "Information for Mid-term Evaluation 2011" Table 2.1, 2.13.</p>	Date	Venue	Themes	No. of trainees	1 2009/03/22-2009/04/03	CEMASTEBA	Actualization of ASE/PDSI in the classroom	Phase 2 activities	2 2009/04/05-2009/04/18	CEMASTEBA			3 2009/04/19-2009/05/02	CEMASTEBA			4 2010/02/14-2010/02/27	CEMASTEBA	Enhancing quality in teaching and learning Mathematics and Science	86	5 2010/02/28-2010/03/13	CEMASTEBA		76	6 2010/03/14-2010/03/27	CEMASTEBA		121	7 2011/02/13-2011/02/26	CEMASTEBA		82	8 2011/02/27-2011/03/12	CEMASTEBA	Planning activities for effective teaching and learning	73	9 2011/03/13-2011/03/26	CEMASTEBA		116
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	<p>1(c) National INSET for the primary education at CEMASTEBA obtain mean of over 3 on the scale of 0 to 4 in the Quality of INSET Assessment Index.</p>	<p>Achievement record</p>	<p>SMASE Project Information for Mid-term Evaluation 2011 Table 2.17, 2.18</p>	<p>Literature review</p>	<p>Indicator 1(c): Quality of INSET Assessment Index of National INSET</p> <table border="1"> <thead> <tr> <th>Session evaluation (Project figure: scale 1-5)</th> <th>Target figure</th> <th>2010</th> <th>2011</th> </tr> </thead> <tbody> <tr> <td>Mathematics</td> <td></td> <td>2.9</td> <td>3.3</td> </tr> <tr> <td>Science</td> <td></td> <td>3.3</td> <td>3.4</td> </tr> <tr> <td>Converted figure (Scale 0-4)</td> <td>3.0</td> <td>1.9</td> <td>2.3</td> </tr> <tr> <td></td> <td></td> <td>2.3</td> <td>2.4</td> </tr> </tbody> </table> <p>Source: SMASE Project (2011) "Information for Mid-term Evaluation 2011" Table 2.17, 2.18. Project rating scale: 1-5</p>	Session evaluation (Project figure: scale 1-5)	Target figure	2010	2011	Mathematics		2.9	3.3	Science		3.3	3.4	Converted figure (Scale 0-4)	3.0	1.9	2.3			2.3	2.4																				
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Post INSET score	58.7%	73.6%																																											

Indicator	Reference data	SMASE Project Information for Mid-term Evaluation 2011	PTTC principal WS 2009 report (held with DEO)	Literature review	Session evaluation WS	Indicator 1(c): Session and Overall Evaluation of National WS for PTTC Principals and DOCs																																
1(e) National WS for PTTC principals and DOC: Session and overall evaluation.		SMASE Project Information for Mid-term Evaluation 2011 Table 2.19	PTTC principal WS 2010 report PTTC principal WS 2011 report PTTC Dean of Curriculum WS 2011 report			<table border="1"> <thead> <tr> <th></th> <th>2009</th> <th>2010</th> <th>2011</th> </tr> </thead> <tbody> <tr> <td>WS for PTTC Principals</td> <td>3.4</td> <td>3.5</td> <td>3.9</td> </tr> <tr> <td>Workshop evaluation</td> <td>3.5</td> <td>3.6</td> <td>3.8</td> </tr> <tr> <td>WS for PTTC DEOs</td> <td>-</td> <td>-</td> <td>4.1</td> </tr> <tr> <td>Workshop evaluation</td> <td>-</td> <td>-</td> <td>3.6</td> </tr> </tbody> </table> <p>Source: SMASE Project (2011) "Information for Mid-term Evaluation 2011" Table 2.19. Rating scale: Not identified.</p>		2009	2010	2011	WS for PTTC Principals	3.4	3.5	3.9	Workshop evaluation	3.5	3.6	3.8	WS for PTTC DEOs	-	-	4.1	Workshop evaluation	-	-	3.6												
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2. A system of Regional INSET and Regional workshop is established at PTTCs.	<p>2(a) Regional INSET for Cluster Trainer at PTTCs is carried out four times.</p> <p>2(b) At least 5,600 Cluster Trainers are trained.</p>	<p>SMASE Project Information for Mid-term Evaluation 2011 Table 3.4</p> <p>SMASE Project Information for Mid-term Evaluation 2011 Table 3.4</p>	<p>R-INSET 2010 report R-INSET 2011 report</p> <p>R-INSET 2010 report R-INSET 2011 report</p>	<p>Literature review</p> <p>Literature review</p>	<p>Session evaluation WS</p> <p>-</p>	<p>Two Regional INSET for Cluster Trainer at PTTCs were carried out in 2010 and 2011. It is planned to conduct additional two trainings in 2012 and 2013.</p> <p>The actual number of trained Cluster Trainers was 4,420 (2010) and 4,164 (2011). However, equivalent to 6,384 trainers conducted training at cluster level, because some conducted twice.</p> <p>Indicator 2(b): Number of Cluster Trainers Trained at Regional INSET</p> <table border="1"> <thead> <tr> <th></th> <th>2010</th> <th>2011</th> </tr> </thead> <tbody> <tr> <td>Cluster trainers trained at Regional INSET</td> <td>4,420</td> <td>4,164</td> </tr> </tbody> </table> <p>Source: SMASE Project (2011) "Information for Mid-term Evaluation 2011" Table 3.4.</p>		2010	2011	Cluster trainers trained at Regional INSET	4,420	4,164																										
