Challenges of Research Extension Systems in Kenya

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Agriculture Contribution to Kenya's Development

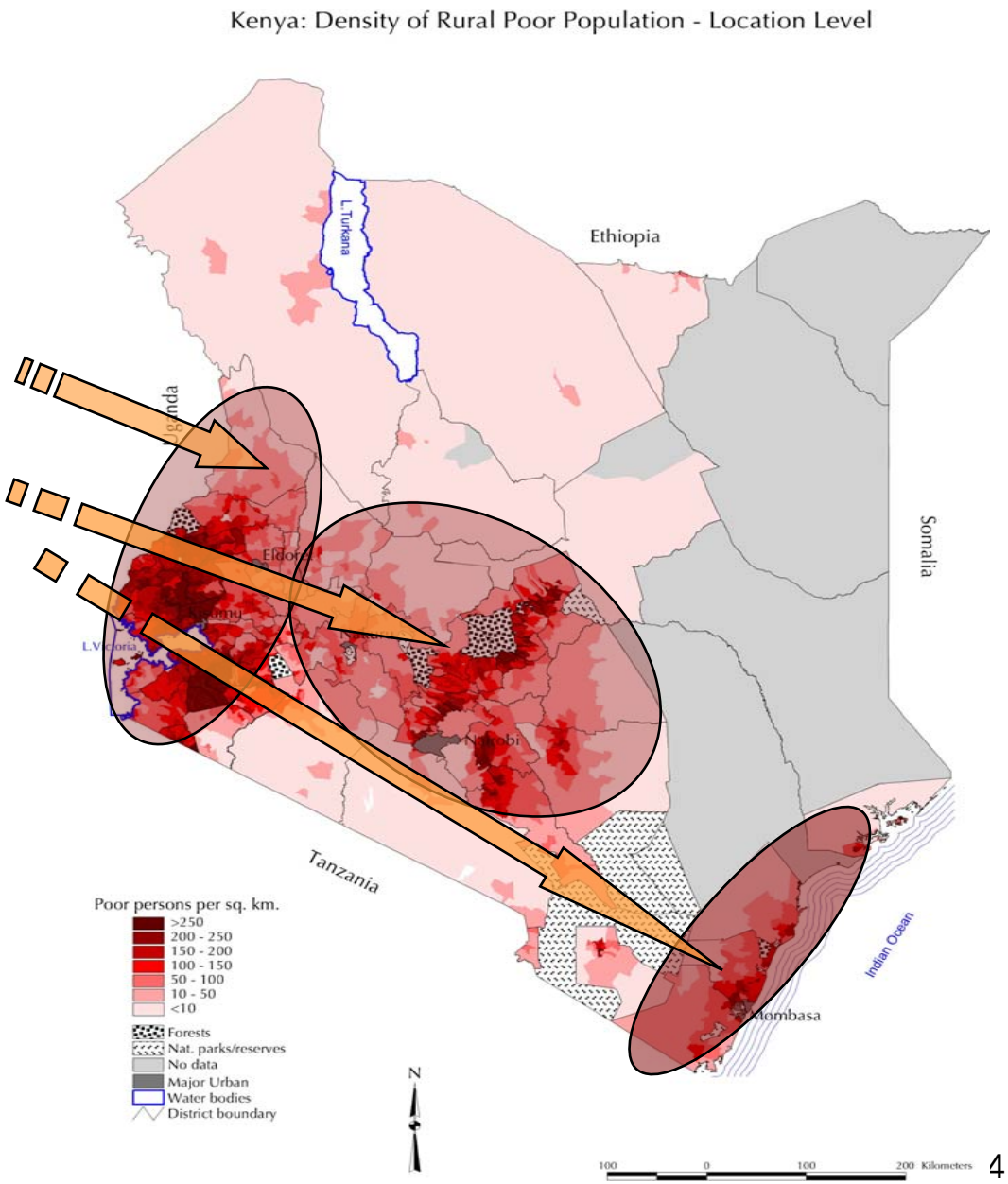
- Agriculture will remains a key sector in the Kenyan economy and continue to play a pivotal role in the realization of the economic growth and poverty reduction>>>major economic pillar for vision 2030 agenda in the medium term.

