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粮食及  
农业组织

FOOD AND  
AGRICULTURE  
ORGANIZATION  
OF THE  
UNITED  
NATIONS

ORGANISATION  
DES NATIONS  
UNIES POUR  
L'ALIMENTATION  
ET  
L'AGRICULTURE

ORGANIZACION  
DE LAS NACIONES  
UNIDAS PARA  
LA AGRICULTURA  
Y LA  
ALIMENTACION

منظمة  
الغذية  
والزراعة  
للأمم  
المتحدة

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OFFICE OF THE FAO REPRESENTATIVE IN NEPAL

Fax 977-1-5526358  
E-mail: FAO-NP@fao.org

P.O. Box 25, Kathmandu, Nepal  
Telephone: 5 523200 Ext. 1400-1412  
5 523239 (Direct)  
5 523990 (Direct)

Ref: UNJP/NEP/005/UNJ

13 November, 2009

Dear Mr. Sorensen,

**Subject: Enhancing Capacities for Climate Change Adaptation and Disaster Risk Management for Sustainable Livelihood in the Agriculture Sector**

With reference to the captioned joint programme between UNDP and FAO, I am pleased to forward herewith a fully signed copy of the Memorandum of Understanding between United Nations Development Programme (UNDP) and the Food and Agriculture Organization of the United Nations (FAO) for your record and further necessary action. You are kindly requested to return one original copy to FAO Representation in Nepal.

May I also request for your concurrence to a revision in the original work plan and budget of UNDP component of the project for the first year of the project, i.e. remainder of 2009 and most of 2010. For this period we have proposed a total budget of 201,140 USD for 2009. This is based on realistic plan of expenditure for 2009 and will be covered from 2010 budget of UNDP contributions such that the total contribution amount from UNDP to the project remains the same.

With this I would like to kindly request you to release a sum of US\$ 201,140 USD as per the revised work plan and budget, which is attached for your reference. An early release of the fund will facilitate FAO to place orders for the project vehicle and equipments and to start other project activities as soon as feasible. The banking details are as follows:

BANK NAME AND ADDRESS: HSBC New York  
New York, NY, USA  
Swift/BIC: MRMDUS33  
ABA/Bank Code: 021001088

ACCOUNT NUMBER: FAO/UN Trust Fund US\$ Account  
No. 000156426

PAYEE NAME AND ADDRESS: Food and Agriculture Organization of the UN, Rome  
Viale Terme di Caracalla, 00100 Rome

REFERENCE DETAILS: UNJP/NEP/005/UNJ

We will obtain government's signature on the revised work plan and budget upon your approval. The revised work plan and budget will be annexed to the pro-doc to finally replace the original work plan and budget of the project for 2009 and 2010.

I look forward to a successful implementation of the project.

Best regards,



Mr. Jorn Sorensen  
Deputy Country Director  
UNDP



Yours Sincerely,

*Lan*

Bui Thi Lan  
FAO Representative in Nepal



**Memorandum of Understanding  
between  
United Nations Development Programme (UNDP)  
and  
the Food and Agriculture Organization of the United Nations (FAO)**

**WHEREAS**, UNDP & FAO (hereinafter referred to collectively as the “Participating UN Organizations”) have developed a joint programme (hereinafter referred to as the “Joint Programme”) as part of their respective development cooperation with the Government of Nepal, as more fully described in the detailed Joint Programme document “Enhancing Capacities for Climate Change Adaptation and Disaster Risk Management for Sustainable Livelihoods in the Agriculture Sector” (hereinafter referred to as the “Joint Programme Document”), and have agreed to establish a coordination mechanism (hereinafter referred to as the “Joint Programme Steering Committee”) to facilitate the effective and efficient collaboration between the Participating UN Organizations and the host Government for the implementation of the Joint Programme;

**WHEREAS**, the Participating UN Organizations have agreed that they will fully participate in the preparation, planning, and evaluation of the Joint Programme in cooperation with the host Government, and that they will appoint one of the Participating UN Organizations to be responsible for supporting the national partner in the management of the Joint Programme funds and activities, (hereinafter referred to as “Managing Agent”) in order to achieve the objectives of the Joint Programme more effectively and efficiently; and

**WHEREAS**, the Participating UN Organizations have further agreed that they will pool their existing or otherwise mobilized Regular and/or Other Resources for the Joint Programme and put such resources under management and administration by the Managing Agent for supporting the national partner in the implementation of the Joint Programme;

**WHEREAS**, the Participating UN Organizations and the Government/national partner have further agreed that FAO (which is also a Participating UN Organization) will be so appointed and will serve as the administrative interface with the national partner, and be responsible for supporting the national partner in the management of the Joint Programme, and the Participating UN Organization FAO has agreed to do so in accordance with this Memorandum of Understanding.

**NOW, THEREFORE**, the FAO and the UNDP (hereinafter referred to collectively as the “Parties”) hereby agree as follows:

Appointment of Managing Agent, its Status and Duties

1. The Participating UN Organizations hereby appoint FAO as the “Managing Agent” or the “MA” to be responsible for the administration of the funds and for supporting the national partner in the management of the Joint Programme activities set out in the Joint Programme Document. The Managing Agent accepts this appointment and assumes full programmatic responsibility and financial accountability for the funds transferred to it by the Participating UN Organizations. This appointment shall continue until it terminates, or is terminated, in accordance with Article VIII below.
2. The Managing Agent shall perform the following duties:
  - (a) disburse funds and supplies in a timely fashion;
  - (b) coordinate technical inputs by all Participating UN Organizations;
  - (c) follow-up with the (sub-)national partner on implementation;
  - (d) be accountable for narrative and financial reporting to the joint programme coordination mechanism;
  - (e) perform such other activities as the Participating UN Organizations and the Managing Agent may agree in writing.

3. In discharging its obligations under this Memorandum of Understanding, the Managing Agent shall have the status of an independent contractor and shall not be considered as an agent of the Participating UN Organizations or any of them and, thus, its personnel shall not be considered as staff members or personnel of any of them. Without restricting the generality of the preceding sentence, none of the Participating UN Organizations shall be liable for the acts or omissions of the Managing Agent or its personnel, or of persons performing services on its behalf, to the extent that the Participating UN Organizations or any one of them have not contributed to such acts or omissions of the Managing Agent resulting in such liability. In the case of any contributory acts or omissions of the Participating UN Organizations, the resulting liability shall be apportioned among them or any one of them.

## Article II Financial Matters

1. The Participating UN Organizations shall contribute to the costs of the Joint Programme activities in accordance with the budget contained in the Joint Programme Document attached as ANNEX A. The fund will be disbursed to the Managing Agent in advance annually. The Managing Agent should submit the annual report of the previous year, while requesting fund transfer for the current year.

2. The Managing Agent shall establish a separate ledger account under its financial regulations and rules for the receipt and administration of the funds received by it pursuant to this Memorandum of Understanding (hereinafter, the "Joint Programme Account"). The Joint Programme Account shall be administered by the Managing Agent in accordance with the regulations, rules, directives and procedures applicable to it, including those relating to interest. The Joint Programme Account shall be subject exclusively to the internal and external auditing procedures laid down in the financial regulations, rules, directives and procedures applicable to the Managing Agent. The audit conducted by the Managing Agent's internal and/or external auditors shall be considered acceptable to the Participating UN Organizations.