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Cluster trainers trained at Regional INSET	4,420	4,164																																				
	2(c) Over 1,000 TAG Tutors and 8 provincial, 140 district and 1,000 Zone QASOs are trained.	SMASE Project Information for Mid-term Evaluation 2011 Table 2.16, 3.5	R-WS 2009 report R-WS 2010 report	Literature review		<p>1,113 participants and 897 participants were trained at the Regional Workshop in 2009 and 2010, respectively. However, there is no information about number of participants by post. The Memorandum to Joint Coordinating Committee on 2011/05/26 says: "The shortfall in the number of TAG Tutors/QASO could be attributed to lack of budget provisions for INSET in 2009/2010 and doubling of roles (of TAG Tutor and Zone QASO)". According to the CEMASTEAs counterparts, the shortfall in 2010 attributed to the timing (last week of November) of the training, because this is a period of national examination marking and University's programme (interview with CEMASTEAs CP). There is no information about number of participants by post.</p> <p>Indicator 2(c): Number of Participants at Regional Workshop</p> <table border="1"> <thead> <tr> <th></th> <th>2009</th> <th>2010</th> </tr> </thead> <tbody> <tr> <td>Number of participants at Regional Workshop</td> <td>1,113</td> <td>897</td> </tr> </tbody> </table> <p>Source: SMASE Project (2011) "Information for Mid-term Evaluation 2011" Table 3.5.</p>		2009	2010	Number of participants at Regional Workshop	1,113	897																										
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Number of participants at Regional Workshop	1,113	897																																				
2(d) Regional Trainers obtain mean of over 2.5 on the scale of 0 to 4 in the overall assessment of Capacity Building Index at the Regional INSET at PTTCs.		SMASE Project Information for Mid-term Evaluation 2011 Table 3.6	R-INSET 2010 report R-INSET 2011 report	Literature review	Quality of Facilitation	<p>According to the report, the rating scale used for this indicator is 1-5. Therefore, the following table shows the original figures and the converted figures for 0-4 rating scale.</p> <p>Indicator 2(d): Capacity Building Index of Regional Trainers</p> <table border="1"> <thead> <tr> <th></th> <th>Target figure</th> <th>2010</th> <th>2011</th> </tr> </thead> <tbody> <tr> <td>Quality of INSET session</td> <td>-</td> <td>3.5</td> <td>3.4</td> </tr> <tr> <td>Quality of session aspects</td> <td>-</td> <td>3.5</td> <td>3.5</td> </tr> <tr> <td>Quality of facilitation</td> <td>-</td> <td>3.4</td> <td>3.4</td> </tr> <tr> <td>Overall</td> <td>-</td> <td>3.5</td> <td>3.4</td> </tr> <tr> <td>Converted figures to POMS scale</td> <td>-</td> <td>2.5</td> <td>2.4</td> </tr> <tr> <td>Quality of facilitation</td> <td>-</td> <td>2.4</td> <td>2.4</td> </tr> <tr> <td>Overall</td> <td>2.5</td> <td>2.5</td> <td>2.4</td> </tr> </tbody> </table> <p>Source: SMASE Project (2011) "Information for Mid-term Evaluation 2011" Table 3.6. Project scale: 1-5</p>		Target figure	2010	2011	Quality of INSET session	-	3.5	3.4	Quality of session aspects	-	3.5	3.5	Quality of facilitation	-	3.4	3.4	Overall	-	3.5	3.4	Converted figures to POMS scale	-	2.5	2.4	Quality of facilitation	-	2.4	2.4	Overall	2.5	2.5	2.4