- Kenya aims to promote an innovative, commercially-oriented, and modern agricultural sector.

Importance of Agriculture

- Agricultural sector plays a dominant role in the country's economy.
  - **Over 70%** of the population live in rural areas and derive their livelihood from agriculture.
  - Directly contribution to GDP = **26%**
  - further **27%** through linkages with manufacturing, distribution and service related sectors.
  - Account for 75% of total production and 70% of marketed output
  - Sector also accounts for over **60%** of export earnings, and **45%** of government revenue
- Agricultural production dominated by smallholder farmers >>>Women

Rural Poverty and Hunger concentration >> the medium to high potential parts of the country – absolute numbers



Farming Systems- Where agriculture occurs

Horticulture

Floriculture

Coffee

Cashew nuts

Sugarcane

Barley

1.Maize/

2.Potatoes

Wheat

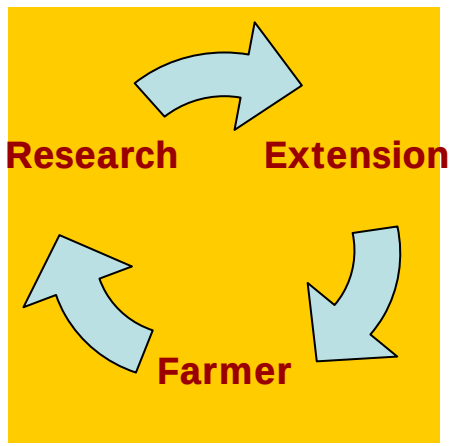
Mangoes

Cotton

Livestock Production

Challenges to Research for Sustainable Land Management

- Population pressure - 36m and ↑ resulting in a need for high level of self-sustenance in food.
- Weather variability - severity and frequency of erratic weather patterns
- Poverty levels: -Access to production resources
  - >>Land, Credit, Technology >>> cf. women
- Technology development, dissemination and application
  - Weak Research Extension Farmers Links
  - Top down research extension models



Role of Agricultural Research in Agricultural Development

- Productivity impact
- Livelihoods impact
- Environmental impact and sustainability

=> Calls for impact orientation where agriculture R&D contributes to development impact

Impact orientation

impact

- improved food security
- poverty reduced
- sustainable NRM

outcomes

- awareness
- availability of:

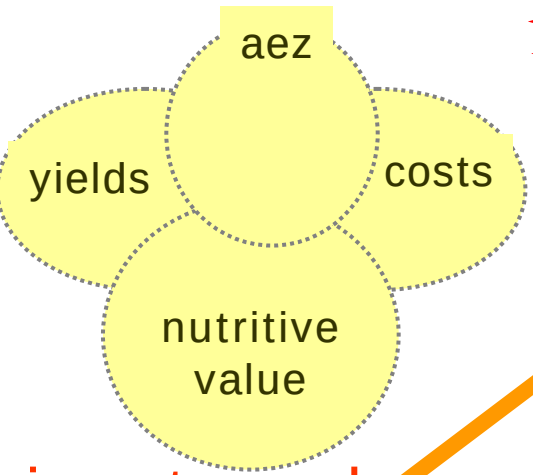
seeds, inputs, markets
good roads

super seed

- increased yields
- reduced costs
- improved soil fertility
- new knowledge, skills
- attitudes and values

outputs

- HYV seeds
- trade-offs
- policy options
- training sessions
- reports



inputs and activities

actors

- private agents:

extension, input dealers, millers,

- public entities:

extension, roads, trade, quality control, electricity,

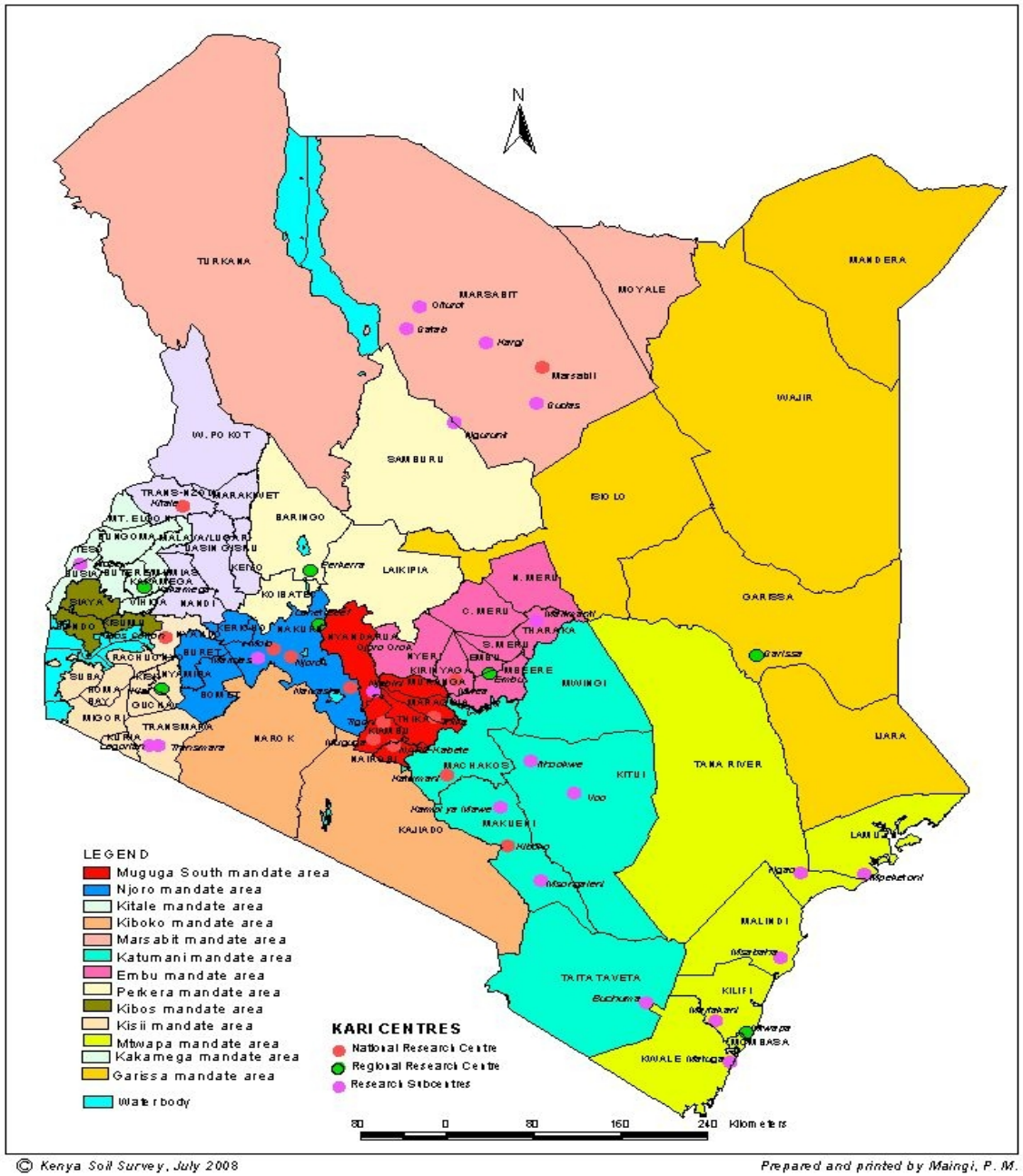
technology design & development

NARS

KARI's Research programmes

- Food crops (Cereals, root and tubers, grain legumes, crop health)
- Horticulture and industrial crops (vegetables; fruit and nuts; oil and fibre; and flowers, botanicals, medicinal and aromatics)
- Animal production (ruminant, non ruminant and emerging livestock improvement)
- Animal health research (disease diagnostics, epidemiology and control; vaccines and drugs)
- Range resource management
- Natural Resource Management (Land use planning, Soil and water management, Integrated soil fertility management, Irrigation and drainage)
- Biotechnology (Crop and livestock biotechnology)
- Genetic resources management (Genebank)
- KARI Seed Unit
- Socio-economics and Applied Statistics
- Adaptive research, outreach and partnerships