3. The Participating UN Organizations shall transfer funds to the Managing Agent through wire transfer. When making a transfer to the Managing Agent, each Participating UN Organization will notify the Managing Agent's Treasury Operations of the following: (a) the amount transferred; (b) the value date of the transfer; and (c) that the transfer is from that Participating UN Organization in respect of the joint programme in **Nepal** pursuant to this Memorandum of Understanding, for deposit to the Joint Programme Account.

4. The Managing Agent shall not be required to commence or continue activities in connection with the Joint Programme if a scheduled contribution from a Participating UN Organization has not been paid.

5. The funds in the Joint Programme Account shall be accounted as income to the Managing Agent. In accordance with **its policies and procedures for cost recovery in line with decisions of its Executive Board**, the Managing Agent will apply [**Thirteen percent (13%)**] of the contribution of each Participating UN Organization towards the Managing Agent's indirect costs.

## Article III Activities of the Managing Agent

1. The Managing Agent shall support the national partner in the management of the Joint Programme activities contemplated in the Joint Programme Document in accordance with its regulations, rules, directives and procedures. Accordingly, personnel shall be engaged and administered, equipment, supplies and services purchased, and contracts entered into in accordance with the provisions of such regulations, rules, directives and procedures.

2. Any modifications to the Joint Programme activities set out in the Joint Programme Document, including as to their nature, content, sequencing or the duration thereof, shall be subject to mutual agreement in writing between the Participating UN Organizations and the Managing Agent, following approval of the Joint Programme Steering Committee. Any change in the budget for the Joint Programme set out in the Joint Programme Document shall be subject to mutual agreement in writing between all parties to the Joint Programme Document.

3. Where the Managing Agent wishes to support the implementation of the Joint Programme activities through or in collaboration with a third party, it shall be responsible for discharging all commitments and obligations with such third parties, and no Participating UN Organization shall be responsible for doing so.

#### Article IV Reporting

1. The Managing Agent shall provide the Joint Programme Steering Committee with the following statements and reports prepared in accordance with the regulations, rules and procedures applicable to it and as reflected in the joint programme document. In line with the principle that there should be only one annual report, the reporting arrangements are recommended to be:

(a) Narrative progress reports for each twelve-month period, to be provided no later than 30 days after the end of the applicable reporting period;

(b) Interim, locally-produced, annual financial reports as of 31 December each year with respect to the Joint Programme Account, to be provided no later than 15 days after the end of the applicable reporting period;

(c) A final narrative report and uncertified financial report, to be provided no later than 2 months after the completion of the Joint Programme (in the case of the final report) and 3 months after the last 31 December during which funds disbursed from the Joint Programme Account;

(d) A final certified financial statement, to be provided [within 3 months after the completion of the project]

2. Apart from the reports set further above, no other reports will be provided by the Managing Agent to the Participating UN Organizations or to the other contributors (if any) to the Joint Programme Account.

#### Article V Other Contributors to Support the Joint Programme

1. Where a funding gap exists over and above the commitments made by Participating UN Organizations, the Managing Agent can engage in resource mobilization for the additional necessary funds. Donors would normally be expected to contribute to the Joint Programme through the Managing Agent. The Managing Agent would inform the Participating UN Organizations of any such contributions through the Joint Programme Steering Committee

2. In cases where a Participating UN Organization commits existing or otherwise mobilized other resources to the Joint Programme, the agreement between the participating UN organization concerned, and the donor would govern the said contribution.

#### Article VI Monitoring and Evaluation

Monitoring and evaluation of the Joint Programme shall be undertaken exclusively in accordance with the Managing Agent's procedures and policy guidance and as reflected in the Joint Programme Document.

#### Article VII Communication

Upon consultation with the Participating UN Organizations, the Managing Agent shall take appropriate measures to publicize the Joint Programme as a joint programme of all the Participating UN Organizations. Information given to the press, to the beneficiaries of the Joint Programme, all related publicity material, official notices, reports and publications, shall acknowledge the role of the host Government, the Managing Agent, all Participating UN Organizations and the other contributors (if any) to the Joint Programme Account.

#### Article VIII Expiration, modification and termination of the Agreement

1. This Memorandum of Understanding shall expire upon completion of the Joint Programme, subject to the continuance in force of paragraph 5 below for the purposes therein stated.
2. This Memorandum of Understanding may be modified only by written agreement between the Parties.
3. Any of the Participating UN Organizations may withdraw from this Memorandum of Understanding upon giving thirty (30) days' written notice to all other parties to this Memorandum of Understanding that it has given notice, in accordance with the Joint Programme Document, of its withdrawal from the Joint Programme. In the event of any such withdrawal, the withdrawing Participating UN Organization shall only be eligible for a refund on contributions provided hereunder which have not yet been committed and/or disbursed.
4. The Managing Agent's appointment may be terminated by the Managing Agent (on the one hand) or by the mutual agreement of all Participating UN Organizations and the host Government (on the other) on thirty (30) days' written notice to the other party, subject to the continuance in force of paragraph 5 below for the purpose therein stated. In the event of such termination, the Parties shall agree on measures to bring all activities to an orderly and prompt conclusion so as to minimize costs and expense.
5. Obligations assumed by the Parties under this Memorandum of Understanding shall survive the expiration or termination of this Memorandum of Understanding to the extent necessary to permit the orderly conclusion of the Joint Programme and the completion of final reports, the withdrawal of personnel, funds and property, the settlement of accounts between the Parties hereto and the settlement of contractual liabilities that are required in respect of any subcontractors, consultants or suppliers. Any balance remaining in the Joint Programme Account shall be used for a purpose mutually agreed upon by the Parties to this Memorandum of Understanding.

#### Article IX Notices

1. Any action required or permitted to be taken under this Memorandum of Understanding may be taken on behalf of the Managing agency by the **Country Director** or the designated representative and on behalf of a **UNDP** by the **Deputy Country Director (Programme)** Participating UN Organization by the head of office his or her designated representative.

2. Any notice or request required or permitted to be given or made in this Memorandum of Understanding shall be in writing. Such notice or request shall be deemed to be duly given or made when it shall have been delivered by hand, mail, cable or telex to the party to which it is required to be given or made, at such party's address specified in ANNEX B to this Memorandum of Understanding or at such other address as the party shall have specified in writing to the party giving such notice or making such request.

Article X  
Entry into force

This Memorandum of Understanding shall enter into force upon signature by authorized officials of the Parties and shall continue in full force and effect until it is expired or terminated.

Article XI  
Settlement of disputes

The Parties shall use their best efforts to promptly settle through direct negotiations any dispute, controversy or claim arising out of or in connection with this Memorandum of Understanding or any breach thereof. Any such dispute, controversy or claim which is not settled within sixty (60) days from the date either party has notified the other party of the nature of the dispute, controversy or claim and of the measures which should be taken to rectify it, shall be resolved through consultation between the Executive Heads of each of the Participating UN Organizations and of the Managing Agent.

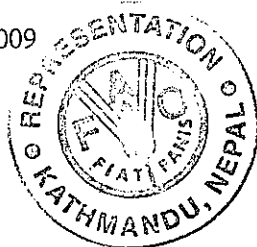
IN WITNESS WHEREOF, the undersigned, duly authorized representatives of the respective Parties, have signed this Memorandum of Understanding in the English.

