

Participatory Community Extension for Dissemination of Agrometeorological Information

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INTRODUCTION

- Irrigation of crops is influenced by environment & in particular variability of climate & weather parameters.
- Many scientifically sound methods available to calculate irrigation water requirements & to schedule irrigation;
- However, **this information must also reach users.**

- A **Community Agrometeorological Participatory Extension Service (CAPES)** was developed for Mujika near Monze in Southern province of Zambia

- Success of CAPES is it involves the community in decision making and dissemination of information

'CAPES' Steps

C = Community
A = Agromet
P = Participatory
E = Extension
S = Services

1. Initiate contact and project launch
2. Collect Community-based resource data using PRA & from science sources
3. Organise Community-based ID of Problems & Opportunities
4. Create Community Information Dissemination Plan (CIDP)
5. Form Community Agromet Participatory Extension Services Team (CAPES Team)
6. Implement CAPES
7. Monitor and Evaluate using participatory methods
8. Exit strategy of Development Team and Takeover by Operational Team





WHAT IS A 'CAPE'?

- A headland or promontory into the seas. This is a new feature in the waters.



- Short cloak/covering outer garment sleeveless, fastened around the neck falling loosely from the shoulders.
- A mantle of protective cloth against weather



As an intervention pointing into a sea of other things with new ideas, making a contribution to adaptation.

As a cloak it covers and protects the community suffering from climate change and variability.

CAPES STEP 1



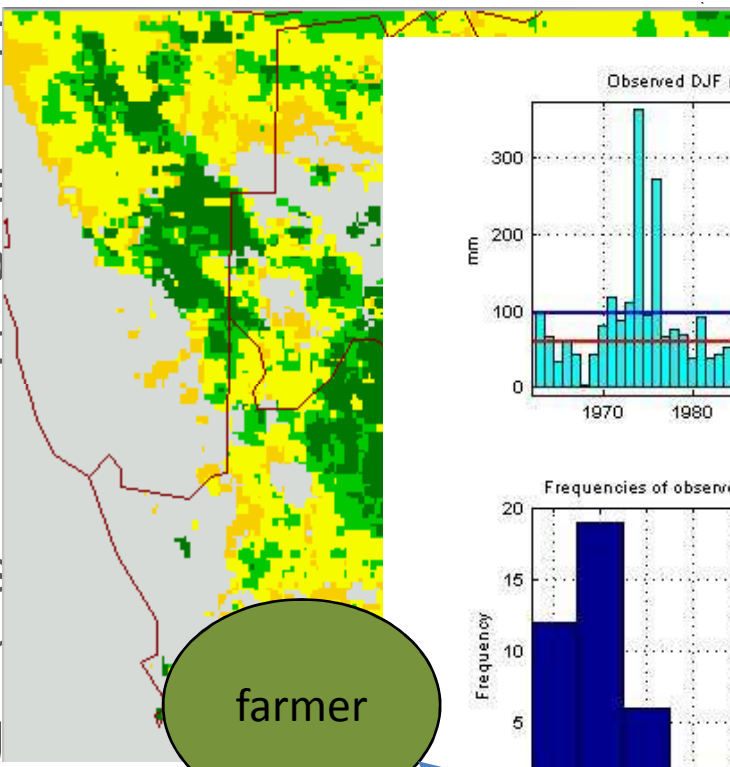
- Initiated by correct protocol with local leadership prior to the launch within the community.
- Both local leaders & local government officials involved in selection of specific community for project.

Group 3

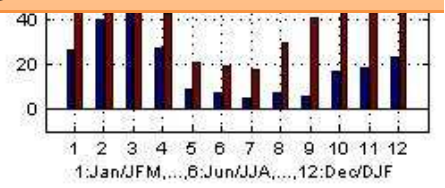
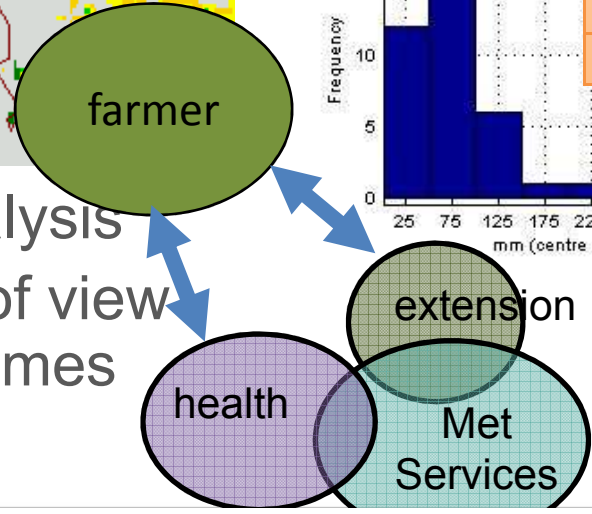