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<p>2(e) Regional INSET at PTTCs obtain mean of over 2.5 on the scale of 0 to 4 in the Quality of INSET Assessment Index.</p>	<p>Achievement record</p>	<p>SMASE Project Information for Mid-term Evaluation 2011 Table 3.7</p>	<p>R-INSET 2010 report R-INSET 2011 report</p>	<p>Literature review</p>	<p>Quality of INSET management</p>	<p>According to the report, the rating scale used for this indicator is 1-5. Therefore, the following table shows the original figures and the converted figures for 0-4 rating scale. Indicator 2(e): Quality of INSET Assessment Index of Regional INSET</p> <table border="1"> <thead> <tr> <th>Project figure (Scale: 1-5)</th> <th>Target figure</th> <th>2010</th> <th>2011</th> </tr> </thead> <tbody> <tr> <td>Quality of INSET management by Regional Center</td> <td>-</td> <td>3.1</td> <td>3.5</td> </tr> <tr> <td>Quality of INSET management (quality aspects)</td> <td>-</td> <td>3.1</td> <td>3.5</td> </tr> <tr> <td>Overall</td> <td>-</td> <td>3.1</td> <td>3.5</td> </tr> <tr> <td>Converted figures to PDM scales (0-4)</td> <td>-</td> <td>2.1</td> <td>2.3</td> </tr> <tr> <td>Quality of INSET management (quality aspects)</td> <td>-</td> <td>2.1</td> <td>2.3</td> </tr> <tr> <td>Overall</td> <td>2.5</td> <td>2.1</td> <td>2.3</td> </tr> </tbody> </table> <p>Source: SMASE Project (2011) "Information for Mid-term Evaluation 2011" Table 3.6. Project figure: 1-5</p>	Project figure (Scale: 1-5)	Target figure	2010	2011	Quality of INSET management by Regional Center	-	3.1	3.5	Quality of INSET management (quality aspects)	-	3.1	3.5	Overall	-	3.1	3.5	Converted figures to PDM scales (0-4)	-	2.1	2.3	Quality of INSET management (quality aspects)	-	2.1	2.3	Overall	2.5	2.1	2.3
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<p>2(f) National WS for DEO, QASO: (Reference Session and overall evaluation. (The rating scale is 1-5.)</p>	<p>(Reference data)</p>	<p>SMASE Project Information for Mid-term Evaluation 2011 Table 2.19</p>	<p>DEO-WS 2009 report DEO-WS 2010 report DEO-WS 2011 report D-QASO-WS 2010 report</p>	<p>Literature review</p>	<p>Session evaluation WS</p>	<p>Indicator 2(f): Session and Overall Evaluation for DEO and QASO Workshops</p> <table border="1"> <thead> <tr> <th>WS for DEOs</th> <th>2009</th> <th>2010</th> <th>2011</th> </tr> </thead> <tbody> <tr> <td>Session evaluation</td> <td>3.4</td> <td>3.2</td> <td>3.3</td> </tr> <tr> <td>Workshop evaluation</td> <td>3.6</td> <td>3.0</td> <td>3.5</td> </tr> <tr> <td>WS for QASOs</td> <td>-</td> <td>3.4</td> <td>-</td> </tr> <tr> <td>Workshop evaluation</td> <td>-</td> <td>3.1</td> <td>-</td> </tr> </tbody> </table> <p>Source: SMASE Project (2011) "Information for Mid-term Evaluation 2011" Table 2.19.</p>	WS for DEOs	2009	2010	2011	Session evaluation	3.4	3.2	3.3	Workshop evaluation	3.6	3.0	3.5	WS for QASOs	-	3.4	-	Workshop evaluation	-	3.1	-								
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<p>2(g) Capacity Building Index for Regional WS. (The rating scale is 1-5.)</p>	<p>(Reference data)</p>	<p>SMASE Project Information for Mid-term Evaluation 2011 Table 3.8</p>	<p>R-WS 2010 report</p>	<p>Literature review</p>	<p>Quality of Facilitation</p>	<p>Indicator 2(g): Capacity Building Index for Regional Workshop</p> <table border="1"> <thead> <tr> <th>Overall</th> <th>2011</th> </tr> </thead> <tbody> <tr> <td></td> <td>3.5</td> </tr> </tbody> </table> <p>Source: SMASE Project (2011) "Information for Mid-term Evaluation 2011" Table 3.8.</p>	Overall	2011		3.5																								
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Overall	2011																																	
	3.8																																	