Network of KARI Centres



Extension Challenges

- Inadequate financial support to the extension services
  - Low extension coverage due to inadequate technical staff
- Poor access to affordable credit for farmers especially women
- Inadequate factor and product markets and marketing infrastructure
  - Low returns to farmers
  - Low adoption of recommended technologies due to high cost of farm inputs and high poverty levels
- Risks due erratic weather patterns >> droughts, floods
- Low investment in storage and processing facilities
- Poor physical infrastructure
- Dynamic nature of farmer needs>> requires dynamism in technology development and dissemination methods

Initiatives to strengthen Research Extension Links

- Recognize multiple options for extension service providers>> Aims to tap farmer participation and private sector contribution in provision of extension service

Include:

  - Focal Area Development Approach **(FAD)** and
  - Farmers Field Schools **(FFS) a**pproach >>>experiential research extension model where group of **20-30 farmers** meet regularly on a given farm where they go through a learning cycle of the enterprise. >>FFS approach is quite effective in imparting skills and knowledge to farmers

- Promotion of pluralistic and demand driven extension service delivery systems
- Funding modalities including multiplicity of approaches >> self administered grants to farmer groups for technology testing and up-scaling

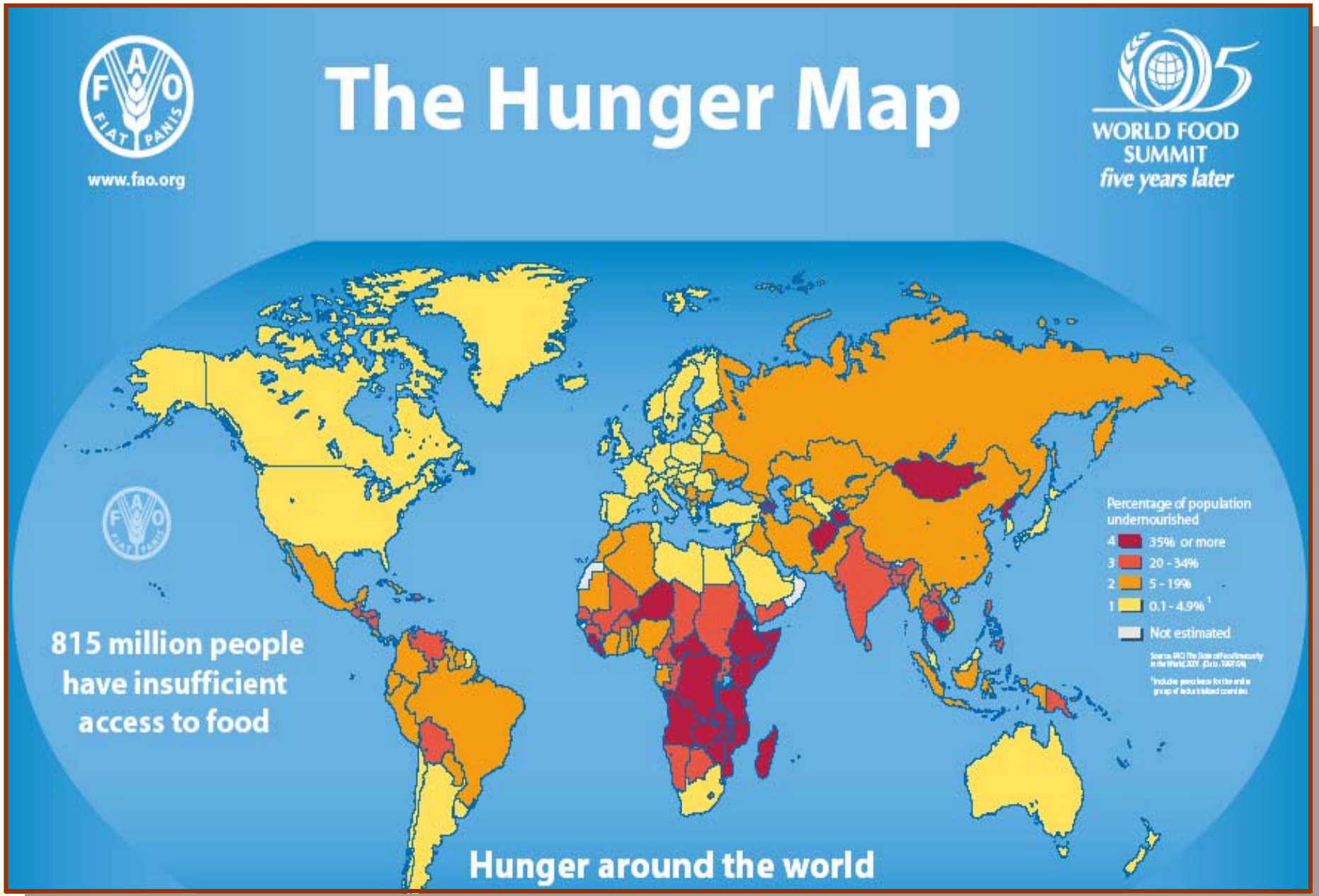
Initiatives to strengthen Research Extension Links