CAPESTEP 2: COLLECT

- To collect information about natural resources
- using participatory mapping & Science data
- at advertised public meetings
- community natural resource maps and transect walks
- historical, seasonal, and daily gender time use
- focusing on agricultural and institutional analysis from peoples point of view using Venn diagrammes

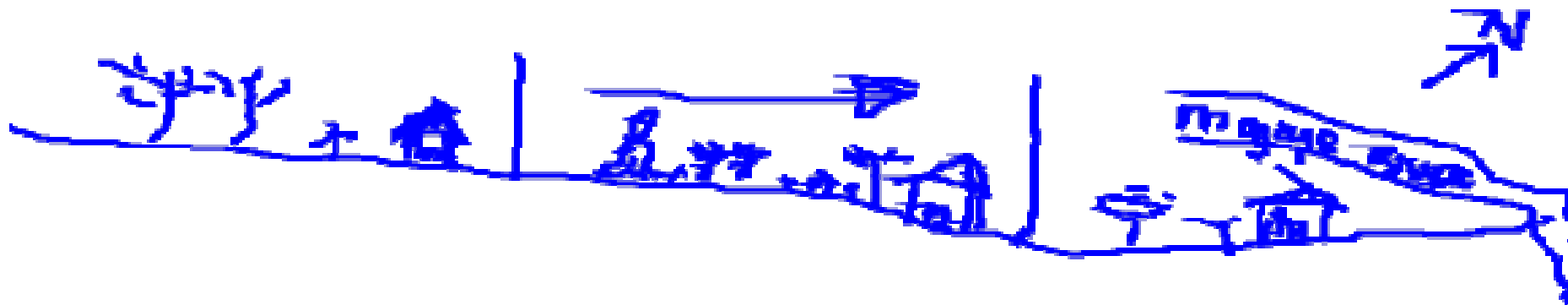


| Year | Event in Bulimo village |
|------|-----------------------------------|
| 1927 | Polio vaccination (outbreak) |
| 1928 | Bulimo village established |
| 1928 | First Headman Bulimo installed |
| 1933 | Locusts outbreak |
| 1952 | Second Headman Bulimo installed |
| 1956 | Agriculture Marketing Board built |
| 1957 | December first Headman died |
| 1958 | Hunger (Floods) |
| 1963 | Namayoba was built |
| 1974 | Agriculture Shed built (Brunelli) |
| 1991 | Food handouts |
| 1992 | Drought |
| 1995 | Borehole |
| 1998 | Bulimo Community School built |
| 2003 | Hunger |





TRANSECT WALK EXAMPLE



| | | | |
|----------------------|--|--|--|
| Crops | Nil | Nil | Vegetables |
| Soil | Heavy clay | Heavy clay | Heavy clay |
| Vegetation | Musangu/Acacia | Bananas, roofing grass, Acacia | Oranges, sisal, Acacia |
| Water | Handy pump | Nil | Magoye River |
| Social | Nil | Nil | Foot ball ground |
| Problems | Dambo / water logging | Water logging Lack of draught power | Waterlogging |
| Opportunities | More boreholes Business enterprises | Grazing grounds | Grazing grounds, Building of wier/dam, Irrigation |



CAPEs STEP 3 ORGANISE PROBLEMS & OPPORTUNITIES

- based on natural resources information,
- problems in current farming systems were identified.
- problems listed with causes & extent
- consider
- available or current possible coping strategies
- opportunities presented



- Rank problems in order of importance to community
- considering available funds & personnel