For the Managing Agent

Signature:

*Lan*

Name: Bui Thi Lan  
Title: FAO Representative in Nepal  
Place: Kathmandu  
Date: 6 November, 2009



For UNDP

Name: Mr. Jorn Sorensen  
Title: Deputy Country Director  
Address: Pulchowk, Lalitpur  
Telephone: 977- 01- 5523200  
Facsimile: 977-01 -5523991, 977-01-5523986  
Electronic mail: registry.np@undp.org



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ANNEX A: Joint Programme Document Extract – Budget [and Disbursement Plan]



ANNEX B

NOTICES

For the Managing Agent:

Name: Bui Thi Lan  
Title: FAO Representative in Nepal  
Address: Office of the FAO Representative in Nepal, UN House, Pulchowk, Lalitpur  
Telephone: 977-1-5523239  
Facsimile: 977-1-5526358  
Electronic mail: FAO-NP@fao.org

For UNDP

Name: Mr. Jorn Sorensen  
Title: Deputy Country Director  
Address: Pulchowk, Lalitpur  
Telephone: 977- 01- 5523200  
Facsimile: 977-01 -5523991, 977-01-5523986  
Electronic mail: registry.np@undp.org

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**Project Name: Enhancing Capacities for Climate Change Adaptation and Disaster Risk Management for Sustainable Livelihoods in the Agriculture Sector**

**Project ID:00070688**

**AWP and Budget for 2009 and 2010**

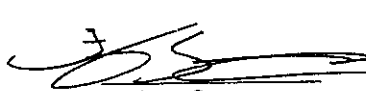
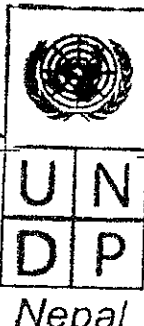
**AWP Year 2009**


EXPECTED OUTPUTS	UN Organization	PLANNED ACTIVITIES <i>List all activities and indicate M&amp;E to be undertaken during the year towards stated CP outputs</i>	TIMEFRAME				RESPONSIBLE PARTY	PLANNED BUDGET		
			Q1	Q2	Q3	Q4		Source of Funds	Budget Description	Amount (USD)
<b>Output 1:</b> Enhancing technical capacity within Department of Agriculture for climate change adaptation and disaster risk management in agriculture.	FAO, UNDP	1.1 Establishment of inter-departmental technical project implementation task groups in two selected districts			X	X	MoAC, FAO	UND ✓ P	Equipments	UNDP 4 000 ✓ TCP 6000
	FAO	1.2 Participation of district level task group in national level training workshops			X	X	MoAC, FAO	UND ✓ P		UNDP 1 000 ✓ TCP 5000
	FAO	1.3 ToT training programme on hazard and vulnerability analysis in selected pilot districts (one district cluster)			X	X	MoAC, FAO	UND ✓ P	Contractual services	UNDP 5 000 ✓ TCP 15000
	FAO	1.4 District training workshop on community mobilization, adaptation and DRM planning at selected two pilot districts			X	X	MoAC, FAO	UND ✓ P	Contractual service Workshops	UNDP 4 000 ✓ TCP 15000
	FAO, UNDP	1.5 Regional training participation by district DoA officers (2)				X	FAO	UND ✓ P	International travel and DSA	UNDP 7 500 ✓ TCP 16000
	FAO, UNDP	1.6 Field trip within Nepal for mutual learning and exchange of good practices (10 numbers)				X	MoAC, FAO	UND ✓ P	National field trips	UNDP 2 500 ✓ TCP 12000
	FAO, UNDP	1.7 Field trip to North Western Bangladesh to visit FAO/UNDP/CDMP project on livelihood adaptation to climate change project.				X	FAO, MoAC	UND ✓ P	International Field trips	UNDP 5 000 ✓ TCP 16000
	FAO	1.8 District and VD level training/workshops and meeting costs				X	FAO MoAC	UND ✓ P	Training/workshops/meetings	UNDP 2 500 ✓ TCP 10000
<b>Output 2:</b> Strengthening basic support services for Climate Change Adaptation and	FAO	2.1 Customizing location specific early warning systems relevant to local livelihood adaptation and community based early warning				X	FAO, DHM	UND ✓ P	Contractual Service	UNDP 5 000 ✓ TCP 5000

DRM in Agriculture Sector in two selected districts	FAO	2.3 Development of training modules and e-learning tools on climate change adaptation and disaster preparedness and training the district level DoA staff				X	DMH, FAO	FAO co-funding from HQ	Contractual services	UNDP 5 000 ✓ TCP 10000
	FAO	2.4 Assessment of data gaps and strengthening met observation network at the pilot districts				X	DHM, FAO	UND P	Equipments	UNDP 1 500 ✓ TCP 5000
	FAO	2.5 Assessment and building of disaster impact data base management system				X	DoA, FAO	UND P	FAO TCP	TCP 10000
	FAO	2.6 Facilities and set-up end to end data exchange at two selected districts				X	DoA, FAO	UND P	Equipments	UNDP 1 500 ✓ TCP 3500
	FAO	2.7 Seed supply and storage system at district level (2 districts @ USD 15000/district)				X	MoAC, FAO	UND P	Equipments and supplies	UNDP 3 000 ✓ TCP 6500
	FAO	2.8 Training need assessment and training to district agriculture office and private seed suppliers				X		UND P	Contracts	UNDP 1 000 ✓ TCP 5000
Output 3: A set of suitable, location specific technologies for climate risk management, DRM and climate change adaptation within the agriculture sector identified and demonstrated through a participatory learning by doing process at district and community levels.	FAO	3.1 <u>Livelihood profiling and vulnerability analysis</u> : In-depth study on local vulnerabilities, natural resource endowments, institutional setting to address climate risks and on locally available and applied natural disaster preparedness strategies, including local EWS their existing strengths and demands (2 districts).				X	MoAC, FAO	UND P	Contractual service  National Experts	UNDP 9000 ✓ TCP 15000  UNDP 8 000 ✓ TCP 15000
	FAO	<u>Good Practice data base</u> : Conduct an in depth study to identify, collect and document existing (locally generated and introduced) good practices in the two selected pilot districts.			X	X	MoAC, FAO	UND P	National Expert	UNDP 4500 ✓
	FAO	<u>3.2 Good Adaptation practice data base</u> : Conduct an in-depth study to identify, collect and document existing (locally generated and introduced) good practices in the two selected pilot districts				X	MoAC, FAO	UND P	National Expert/Field Monitors	UNDP 3 000 ✓ TCP 14000
	FAO	<u>3.3 Social mobilization process</u> : Initiate a local awareness and social mobilization process with farmer groups/associations, taking due consideration of gender issues. in order to inform about and raise awareness on the topic and the project.				X	MoAC, FAO	UND P	Field Monitoring Officers/National experts	UNDP 18000 ✓ TCP 26000