- Paradigm shift from top down approach to **participatory**, **inclusive** and **demand driven** extension approaches
- Regulation of extension service providers and quality of extension messages
- Establishment of Stakeholder Fora at Provinces & Districts
- Joint Centre Research Advisory Committee (CRAC) meetings for setting priorities
- Participatory joint On-farm trials and demonstrations
- Joint technology adoption/ uptake monitoring & evaluation

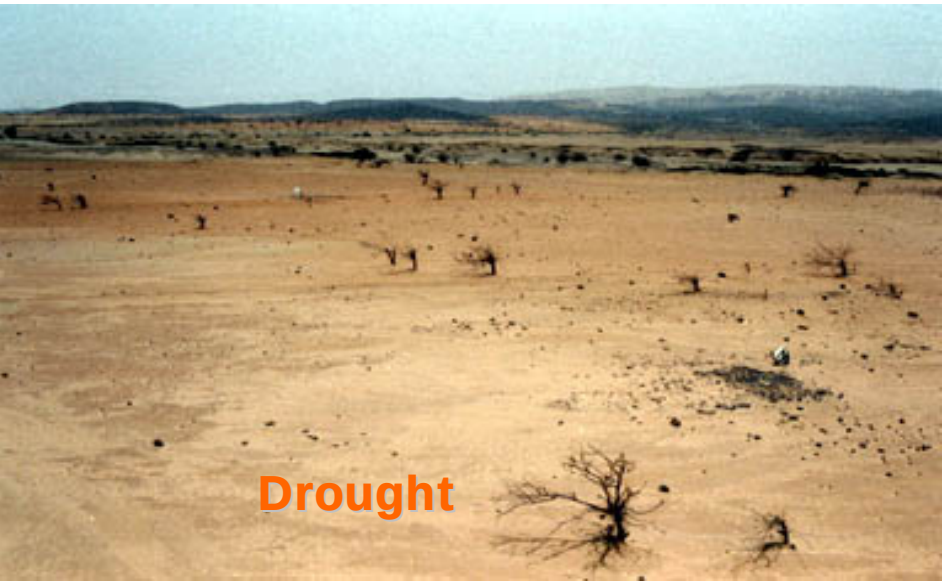
Conclusions

- Dynamic nature of research extension client-needs (Diversity in time and space)
  - Dynamism and diversity in approaches to research extension links
- Need for targeted technology development and dissemination models
  - Spatial and temporal specificity
- Challenge - Are resources available to do this?
- Enhanced participatory research agenda setting and dissemination methods

Compelling case for universal action



Consequences of unsustainable land management



Consequences of unsustainable land management

Destroyed Livelihoods

Poor crop performance

Thank You