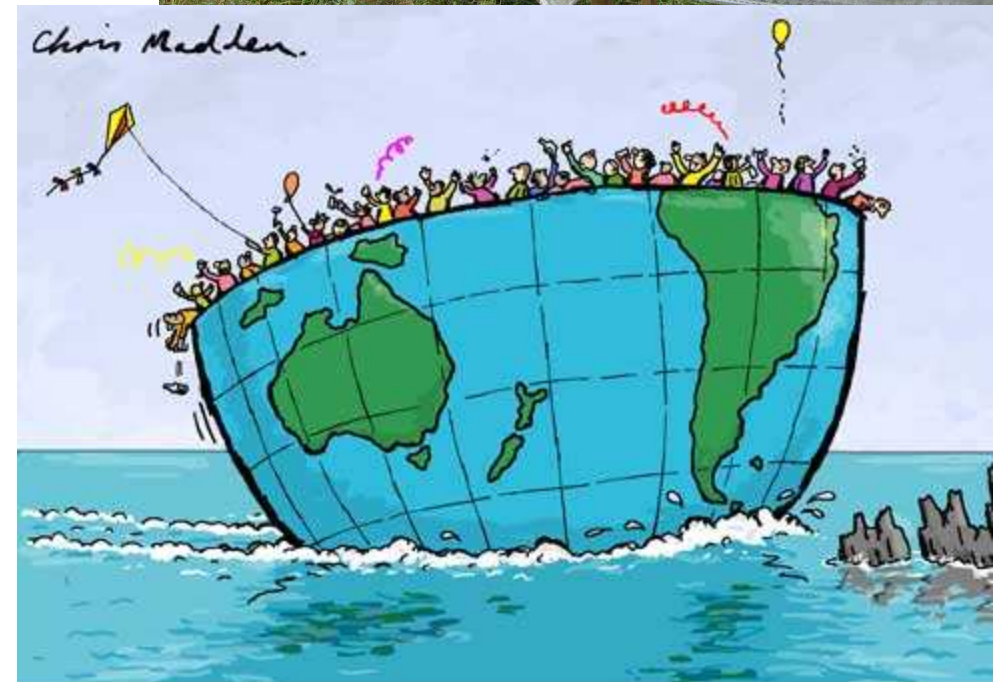
Problems matrix & ranking for Nkabika village on 4th Sept, 2007

| Problems | P | LW | PT | LSF | ER | LD | Total | Rank |
|----------------------------------|---|----|----|-----|----|-----|-------|------|
| Lack of animal draft power (LDP) | P | LW | PT | LDP | ER | LD | 1 | 5 |
| Poverty (P) | | P | PT | LSF | ER | LD | 2 | 4 |
| Lack of Water (LW) | | | LW | LW | ER | LW | 4 | 2 |
| Planting at wrong times (PT) | | | | LSF | ER | PT | 3 | 3 |
| Low soil fertility (LSF) | | | | | ER | LSF | 3 | 3 |
| Erratic rainfall (ER) | | | | | | ER | 6 | 1 |
| Livestock diseases (LD) | | | | | | | 2 | 4 |

CREATE COMMUNITY INFORMATION DISSEMINATION PLAN



- community must constitute a working group or committee to formulate a dissemination plan.
- people contributed their own ideas and methods to implement CAPES.



THE SHIP OF FOOLS AND THE ROCKS OF SHORT-TERM ECONOMIC PLANNING

STEP 5: FORM CAPES TEAM

Multi-disciplinary team

All available areas

- e.g. health, agriculture, weather, water, transport, education

Community leaders for main positions

- e.g. chair, secretary, treasurer, publicity

Establish process & operation

- e.g. frequency of meetings, aims, desired outcomes

Need commitment to project





STEP 6: IMPLEMENT CAPES

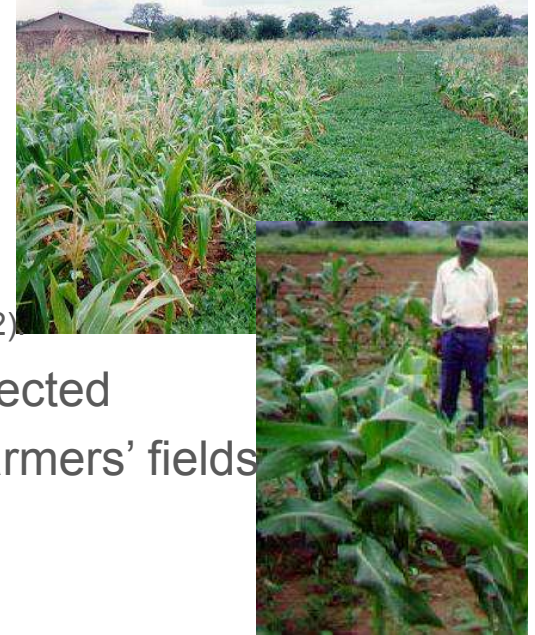
- Identify major climate variability in area
- Identify which decisions climate affects
- Plan information dissemination
- Use experiments with mother-baby field trials
- Give training on climate & variability
- Do field & home visits
- Promote farmer to farmer dissemination of information