	FAO	3.4 Pilot demonstrations/trials on farmer's fields and local research stations on selected good practice options at pilot locations of the two districts.					MoAC, FAO	UND P	Vehicle to be engaged for field demonstration work	UNDP 32 000 ✓
									Inputs for demonstrations	UNDP 11 000 ✓ TCP 16000
						X				
									Contractual service	UNDP 10000 ✓ TCP 16000
									Operational costs	UNDP 5 000 ✓ TCP 8000
<b>Output 4:</b> Economic impact analysis of adaptation and DRM interventions, lessons learned and policy interventions		4.1 Project workshop			X	X	MoAC, FAO, UNDP	UND P	Workshop	UNDP 5 000 ✓ TCP 5000
	FAO	4.2 Technical backstopping from FAO headquarters (workshop)								UNDP 8 000 ✓ TCP 10000
	FAO overheads									UNDP 23140 ✓
		4.3 Economic Impact analysis of field demonstrations to assess the scope of further replications			X	X			Contractual Services	UNDP 5000 ✓
		4.4 Technical backstopping from FAO headquarters/regional office( Travel, DSA and reimbursement)			X	X	FAO	UND P	Technical inputs from FAO (travel, DSA, reimbursement)	UNDP 11000 ✓
<b>TOTAL</b>										<b>4,66,140</b>

- \* The Total Planned Budget by UN Organization should include both programme cost and indirect support cost

  
 Mr. Jørn Sørensen  
 Deputy Country Director  
 UNDP  


  
 Ms. Bui Thi Lan  
 FAO Representative  
 FAO

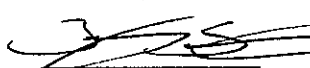
Government of Nepal



**AWP Year 2010**

EXPECTED OUTPUTS	UN Organization	PLANNED ACTIVITIES <i>List all activities including M &amp; E to be undertaken during the year towards stated CP outputs</i>	Time Frame				Responsible Party	Planned Budget		
			Q 1	Q 2	Q 3	Q 4		Source of Funds	Budget description	Amount (USD)
Output 1: Enhancing technical capacity within Department of Agriculture for climate change adaptation and disaster risk management in agriculture.	FAO	1.1 Participation of district level task group in national level training workshops	X				FAO			TCP 15000
		1.2 ToT training programme on hazard and vulnerability analysis in selected pilot districts	X				FAO			TCP 11000
		1.3 District training workshop on community mobilization, adaptation and DRM planning at selected two pilot districts	X	X			FAO			TCP 15000
Output 2: Basic service systems for Climate Change Adaptation and DRM in Agriculture Sector Strengthened in selected pilot districts	FAO	2.1 Customizing location specific early warning systems relevant to local livelihood adaptation and community based early warning system	X	X	X	X	FAO, DHM	UNDP	Contractual service/reporting	UNDP 5 000 TCP 7000 ✓
	FAO, UNDP	2.4 Assessment of data gaps and strengthening met observation network at the pilot districts	X	X			DHM, FAO	UNDP	Equipments	UNDP 1 500 TCP 5000 ✓
	FAO	2.5 Assessment and building of disaster impact data base management system	X	X	X	X	DMH, FAO	UNDP	FAO TCP	TCP 5000 ✓
	FAO	2.6 District/VDC level trainings/workshops/meetings	X	X	X	X	FAO/MoA	UNDP	Local workshops/meeting costs	UNDP 2 500 TCP 4000 ✓

Output 3: A set of suitable, location specific technologies for climate risk management, DRM and climate change adaptation within the agriculture sector identified and demonstrated through a participatory learning by doing process at district and community levels.	FAO	3.1 <u>Livelihood profiling and vulnerability analysis</u> : In-depth study on local vulnerabilities, natural resource endowments, institutional setting to address climate risks and on locally available and applied natural disaster preparedness strategies, including local EWS their existing strengths and demands (2 districts).	X	X			MoAC, FAO	UNDP	National Expert	TCP 8000	✓	
	FAO	3.2 <u>Good practice data base</u> : Conduct an in-depth study to identify, collect and document existing (locally generated and introduced) good practices in the two selected pilot districts	X	X	X	X	MoAC, FAO	UNDP	National Expert	TCP 9000	✓	
	FAO	3.3 <u>Social mobilization process</u> : Initiate a local awareness and social mobilization process with farmer groups/associations, taking due consideration of gender issues, in order to inform about and raise awareness on the topic and the project.	X	X	X	X	MoAC, FAO	UNDP	Field monitoring officers/National experts	TCP 5000	✓	
	FAO	3.4 Pilot demonstrations/trials on farmer's fields and local research stations on selected good practice options at pilot locations of the two districts.					MoAC, FAO	UNDP	Equipments, inputs and supplies	TCP 3000	✓	
				X	X	X	X			Operational cost	TCP 5000	✓
										Contractual service	TCP 5000	✓
Output 4: Economic impact analysis, lesson learned and policy implications	FAO, UNDP	4.1 Economic impact analysis of field demonstrations to assess the scope of further replications			X	X			Contractual services	TCP 4000	✓	
	FAO	4.2 technical backstopping from FAO headquarters/regional office (Travel, DSA and reimbursements)	X	X	X	X	FAO	UNDP	Technical inputs from FAO (travel, DSA, reimbursements)	TCP 4360	✓	
	FAO	FAO overhead								UNDP 1170	✓	
<b>TOTAL</b>										<b>1,15,530</b>		

  
Mr. Jorn Sorensen  
Deputy Country Director  
UNDP

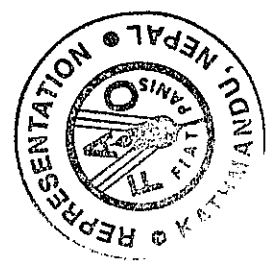


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Nepal

*Lan*  
Ms. Bui Thi Lan  
FAO Representative  
FAO

Government of Nepal



**JOINT PROGRAMME DOCUMENT**

**1. Cover Page**

Country: NEPAL

Programme Title : **Enhancing Capacities for Climate Change Adaptation and Disaster Risk Management for Sustainable Livelihoods in the Agriculture Sector<sup>1</sup>**

Joint Programme Outcome(s) : **Climate Change Adaptation, Disaster Risk Management and Sustainable Livelihoods**

Programme Duration: 2 years

Anticipated start/end dates: September 2009 - August 2011

Fund Management Option(s): Pooled  
(Parallel, pooled, pass-through, combination)

Managing or Administrative Agent: FAO  
(if/as applicable)

Total estimated budget\*: **USD 722 555**

Out of which:

1. Funded Budget: **USD 722 555**

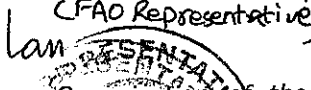
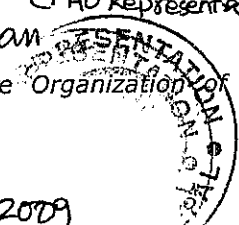
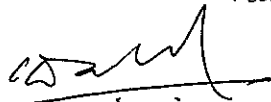
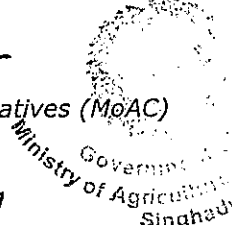


2. Unfunded budget:

\* Total estimated budget includes both programme costs and indirect support costs

Sources of funded budget:

<b>FAO (TCP)</b>	<b>USD 470 000</b>
<b>UNDP</b>	<b>USD 252 555</b>

**Names and signatures of national counterparts and participating UN organizations**

UN organizations	National Coordinating Authorities
<p>Name of Representative <u>Ms. Bui Thi Lan</u> (FAO Representative)</p> <p>Signature </p> <p>Food and Agriculture Organization of the United Nations</p> <p>Date &amp; Seal <u>19/8/2009</u></p> 	<p>Name of Head of Partner <u>Hari Dahal, PhD</u></p> <p>Signature </p> <p>Ministry of Agriculture and Cooperatives (MoAC)</p> <p>Date &amp; Seal <u>25/10/2009</u></p> 
<p>Name of Representative</p> <p>Signature </p> <p>United Nations Development Programme <b>John Sorensen</b> Deputy Country Director</p> <p>Date &amp; Seal <u>13 AUG 2009</u></p>	

**Nepal**

<sup>1</sup> The FAO-TCP project (TCP/NEP/3201 (D)) has been already approved (document annexed) and being implemented in four districts covering Eastern and Western Development Regions in Nepal. UNDP funding is sought for additional two districts in Mid-Western Development Region.



