Reg.- SAMS Strategic pillar 1

Country-Level Surveys and Assessments of the Current Status of Sustainable Agricultural Mechanization

Outline

1. General data
   - Economic indicators
   - Physical environment: soil and its importance according to the region, the water potential, fertility, the yearly precipitation and temperatures and their distribution throughout the year and according to region, days of work in the possible fields per month, the zones bioclimatiques…
   - Population: total population disaggregated by age, sex and residence (rural/urban) and annual growth rate, projections, life expectancy, nutrition, caloric intake, health, literacy,…
   - Infrastructure status of road system, Railways facilities, Animal health services

2. Existing agricultural practices
   - Types of crops, cropping systems and agricultural practices related to these crops (e.g. including intercropping – corn/oil palm, carrots/onions…..)
   - Agricultural practices that are in decline and practices that are increasing (sustainable and unsustainable)
   - Farmer categories, farm size and labor availability
   - Gender roles in agricultural production systems
   - Level of mechanization in each operation (production, harvesting…..)
   - Mechanization technologies (including Conservation Agriculture) suited to specific agro-ecological zones
   - Consequences of inappropriate equipment use
   - Machinery – type and size, scale, cost (including operating and servicing cost)
   - General constraints

3. Machinery supply chains

Stakeholders

- Manufacturers of machinery (locally produced, imported)
  - Scale of machinery production (number, type…)
  - Sources of imported machinery (cost/$ value of imports; number..)
- Dealers and sub-dealers
- Service providers (custom hiring, financial services, repair and maintenance)
- Individual owners
- Extension agents

System of organization of stakeholders

- Individual owners
- Cooperatives (clusters, other types of groups)
- Manufacturing and supply associations
Sustainable Agricultural Mechanization Strategies (SAMS)

**Inputs and Quality Management**

- Spare parts
- Raw materials and components
- Testing and standardization
- Safety and quality control

4. **Policies that are relevant to/cover SAM**

- Agriculture and trade policy (including financial policy)
- Industrial and trade policy
- Environment policy
- Labor policy
- Land tenure legislation and land use
- Insurance
- Role of SAM in national agricultural development plans

5. **Institutional linkages (intra-, inter-) SAM related**

- Financial institutions
- Research and extension institutions, Universities, Manufacturers
- Private sector (importers and manufacturers)
- Public-private linkages (e.g. John Deere scheme)
- NGOs
- Government (Extension institutions)
- Farmer Associations
- Testing and standardization organizations

6. **Existing human capacity for SAMS**

- Research and development
- Extension
- Testing and quality control
- Training (vocational, academic, short-term focused training on specific topics)
- Technical specializations and multidisciplinarity
- Repair and maintenance
- Manufacturing
- Information dissemination and promotion

7. **Emerging innovative schemes with implications for SAMS**

- Climate smart agriculture\(^1\) (environmentally sustainable)
- Equipment innovations (Mechanized intercropping - ag machinery adapted for intercropping, flex-fuel machinery...)

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- Payment of environmental services
- Carbon credits for no-till agriculture
- Biofuels and renewable energy
- Renewable energy and energy efficient equipment (solar energy, etc.)