<p>3. Existing system of cluster INSET is strengthened.</p>	<p>Achievement record</p>	<p>SMASE Project Information for Mid-term Evaluation 2011 Table 4.1</p>	<p>Draft Handbook on Management of Primary INSET List of Participants by DPC (at account office)</p>	<p>Literature review</p>	<p>-</p>	<p>Indicator 3(b): Teachers Trained in Cluster INSET</p> <table border="1"> <thead> <tr> <th>No. of teachers trained in Cluster INSET</th> <th>Target</th> <th>2011</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>60,000</td> <td>60,000</td> <td>55,393</td> <td>92.3</td> </tr> </tbody> </table> <p>Source: SMASE Project (2011) "Information for Mid-term Evaluation 2011" Table 4.1</p>	No. of teachers trained in Cluster INSET	Target	2011	%	60,000	60,000	55,393	92.3																				
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<p>3(a) A guideline/manual on management of M/S INSET for primary school teacher is developed.</p>	<p>Achievement record</p>	<p>-</p>	<p>Draft Handbook on Management of Primary INSET</p>	<p>Literature review</p>	<p>-</p>	<p>A guideline on management of M/S INSET for primary school teachers is in the process of elaboration. The final draft of the guideline will be produced after holding JCC. CEMASTE A has a plan to consolidate it with secondary handbook in the future (Interview with CEMASTE A CP).</p>																												
<p>3(b) At least 60,000 primary school teachers drawn from every cluster in the country participate in Cluster INSET.</p>	<p>Achievement record</p>	<p>SMASE Project Information for Mid-term Evaluation 2011 Table 4.1</p>	<p>List of Participants by DPC (at account office)</p>	<p>Literature review</p>	<p>-</p>	<p>Indicator 3(b): Teachers Trained in Cluster INSET</p> <table border="1"> <thead> <tr> <th>No. of teachers trained in Cluster INSET</th> <th>Target</th> <th>2011</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>60,000</td> <td>60,000</td> <td>55,393</td> <td>92.3</td> </tr> </tbody> </table> <p>Source: SMASE Project (2011) "Information for Mid-term Evaluation 2011" Table 4.1</p>	No. of teachers trained in Cluster INSET	Target	2011	%	60,000	60,000	55,393	92.3																				
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	<p>3(c) Quality of Sessions Index for Head teachers' workshop.</p>	<p>(Reference data)</p>	<p>SMASE Project Information for Mid-term Evaluation 2011 4.4.2</p>	<p>D-WS 2009 report D-WS 2010 report</p>	<p>Literature review</p>	<p>Quality of Facilitation</p>	<p>The data is of the workshop 2010 and rating was realized by CEMASTEAs staff. The detail figure is not specified in the original report. "Primary Head teacher's Workshops 2011 Monitoring and Evaluation Report" p. 14.</p> 																
	<p>3(d) Workshop Management Index for Head teachers' workshop.</p>	<p>(Reference data)</p>	<p>SMASE Project Information for Mid-term Evaluation 2011 4.4.2</p>	<p>D-WS 2009 report D-WS 2010 report</p>	<p>Literature review</p>	<p>Quality of WS management</p>	<p>The data is of the workshop 2010 and rating was realized by CEMASTEAs staff. The detail figure is not specified in the original report. "Primary Head teacher's Workshops 2011 Monitoring and Evaluation Report" p. 11.</p> 																
<p>4. Secondary M/S teachers' ASE/PDSI practices in classroom are enhanced.</p>	<p>4(a) INSET and workshop contents for introducing lesson study are developed.</p>	<p>Achievement record</p>	<p>SMASE Project Information for Mid-term Evaluation 2011 5.1.1, 5.1.2</p>	<p>Lesson Study Content for D-INSET 2011 manual Principals WS 2010 manual</p>	<p>Literature review</p>		<p>INSET and workshop contents for introducing lesson study were developed and compiled as "Lesson Study Content for D-INSET Manual (write-ups)" and "Principal workshop 2010 manual".</p>																
	<p>4(b) 360 principals are trained at National workshop.</p>	<p>Achievement record</p>					<p>No data.</p>																