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### **Abbreviations and Acronyms**

CBDRM	Community Based Disaster Risk Management
CBO	Community Based Organization
CCA	Climate Change Adaptation
CPAP	Country Programme Action Plan
DDRC	District Disaster Relief Committee
DHM	Department of Hydrology and Meteorology
DoA	Department of Agriculture
DoLS	Department of Livestock
DRM	Disaster Risk Management
EWS	Early Warning System
FAO	Food and Agriculture Organization of the United Nations
GCM	Global Circulation Models
GLOF	Glacial Lake Outbursts Floods
HFA	Hyogo Framework for Action
JPSC	Joint Programme Steering Committee
LTU	Lead Technical Unit
MDGs	Millennium Development Goals
MoAC	Ministry of Agriculture and Cooperatives
MoEST	Ministry of Environment and Science and Technology
MoLD	Ministry of Local Development
MoWR	Ministry of Water Resources
NAPA	National Adaptation Programme of Action
NARC	Nepal Agriculture Research Council
NGO	Non-governmental Organization
NPD	National Project Director
NRCB	Natural Resources, Climate Change and Bioenergy
PMU	Project Management Unit
PSC	Project Steering Committee
TAC	Technical Advisory Committee
TCP	Technical Cooperation Project
ToT	Training of Trainers
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme
VDC	Village Development Committee

## **2. Executive Summary**

Nepal is one of the global "hot spots" countries for natural disasters and climate change impacts. The poor and marginalized groups of people residing in the rural areas are usually hit hardest by the consequences of climate change and increasing frequency of natural hazards. Agriculture which is Nepal's principal economic sector, employing 80 percent of the population is highly exposed to these risks. Global climate change constitutes an additional threat to the already deprived rural population heavily engaged in agriculture. Increasing trends of extreme climate events and natural disasters due to climate change could undermine future food security. Although the Government of Nepal has constantly responded to natural disasters and climate risks, a shift from reactive emergency response to proactive climate change adaptation and disaster risk management initiative is crucially needed to save agricultural livelihoods. This shift is currently under way, led by the Ministry of Home Affairs and requests strong cross-sectoral involvement from line agencies including the Department of Agriculture (DoA).

In response to the request from the Government of Nepal, FAO has prepared the proposal aimed at enhancing capacities for climate change adaptation and disaster risk management. The proposed outputs include key elements specifically: (1) strengthening of technical capacity of DoA district level functionaries for climate risk management and disaster preparedness; (2) strengthening of basic service systems for disaster risk management at district levels; (3) identification and demonstration of location specific technologies for climate change adaptation and disaster risk management at community levels and (4) Economic impact analysis, lessons learned and policy implications. The project will employ a Training of Trainers (ToT) approach and will contribute to development of sustainable capacity enhancement at district and local levels.

The joint programme contributes to national priorities under UNDAF and UNDP-CPAP related to supporting the government departments on preparedness to natural disaster and climate change adaptation. The joint programme will be implemented in two pilot districts (Banke and Surkhet) in mid-western development region of Nepal in addition to four districts (Siraha, Udaipur, Kapilvastu and Arghakhachi) funded through FAO-TCP project. The local community in six selected Village Development Committees (VDC) are the direct beneficiaries, while the district disaster relief committee (DDRC), staff from Department of Agriculture (DoA), Department of Livestock (DoLS), Local Development, Department of Irrigation and local Non-governmental Organizations (NGO)/Community Based Organizations (CBO) are the second level of beneficiaries through capacity building programmes and development of district disaster management plans. The financial support for two additional districts (one cluster) will be provided by UNDP and the project will be implemented jointly by the Food and Agriculture Organization (FAO), the United Nations Development Programme (UNDP) in partnership with Ministry of Agriculture and Cooperatives (MoAC) in close linkage with FAO-TCP (Technical Cooperation Programme) (TCP/NEP/3201 (D)).

FAO-TCP has been implementing the projects in the four districts since 2008. Total funded budget for the four districts is 470 000 USD. The FAO TPC document attached as annex to this document. UNDP's contribution to the joint programme is 252 555 USD. This contribution to the joint programme will extend the initiative from four districts to six districts.

### **3. Situation Analysis**

Agriculture remains Nepal's principal economic activity. The agricultural population (including forestry and fisheries) comprises 92 percent of the total population (FAO-SOFA, 2007). Nepal is prone to a variety of natural disasters such as floods, land slides, snow avalanches, Glacial Lake Outburst Floods (GLOF), hailstorms, thunderstorms, cold waves, hot waves, drought, and epidemics and undermines agriculture productivity causing poverty and food insecurity. The poor, marginalized and disadvantaged groups of people are hardest hit by natural calamities that occur in the country. Among them women have been affected the most who comprises 48% of the agriculture labor force. The subsistence sector has become more feminized as more men migrate to urban areas for jobs. In the last twenty three years (1983 - 2005), over 28 billion rupees (USD 288 million) were lost due to disasters, an average of nearly 1 208 million Nepal rupees per year. According to most latest bi-monthly crop yield forecast report (July 2007) from the Ministry of Agriculture and Cooperatives (MoAC), the crop (paddy, maize and millet) area affected by flood, land slides and drought in 2007 stands currently at 120 000 hectares. According to the Ministry, the 4 024 hectares were affected in 2006, and 1 18 298 hectares were affected in 2005. The accompanied indirect losses, in terms of lost time and opportunities, may be several times more than the above figure. Reasons for the losses are attributed to insufficient public awareness, lack or inadequacy in preparedness, lack of coordination among inter-government agencies, inadequate financial resources, low level of technical know-how and skill in mitigation of natural disasters and climate related risks.

An additional threat derives from global warming and the resulting repercussions of climate change in the Himalayan environment, which are likely to further increase the number of hazardous events and their social, economic and environmental impacts. Rapid population growth, shrinking farm size, continued un-planned agriculture in hazard-prone areas is likely to further increase the hazard exposure and losses, if no countermeasures are put in place. Although climate change impacts all, its impact on women and their livelihoods would be more pronounced due to their dependence on agriculture sector. In the assessment of the climatic condition of Nepal, a tendency towards increased seasonal and annual air temperatures was observed for the last few decades<sup>2</sup>. Observed annual trend of temperature rise per decade was found to be 0.41° C while seasonal rising trend for temperature during pre-monsoon, monsoon and winter periods were 0.43° C, 0.43° C and 0.37° C per decade respectively.

