



# Proposed Methodology for Assessment of Human Resource Needs in Agricultural and Environmental Sciences

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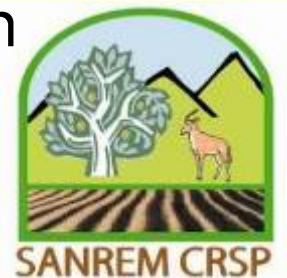
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# Outline

- **Purpose**
- **Proposed Methodology**
- **Next Steps**
- **Discussion & Suggestions**



# Purpose

- **Identify human resource needs of the southern Sudan in agriculture and environmental science**
- **Identify required skills and competencies of each of the identified human resource need areas.**
- **Develop university curricula for key human resource need areas.**
- **Recommendations for staged curricula.**



# Proposed Methodology

1. Recruit local staff member for surveys
2. Identification of potential employers of graduates with agricultural, natural resource management (NRM), and environmental management training
  - GOSS
  - NGOs
  - Universities and training centers
  - Foreign assistance programs
  - Private sector
  - Other?



# Proposed Methodology

3. Identify human resource needs of identified employers.
  - Disciplinary needs, estimated level of training, how many, and when needed

## Examples:

- **GOSS Ministry of Agriculture and Forestry**
  - Extension specialists at certificate, diploma, & B.S. level.
  - Expertise: general agriculture, animal science, veterinary science, forestry, etc.



# Proposed Methodology

4. Assessment of knowledge and skills required for the identified agricultural and environmental science human resource needs

## Examples:

### **GOSS Ministry of Agriculture and Forestry**

- **General agricultural extension specialists, B.S. level**

**Soil fertility management, rainfed staple crop production, vegetable production, extension education, water management, livestock management, draft animals and plowing, etc.**



# Proposed Methodology

## 5. Organize required knowledge & skills to identify commonalities and facilitate curriculum development.

### General Agricultural Extension Specialist

Skill	Level of Mastery		
	High	Medium	Limited
Tractor maintenance		X	
Power unit and pump maintenance			X
Interpretation of soil tests and fertilizer recommendations	X		
Sorghum and millet production	X		
Post-harvest storage and processing of cereals			
Livestock health		X	
Poultry production	X		
Forage management		X	
Seed selection		X	
Integrated pest management	X		
Etc.			



# Proposed Methodology

## 5. Organize identified knowledge & skills into courses and curricula.

### B.S.Agricultural Technology

Course/Skills	Level of Mastery		
	High	Medium	Limited
<b><i>Agricultural Machinery</i></b>			
Types of agricultural machinery		X	
Agricultural engines		X	
Pumps & irrigation equipment	X		
Tractors	X		
Tillage machines	X	X	
Planters	X		
Harvesting & processing machines			X
Soil traction			X
Machinery maintenance	X		
Animal tillage & planting machines	X		
<b><i>Introduction to Horticulture</i></b>			
.....			





# Proposed Methodology

6. Review of draft curricula by Sudanese stakeholders and regional experts (prior to March 2009 symposia)
7. Develop learning objectives for proposed courses



# Proposed Methodology

7. **Develop phased curricula and institutional model(s) for proposed agricultural and environmental science program(s).**
8. **March 3-5, 2009, 2<sup>nd</sup> International Symposium on Higher Education in Agriculture and Environmental Sciences in Southern Sudan to review proposed curricula.**



# Next Steps

## Tuesday and Wednesday

1. Agree upon methodology and knowledge required for needs assessment.
2. Draft questions for survey addressing:
  - What skills/degrees are needed.
  - How many graduates are needed.
  - When graduates are needed.



# Discussion and Suggestions

A sunset over a mountain range. The sky is filled with horizontal bands of orange and red clouds. The sun is a bright yellow line on the horizon. The foreground shows dark silhouettes of mountains and trees.