	<p>4(c) Over 6,000 Principals are trained at District workshop.</p>	<p>Achievement record</p>	<p>SMASE Project Information for Mid-term Evaluation 2011 Table 5.1</p>	<p>Principals' WS report</p>	<p>Literature review</p>		<p>The activity is being implemented by CEMASTEAs staff to reach to the target figure at the moment of the Mid-term Review Study.</p> <table border="1"> <thead> <tr> <th>Indicator 4(c): Principals trained at District Workshop</th> <th>Target</th> <th>2010/2011</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Principals trained at national workshop</td> <td>360</td> <td>0</td> <td>-</td> </tr> <tr> <td>Principals trained at district workshop</td> <td>6,000</td> <td>3,983</td> <td>-</td> </tr> <tr> <td>Total</td> <td>6,360</td> <td>3,983</td> <td>62.6</td> </tr> </tbody> </table> <p>Source: SMASE Project (2011) "Information for Mid-term Evaluation 2011" Table 5.1.</p>	Indicator 4(c): Principals trained at District Workshop	Target	2010/2011	%	Principals trained at national workshop	360	0	-	Principals trained at district workshop	6,000	3,983	-	Total	6,360	3,983	62.6
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<p>5. Role of CEMASTEAs as resource centre for</p>	<p>5(a) At least 8 newsletters are published and distributed.</p>	<p>Achievement record</p>	<p>SMASE Project Information for Mid-term Evaluation 2011 Table 6.1</p>		<p>Literature review</p>		<p>There is not any newsletters published and distributed.</p>																

	M/S education is strengthened.	5(b) At least 2 titles on ASEI/PDSI practices are published and distributed.	Achievement record	SMASE Project Information for Mid-term Evaluation 2011	Literature review	Teachers' Questionnaire	There is not any titles on ASEI/PDSI practices published and distributed.																		
<p>Achievement of Project Purpose</p> <p>Quality of Mathematics and Science education at Primary and Secondary school levels in Kenya is strengthened through INSET.</p>	<p>(Primary level)</p>	<p>(a) Lesson Innovation Index (target figure: 3.0)</p>	<p>Lesson Innovation Index</p>	<p>SMASE Project Information for Mid-term Evaluation 2011 Table 1.3</p>	<p>Literature review</p>	<p>Needs Survey 2009 report Lesson Observation 2011 report</p>	<p>The monitoring tools were developed by the Primary committee members. However, the mid-term review team could not analyze the data because of possible change of monitoring tools between 2009 and 2011.</p> <table border="1"> <thead> <tr> <th></th> <th>Target</th> <th>2009</th> <th>2011</th> </tr> </thead> <tbody> <tr> <td>Mathematics</td> <td>-</td> <td>3.17</td> <td>3.25</td> </tr> <tr> <td>Science</td> <td>-</td> <td>3.28</td> <td>3.23</td> </tr> <tr> <td>Lesson Innovation Index</td> <td>Overall</td> <td>3.00</td> <td>3.22</td> </tr> </tbody> </table> <p>Source: SMASE Project (2011) "Information for Mid-term Evaluation 2011" p. 7. 2009 data: Mathematics N=111, Science N=82, Overall N=193 2011 data: Mathematics N=97, Science N=91, Overall N=188 Project rating scale: 0-4</p>		Target	2009	2011	Mathematics	-	3.17	3.25	Science	-	3.28	3.23	Lesson Innovation Index	Overall	3.00	3.22		
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	<p>(Secondary level)</p>	<p>(b) ASEI/PDSI Check List (target figure: 2.0) (c) Lesson Observation Index (target figure: 2.0)</p>	<p>ASEI/PDSI Check List Lesson Observation Index</p>	<p>SMASE Project Information for Mid-term Evaluation 2011 Table 1.4</p>	<p>Literature review</p>	<p>Lesson Observation tool</p>	<p>The Project decided to combine these two indicators for the purpose of improvement (Interview with CEMASTEAC CP).</p> <table border="1"> <thead> <tr> <th>Lesson Observation Index</th> <th>Target</th> <th>2009</th> <th>2011</th> </tr> </thead> <tbody> <tr> <td></td> <td>2.00</td> <td>1.94</td> <td>2.01</td> </tr> </tbody> </table> <p>Source: SMASE Project (2011) "Information for Mid-term Evaluation 2011" p. 9. 2011 data: N=225 Project rating scale: 0-4</p>	Lesson Observation Index	Target	2009	2011		2.00	1.94	2.01										
Lesson Observation Index	Target	2009	2011																						