The Government of Nepal has constantly been responding to these disasters as and when they occurred. Nepal has created a policy and legal framework for disaster management with the Natural Calamity (Relief) Act 2039 promulgated in 1982. Although the act was amended twice, has however failed to further develop and internalize changing concepts of development and to respond to the paradigm shift in disaster risk management from a reactive intervention in the form of relief to a proactive approach of prevention, mitigation and preparedness. The Act lacks any instrument to correspond to the current concept of mainstreaming disaster risk management to the efforts of national development.

The majority of disaster risk reduction activities relate mostly to preparedness for saving lives and to better design and construct infrastructural measures, some focus on reforestation, soil conservation and watershed management; however very little, or almost nil has been done so far on preventive and preparedness actions in the core areas of agriculture, like adapting of crop varieties, cropping patterns, fruit tree or hedge row intercropping, adaptation of farming systems, seeds systems, risk reducing

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<sup>2</sup> Ministry of Environment and Science and Technology (2004). Initial National Communication to the conference of the Parties of the United Nations Framework Convention on Climate Change, July 2004.

water management on farmers fields, or livestock management. Some practical experience was found however among national NGOs, which have very recently (2006-2007) started to prepare some district level DRM or disaster preparedness plans (at the time of project formulation exactly three district preparedness plans and one DRM plan were available out of 75 districts). However according to the overall pattern in Nepal none of these plans explicitly includes actions in the agriculture sectors. Nevertheless, they provide a basis to build upon and integrate agriculture.

Currently on-going projects in the area of agriculture related to disaster risk management and climate change are geographically scattered and uncoordinated. Substantial research on climate change scenario development, impact and vulnerability assessment is currently underway in the Department of Hydrology and Meteorology (DHM) and in the Nepal Agriculture Research Council (NARC), but results are rarely transferred or used for field level action through the Department of Agriculture.

Nepal is just now in advanced stages of responding to the need for renewal of its legal and policy framework for DRM, and is developing with broad stakeholder involvement and with facilitation support from UNDP a new national strategy for disaster risk management. The first draft of the strategy is just ready for review. The strategy is closely oriented along the lines of the Hyogo Framework for Action (HFA), and it implies for Nepal a major shift in government policies away from an emergency response driven way of working toward a disaster risk management perspective, which puts equal emphasis on prevention, mitigation and preparedness, highlights the links between disaster management and development, as well as the cross sectoral nature of DRM and the responsibilities of a variety of actors in DRM. The draft strategy and the scope for FAO assistance to the Government in implementing sectoral parts of it was discussed in depth at the meeting with UNDP.

Nepal has embarked on meeting the Millennium Development Goals (MDGs) and has demonstrated substantial progress in the first five years of the millennium. However, proper disaster risk management is essential for sustaining the achievements of the MDGs. The UNDAF for Nepal has included disaster management as one of the major areas requiring support of FAO as a lead agency in the areas of FAO mandate. UNDAF priority area C on "*Sustainable Livelihoods*" prioritized the need to support the government departments on preparedness to Natural disasters and support to gender responsive disaster risk management and preparedness activities to increase the capacity of partners<sup>3</sup>. UNDP's Country Programme Action Plan (CPAP)<sup>4</sup> for 2008 - 2010 stressed the need for institutionalizing the concepts of disaster risk reduction and highlighted the need for greater support to the vulnerable communities to ensure safer lives and livelihoods.

The overall service provision required for a functioning climate risk management system is weak. For instance the current climate and weather forecasting products delivered regularly do not provide forecasts at a range of beyond 2 days. No agriculture specific hazard impact forecast neither systems nor crop yield forecasting systems are in place. The data basis on production and secondary economic and social losses/hardship caused by natural hazards and so called "*neglected*" disasters is very thin and insufficient to build prevention and forecast system upon it.

#### **4. Strategies and lessons learned**

The current situation of developing a new disaster risk management (DRM) strategy facilitated by UNDP, creates a strong momentum, but also a strong demand for

<sup>3</sup> United Nations Country Team (2007) United Nations Development Assistance Framework for Nepal 2008 - 2010, Kathmandu: United Nations.

<sup>4</sup> UNDP (2007) Country Programme Action Plan (CPAP) between The Government of Nepal and the United Nations Development Programme in Nepal 2008 - 2010, Kathmandu, Nepal.

technical assistance to assist the country, in particular in core sectors related to DRM, including agriculture and natural resource management, in building the technical skills at district level needed for moving towards the implementation of the strategy, in an integrated, cross-sectoral manner. With regard to the agricultural sector there is an urgent demand for technical assistance to the MoAC and the DoA to flesh out a sector specific local level interventions - in line with the new strategy - and for initiating a platform for practical learning through field based implementation of some sector specific subcomponents for DRM in agriculture as basis for wider replication thereafter. In view of this the Government (MOAC) has requested FAO for an urgent assistance in preparing a sector specific project proposal on Climate Change Adaptation (CCA) and DRM in Agriculture. This initiative through UNDP support in two of the selected pilot districts will compliment the national level efforts under FAO supported TCP project.

This project element are designed to establish a practical action and learning platform in two selected pilot districts (activities in additional four pilot districts are funded through FAO TCP facility) which have a high exposure of agriculture to natural hazards. The project strategy is to address four critical gaps strongly related to climate change adaptation and Disaster Risk Management (DRM).

The project will build up the technical capacity of the DoA at the two selected districts, in particular within its line agency DoA and DoLS to address in a proactive way climate risk management and disaster prevention/preparedness related issues from an agricultural perspective, including the emerging challenges of adaptation to climate change. It will catalyze a process to better positioning the DoA and DLS as a key partners and actors in the implementation of the new strategy for disaster risk management in Nepal as well as to introduce DRM into the main stream of MoAC's sustainable agricultural and rural development planning.

The project will address the phenomenon of droughts, drought spells, floods and land slides in two selected pilot districts, which have regular impacts on agricultural production. Drought impacts due to their slow on-setting nature are however hardly ever categorized in Nepal as disasters, which would receive national attention. However, they cause losses and substantively constrain the livelihoods and food security of small farmers, in particular, and thus hamper the process needed to build up resilience. The impacts of drought spells and droughts on agricultural production have neither been systematically recorded so far, nor have they been addressed in the context of disaster risk management in Nepal. The context of increasing climate variability enhances the probability of more frequent and more severe wet and dry spells and dry periods in the near futures.

The project will facilitate to build on the existing Early Warning System (EWS), introduce innovative weather/climate forecast products tailored to the local needs of farmers at local level. Efforts are needed to improve the communication channels from the national level to the district level, which would help to expand the scope of early warning from its current focus on the saving of lives towards a better safeguarding of peoples' livelihoods as well.

The project is aimed to introduce and demonstrate through a guided learning by doing process at district and community levels in two selected pilot districts, a set of locally adapted, innovative and gender-sensitive technologies for climate risk management within the agriculture sector; this will further enhance (a) local awareness about disaster prevention and adaptation to climate variability and change; and (b) the resilience of local communities against the impacts and unpredictability of current climatic extremes, which are expected to further increase in intensity and frequency in the context of forecasted climate change; (c) livelihood assets, on-farm employment and household food security; and d) active participation of the most vulnerable men and women. Successfully tested technology options will provide the basis for further replication in similar agro-ecological settings elsewhere.

The project will also play a catalytic role in ensuring close interaction and coordination between line agencies at district and sub-district levels. The government of Nepal, through DoA has confirmed that this project proposal is considered of highest priority for MoAC and that the government is fully committed to replicate the project approach elsewhere in Nepal once successfully tested through this FAO TCP and UNDP supported initiative. The replication potential will be decided based on the economic impact analysis of field demonstrations in selected VDCs. UNDP Nepal has been fully informed about the development and content of the proposed TCP during the formulation process. UNDP has committed itself to fund the implementation of the working approach proposed in this project in two additional districts. FAO would in that case be mandated to also guide the technical implementation in the two additional districts targeted under this proposal. The project proposal is directly related to key output of the UNDP's Country Programme Action Plan (CPAP) and UNDAF CP outcomes.

FAO will continue to foster new and enhance existing partnership strategy under its TCP initiative by setting-up the Project Steering Committee (PSC) and a Project Management Unit (PMI) comprising of experts from MoAC, DoA, Ministry of Environment and Science and Technology (MoEST), Ministry of Local Development (MoLD), Ministry of Home Affairs, Nepal Agricultural Research Council (NARC), Ministry of Water Resources (MoWR), Department of Water Induced DRM. The technical implementation group (maximum eight members) at district level will operate under the umbrella of the District Disaster Relief (Management) Committee (DDRC) and will be composed of a multi-disciplinary team of selected officers from the DoA (chair), DoLS, Local Development Officer (LDO), Department of Irrigation, and one NGO/CBO representative. The group will be hosted by the District Agricultural Development Officer.

Building technical capacity within MoAC related to climate change impacts, vulnerability and adaptation will also provide a comparative advantage to better represent the agriculture sector in National Adaptation Programme of Action (NAPA) facilitated by Ministry of Environment and Science and Technology (MoEST) and UNDP-Nepal. Strengthening the institutional systems mandated with overall risk management in agriculture sector at various levels and maintaining close collaboration with the community and community based organisations through field demonstration of adaptation practices provides an extra advantage to promote ownership of the project and to sustain the results beyond the project wide pilot interventions.

## **5. Results Framework**

Within the United Nations Development Assistance Framework 2008 – 2010 (UNDAF) and UNDP Country Programme Action Plan 2008 – 2010 (CPAP) and the new National Policy and Strategy for Disaster Risk Management and priorities set in the Government's legislation and disaster management Act, and inline with FAO's strategic objectives and organizational results, the overall expected outcome of the programme is enhancing capacities for Climate Change Adaptation (CCA) and Disaster Risk Management (DRM) for Sustainable Livelihoods in the Agriculture Sector. The specific objectives are:

- (1) to assist the Ministry of Agriculture and Cooperatives (MoAC) in testing and operationalizing the process of shifting from an reactive emergency response focused intervention approach towards a pro-active natural hazard risk prevention/preparedness oriented approach in the agricultural sector; and
- (2) to demonstrate viable climate change adaptation practices in two selected pilot districts to address impacts of climate variability and climate change and to increase awareness and resilience needed to address the future risk by the communities.

The joint programme outputs will directly contribute to the FAO's strategic objectives, organizational results, UNDAF outcomes and UNDP Country Programme Action Plan 2008 – 2010 priorities. Towards meeting the above objective, the project will deliver the following four main outputs and related activities:

**Output 1: Enhancing technical capacity within DoA for Climate Change Adaptation and Disaster Risk Management (DRM) in Agriculture**

**1.1 Establishment of inter-departmental technical project implementation task groups:** Inter-departmental technical project implementation task groups in two selected pilot districts will be established, under the umbrella of the District Disaster Management Committee (DDMC), to guide and coordinate field implementation of the project, including the field demonstration of good adaptation practices at community level. In the task groups, women representatives will be involved to provide gender sensitive inputs and concerns. The inter-departmental technical project implementation task group will implement project activities at the district level in cooperation with the inter-departmental technical advisory committee and a core group to be established under the FAO TCP initiative.

**1.2 Participation in the national level training workshops:** The representatives of the district level inter-departmental technical project implementation task group will participate all the training workshops (national level training on climate change adaptation and community based disaster risk management) to be organized at the national level through the FAO TCP support. The participation of women in the training workshops will be ensured.

**1.3 District level ToT training programme:** To complement the formal training workshops, a series of up to 2½ days practical ToT training seminars in each pilot district for Department of Agriculture (DoA) and Department of Livestock Services (DoLS) field technicians (including women technicians) will be organized focusing on the following topics (among other to be identified in response to local demand):

- hazard and vulnerability analysis (targeting current and future risks) for agriculture sector;
- local good practice examples and climate change adaptation options for flood, drought and landslide risk management in agriculture and livestock sectors (details to be further investigated at the beginning of project implementation);
- presentation of suitable technologies known from elsewhere;
- flood and drought related crop and livestock disease prevention and cure;
- preparation and operationalization of natural disaster risk contingency planning at village/community level;
- gender issues related to disaster risk management and climate change adaptation;
- empowerment and collaboration of village level farmer organizations in DRM.

**1.4 District level training on community mobilization, CC adaptation and DRM planning:** On the job mentoring support to county/district level agriculture officers in applying participatory approaches for field demonstrations and interaction with farmer associations will be organized at each district; The training will introduce the basic concepts of CCA and DRM but will focus more on practical applications, as well as their coordinated planning at local level; it will also address the role and responsibilities local organizations have to take and communication means and requirements in the context of a national DRM system. The local NGOs, CBOs working in agriculture sector will also encouraged to participate in the training programmes. Women representatives and individuals from the excluded communities participating from the NGOs will also be trained.



**1.5 Regional training participation:** The project will facilitate participation of two DoA district level officers in a two-week training course on Community Based Disaster Risk Management (CBDRM) at ADPC in Bangkok or other climate change adaptation training programmes organized by national or international organizations.

**1.6 Field trip within Nepal:** Two field trips, each for four days (including travel) for ten district level field officers and representatives of farmer organizations will be organized to other disaster prone districts in Nepal where DRM programmes/projects exists to facilitate mutual learning and exchange of good practices. Women farmers will be included for the field trip in order to share their experiences.

**1.7 Field trip to Bangladesh:** One field trip of four days for two district level field officers from each pilot district will be organized to visit FAO's "Livelihood adaptation to climate change" project in Northwestern Bangladesh for exchange and learning and will help to initiate similar activities in Nepal. Female district officers will be given priority for field trips.

## **Output 2: Strengthening basic support services for Climate Change Adaptation (CCA) and Disaster Risk Management (DRM) in Agriculture sector in two selected pilot districts**

### **2.1 Improving Early Warning System (EWS) for Disaster Risk Management and coordination between national to local level and vice versa**

- Improving capacities at district level to make use of the early warning products for disaster preparedness: The new early warning and weather/climate forecast products will be evaluated at two pilot districts and a strategy will be developed on how improvements can be incorporated into the current system. The effort will contribute to improvement of national level early warning systems. A Letter of Agreement (LoA) with the relevant national/international organizations will be initiated to provide technical support for project implementation. The indicators for improvement are number of lead time and relevance of the information to the pilot locations.
- Evaluation of training modules and e-learning tools on climate change adaptation and disaster preparedness and training the district level DoA staff: Training modules and e-learning tools on planning for climate change adaptation and disaster risk management will be developed from NRCB funds (USD 30 000) at FAO headquarters and the e-learning tool will be evaluated with the interdepartment technical project implementation task groups at the district level. The usable forecast products will be demonstrated through practical application in project pilot districts.