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	<p>(Secondary level)</p>	<p>(d) Student Participation Index (target figure: 2.5)</p>	<p>Student Participation Index</p>	<p>SMASE Project Information for Mid-term Evaluation 2011 Table 1.5</p>	<p>Literature review</p>	<p>Students' Questionnaire</p>	<p>According to the report, the scale used for this indicator is 0-2. Therefore, the following table shows the original figure and the converted figure to 0-4.</p> <table border="1"> <thead> <tr> <th>Session evaluation (Project figure: scale 0-2)</th> <th>Converted figure to PDM scale (0-4)</th> <th>Target figure</th> <th>2009</th> <th>2011</th> </tr> </thead> <tbody> <tr> <td>Pupils Participation Index</td> <td></td> <td>-</td> <td>1.33</td> <td>1.5</td> </tr> <tr> <td></td> <td></td> <td>2.5</td> <td>2.66</td> <td>3.0</td> </tr> </tbody> </table> <p>Source: SMASE Project (2011) "Information for Mid-term Evaluation 2011" p. 9. 2009 data: N=2,302 2011 data: N=1,425 Project rating scale: 0-4</p>	Session evaluation (Project figure: scale 0-2)	Converted figure to PDM scale (0-4)	Target figure	2009	2011	Pupils Participation Index		-	1.33	1.5			2.5	2.66	3.0			
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	<p>(Secondary level)</p>	<p>(a) ASEI/PDSI Check List (target figure: 3.0) (b) Lesson Observation Index (target figure: 3.0)</p>	<p>ASEI/PDSI Check List Lesson Observation Index</p>	<p>SMASE Project Information for Mid-term Evaluation 2011 Table 1.7</p>	<p>Literature review</p>	<p>Lesson Observation tool</p>	<p>The Project decided to combine these two indicators for the purpose of improvement (Interview with CEMASTEAC CP). The Project conducted the baseline survey in 2009, but the monitoring tool was modified in 2011 due to some inconvenience in the previous tool. Therefore the 2011 data will be considered as baseline data.</p> <table border="1"> <thead> <tr> <th>Lesson Observation Index</th> <th>Target</th> <th>2011</th> </tr> </thead> <tbody> <tr> <td></td> <td>3.0</td> <td>1.6</td> </tr> </tbody> </table> <p>Source: SMASE Project (2011) "Information for Mid-term Evaluation 2011" p. 11. 2011 data: N=223 Project rating scale: 0-4</p>	Lesson Observation Index	Target	2011		3.0	1.6												
Lesson Observation Index	Target	2011																							
	3.0	1.6																							
<p>Achievement of Overall Goal</p> <p>Capability of young Kenyans in Mathematics and Science is upgraded.</p>	<p>Performance in national examinations at primary education</p>	<p>(a-1) Performance in National Examinations at primary education</p>	<p>Result of National Examinations</p>	<p>The Year 2008 KCPE Examination Report, SMASE Project Information for Mid-term Evaluation 2011 Table 1.1</p>	<p>Literature review</p>	<p>Students' Questionnaire</p>	<p>The indicator was monitored in 2011, and the mean figure was 2.5. (The report is in the final stage of elaboration.) The indicator will be analyzed in the final evaluation.</p> <p>The following table shows the performance in National Examinations at primary education.</p> <table border="1"> <thead> <tr> <th>KCPE Overall Performance (Mean Score)</th> <th>2004</th> <th>2007</th> <th>2008</th> <th>2009</th> <th>2010</th> </tr> </thead> <tbody> <tr> <td>Mathematics (/50)</td> <td>28.97</td> <td>24.85</td> <td>23.58</td> <td>24.78</td> <td>24.90</td> </tr> <tr> <td>Science (/50)</td> <td>28.51</td> <td>27.72</td> <td>27.62</td> <td>27.98</td> <td>28.82</td> </tr> </tbody> </table> <p>Source: Data of 2004-2008: Kenya National Examination Council (2008) "This Year 2008 KCPE Examination Report" Data of 2009, 2010: SMASE Project (2011) "SMASE Project Information for Mid-term Evaluation 2011" p. 6.</p>	KCPE Overall Performance (Mean Score)	2004	2007	2008	2009	2010	Mathematics (/50)	28.97	24.85	23.58	24.78	24.90	Science (/50)	28.51	27.72	27.62	27.98	28.82
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Mathematics (/50)	28.97	24.85	23.58	24.78	24.90																				
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Change of External Factors	Important assumption s	Precondition	Result of National Examinations	The Year 2008 KCSE Examination Report, SMASE Project Information for Mid-term Evaluation 2011, Table 1.2	Literature review	KCSE General Performance (Mean Score) 2006-2009			