### **2.2. Assessment of data gaps and improving data collection, monitoring and analysis for better planning of Climate Change Adaptation (CCA) and DRM in agriculture**

- Assessment of data gaps and strengthening met observation system at the pilot districts: The data and information gaps as perceived by farmers will be assessed at the district level. The strengths/weaknesses of existing agrometeorological data collection system in terms of reliability and accuracy of data at each pilot district will be evaluated and the instrumentation facilities will be improved in selected sites based on the needs identified.
- Assessment and building of disaster impact data base management system: In addition to the current data collection practice, and routine parameters/questions sheets, improvements will be made based on the demand by the farmers so that the data will become more useful as a basis for DRM related information and early warning systems, and also to respond to information demands by farmers. The data will be disaggregated based on sex

and social groups where ever available. Training to front line extension staff will be organized on data collection procedures based on new format. The national and district staff will be trained on the data collection, monitoring, analysis and communication of data along with criteria set for the establishment of an improved strategy for risk prevention in agriculture. A data base management system will be established at the department of statistics in MoAC. Establishment of disaster data base management system at the national level will be supported by FAO-TCP.

- Facilitate set-up of end-to-end data exchange at district level: Setup and test on pilot basis an end-to-end data and information management system between farmers, and local, district and national level in two of the selected project districts; The flow back of demand responsive information useful for farmers and local level planners would be a priority in setting up such a system.

### **2.3 Improvement of a proactive risk related seed storage and maintenance system at two selected pilot districts and community level**

- Seed supply and storage system assessment at district level: The seed supply and storage practices will be assessed particularly in the pre-monsoon period and in post emergency situations (as applicable) and will be linked with the existing cereal seed production programmes at district level. The indigenous methods of seed storage will be documented and familiarized with local CBOs, farmer cooperatives and farmer groups and technical support on innovative seed storage techniques will be provided.
- Training to district agriculture office and private seed suppliers: The district Agriculture Office and private seed suppliers will be trained on seed storage and quality maintenance in order to respond timely and demand responsive manner in the time of disaster. The collaboration of existing seed suppliers (private/public) of the selected pilot districts will be encouraged on the appropriate setup and maintenance of demand responsive seed storage and supply system. The selected local level private seed producers and nurseries and farmer groups will be assisted to maintain seed buffer at the community level and respond to seed/sapling demand on continuous basis.

### **Output 3: Demonstration of prioritized location specific technologies for Climate Change Adaptation (CCA) and Disaster Risk Management (DRM) within the agriculture sector through a participatory learning by doing process at district and community levels**

3.1 Baseline study: Carry out an in-depth study in selected two pilot district to deepen the understanding about local livelihood profiles, vulnerabilities, natural resource endowments, institutional setting to address climate risks and on locally available and applied natural disaster prevention/preparedness strategies, including local EWS their existing strengths and demands. The study will identify options for combining, in a demand responsive way, existing local knowledge and capacities with complementary know-how. The baseline study will collect the data on women's livelihood strategies, coping mechanisms, vulnerabilities but also their strengths in dealing with vulnerabilities and disasters. The study will also document necessary baseline indicators to facilitate assessment of economic impact of adaptation interventions at the farm level. The household level survey format designed already for the four districts will be expanded to additional two districts.

3.2 Development of good practice database: Conduct an in-depth study to identify, collect and document (using the available FAO-Good Practice format) existing (locally generated and introduced) and viable technical good practices in the two selected pilot districts. The good practices will be screened based on the following indicators: environment friendliness, potential to reduce the climate related risks, economic viability, sustainability, social acceptability, gender

sensitivity, income generation, enterprise diversification, seasonal relevance and immediate need of the community.

**3.3 Social mobilization process:** Initiate a local awareness and social mobilization process with farmer groups/associations, taking due consideration of gender issues, in order to inform about and raise awareness on the topic and the project. Women farmer groups will be mobilized for the local level awareness. Catalyze a discussion process to define role and responsibilities of farmers' association in the context of DRM and within the project.

**3.4 On-farm pilot demonstrations:** Conduct pilot demonstrations/trials on farmers' fields and local research stations of selected good practice options, previously endorsed by the *clearing house mechanism* facilitated under FAO TCP and agreed upon with farmers/farmers' groups, including women groups. Farmers field schools, where existing, or guided demonstrations by DoA extension staff and local research staff are suitable extension methods to be used to introduce and monitor the trails. Pilot trials will always have a control plot for comparison in terms of set criteria. Trial's preparation includes to prepare on seasonal basis, before demonstrations of good practices, detailed good practice demonstration manuals will be prepared for each selected adaptation option; technical training sessions will be held for the DoA front line extension staff, and representatives of farmers' groups including Community Based Organizations (CBO) about the implementation, expected impacts and the monitoring of good practice trails. The nature of the trails is not pre-determined but will be decided on location specific basis and needs. Based on regional experience, it is likely that the good practice techniques will address aspects such as:

- drought/flood tolerant varieties, diversification of cropping systems to manage impending climate risk, water harvesting, management and saving technologies in drought/dry spell affected areas;
- improved land slide management, soil conservation measure and hedge row planting, intercropping, mulching techniques;
- fruit tree intercropping and agroforestry measures to better fix and protect river/stream banks, slopes, etc.;
- improving small scale micro-irrigation systems for promotion of water saving;
- good practice examples to improve construction standards for animal shelters and hen pens including specific guidelines;
- local land use and spatial planning methods and tools to reduce season specific hazard risk exposure of agricultural fields/products;
- careful evaluation of good practice examples tested in the field for replication elsewhere; the evaluation criteria, to be elaborated in detail will include economic and social as well as microlevel and macrolevel perspectives;
- adoption of gender-sensitive techniques and tools that take into account the specific needs and constraints of men and women.

#### **Output 4: Economic impact analysis of adaptation interventions, lessons learned and policy implications**

**4.1 Project workshop:** A project workshop will be organized to synthesis climate change adaptation and disaster risk management interventions in Nepal. The recommendations of the workshop will be integrated into Plan of Action (PoA) and other policy documents.

**4.2 Economic impact analysis of field demonstrations:** Economic impact analysis of field demonstrations of climate change adaptation practices will be conducted to assess the scope for further replications. Impact of the field demonstrations on the improvement of adaptive capacity of rural livelihoods and enhancement of the economic benefit by the local adaptation practices will be assessed based on

the feedback from farmer groups and household survey. The data will be compared with the baseline study collected at the beginning.

- 4.3 Final project synthesis workshop for policy advocacy: A final synthesis workshop for policy advocacy and lessons learned will be organised at the end of the project. The national level workshop will present the findings of the project and lessons learned about the good practice examples of DRM and climate change adaptation.
- 4.4 Resource Mobilization Strategy: A resource mobilization strategy will be designed and resource mobilization meetings and workshops with key donors as a basis for implementation of the plan of Action (PoA) will be conducted to facilitate replication of pilot activities under this project to other similar regions in Nepal. The Plan of Action (PoA) will be prepared based on the pilot experience and the entire process will be supported by FAO-TCP.
- 4.5 Follow-up programme proposal: Formulate a follow-up programme proposal for wider replication of successfully tested working modalities and viable climate change adaptation and DRM practices.