						2006	2007	2008	2009
		Result of original test	Result of National Examinations	The Year 2008 KCSE Examination Report, SMASE Project Information for Mid-term Evaluation 2011, Table 1.2	Literature review				
		(a-2) Performance in National Examinations at secondary education	Result of National Examinations	The Year 2008 KCSE Examination Report, SMASE Project Information for Mid-term Evaluation 2011, Table 1.2	Literature review				
		(b) Results of original achievement tests, such as SPIAS at the secondary level	Result of SPIAS						
		Teachers' union support the project.	Comments	Media reports	Literature review				
		The counterparts at CEMASTE A and key trainers in the developed cascade levels will be motivated enough to continue to work for the project.	Comments	CEMASTE A CP, District participants	Interview				
		Other programs do not adversely affect teachers' participation.	Comments	District participants	Interview				
		Outcomes	Comments	District participants	Interview				

The following table shows the performance in National Examinations at secondary education.

	KCSE General Performance (Mean Score) 2006-2009			
	2006	2007	2008	2009
Mathematics (/200)	38.08	36.46	42.59	42.23
Biology (/200)	54.88	83.90	80.64	54.30
Physics (/200)	80.83	82.83	73.42	91.58
Chemistry (/200)	49.82	50.78	45.48	62.82

Source: Data of 2006-2009: Kenya National Examination Council (2008) "The Year 2008 KCSE Examination Report".
Data of 2009: SMASE Project (2011) "SMASE Project Information for Mid-term Evaluation 2011", p. 6.

The Project has not conducted SPIAS or other achievement tests at both primary and secondary levels since when this phase started.

During the process of project implementation, negative media report on secondary INSET as raised by the secondary teachers' union (KUPPET) created a negative publicity for SMASE INSET in general. As a result, primary teachers' unions (KNUT) have been interfering SMASE INSET in some districts such as Kitui district and Machakos district, and teachers are being reluctant to participate in the SMASE secondary INSET.

Counterparts at CEMASTE A and key trainers are not motivated enough, according to the CEMASTE A counterparts observation (Questionnaire survey to CEMASTE A CP). District level interviewees explained the reason: Cluster and District Trainers would not receive valued certificate after serving as trainers and chose to attend other programmes for the purpose of promotion (Interview with district management personnel). Regarding CEMASTE A counterparts, the reason might be internal promotion custom in CEMASTE A; the staff promotion, other than Director and Deputy director, was internally realized and did not reflect on their job category in TSC (Interview with CEMASTE A CP).

	Completely developed		Mostly developed		Not developed at all		N/A
	%	%	%	%	%	%	
CEMASTE A Knowledge Facilitation	33.3	29.6	67.7	70.4	0.0	0.0	0.0
lecturers Motivation	3.7	3.7	63.0	33.3	0.0	0.0	0.0
PTTC Knowledge Facilitation	22.2	11.1	77.8	7.4	0.0	0.0	0.0
lecturers Motivation	0.0	0.0	44.4	51.9	3.7	0.0	0.0
Cluster Knowledge Facilitation	7.4	3.7	85.2	7.4	0.0	0.0	0.0
trainers Motivation	0.0	0.0	25.9	70.4	3.7	0.0	0.0
District Knowledge Facilitation	18.5	18.5	77.8	3.7	0.0	0.0	0.0
trainers Motivation	0.0	0.0	74.1	7.4	0.0	0.0	0.0

Source: Questionnaire survey to CEMASTE A CP

Teachers started attending other programs such as Teacher Proficiency Course offered by the MOE and University degree/diploma course that offered to teachers a possibility to promote them. The ratio of teachers who attended other programmes was very high: a teacher at Machakos district said that only 4 or 5 out of 32 teachers were not in such programmes; 26 out of 125 teachers at 5 schools whose head teacher were interviewed, attended some courses in Naivasha; and, 21 out of 60 teachers at 4 schools attended such programmes in Kiyo South District (Interview with district management personnel and head teachers).