Implementation

Mother – Baby Trials

- a) **Mother trial** = randomized, complete block design (Snapp, 2002)
- with factorial levels determined where responses are expected
 - with 2-4 reps per site to give statistically valid results in farmers' fields
 - researcher-designed and managed trials.
- b) **Baby trials** = located around mother trials
- consist of a few treatments un-replicated chosen from mother trial by farmers.
 - may be managed by researchers or farmers.
 - allow farmers to see for themselves performance of treatments at different trial sites
 - allow for faster, larger-scale testing at different locations under different management conditions.



Farmers actively involved in “farmer to farmer” dissemination of information – even when other people are not around.

They kept telling the story of trials when other communities members passed their fields and/or visited them.

Implementation

Community Radio Weekly Programme

- a) Community Radio Station at Monze used
- b) Special series of radio programmes were locally recorded to illustrate climate learning by people.
- c) Included weekly role-plays
- d) Climate broadcasts were recorded on a portable tape-deck.
- e) Later in week each leader met with group to listen to recorded radio programme.
- f) Topics were actually discussed in depth by farmers, with specific reference to their own cropping system.



Other Examples of CAPES Sub-projects



Match farming systems & needs with climate

- e.g. crops requirements with long-term climate

Disseminate available weather & climate products

- e.g. 7 & 14 day forecasts

Formulate tailor-made forecasts

- e.g. heat units and cultivar lengths

Add value to international products

- e.g. NASA or NOAA or IRI

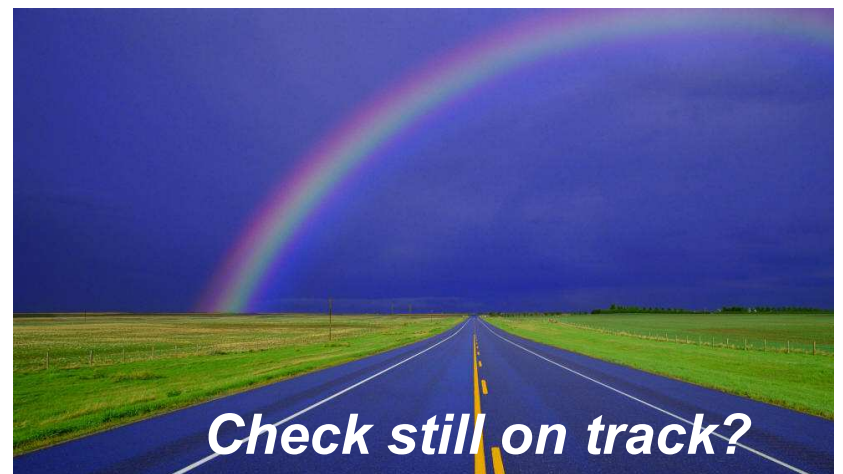
Develop new dissemination methods

- Radio, role plays, study groups, climate field classes

STEP 7: PARTICIPATORY MONITORING & EVALUATION



- Plan M&E process & put in place.
- Monitor activities regularly to evaluate progress towards goal.
- If not as expected, corrections & remedial actions can take place in timely fashion.
- Involve independent people.
- Start from baseline
- Community must understand aim of project
- Team must agree on how work will be done.
- Use M&E questions with some indicators
- Have predetermined criteria & levels



STEP 8: EXIT STRATEGY

Need to plan for :

- Operational mode
- Up-scaling to other areas
- Institutionalisation within current structures



What was that bump?



or





CONCLUSIONS

- CAPES utilises a **range of dissemination methods** that complement each other.
- The advantage and uniqueness of this CAPES system is that it is **community driven** using participatory techniques.
- So **farmers** actually able to **expand their skills** both in using climate information & in generic skills of communication & project management.

ACKNOWLEDGMENT



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See left-hand side panel on www.agrometeorology.org





Thank You
Dankie

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Implementation



Community Modeling Exercise

Use existing farmer focus or study groups

- a) Draw natural resources **map** using participatory methods
- b) Farmers to **id yields** obtained in a wet & a dry year in last 5 years
- c) **Run crop model** with a specific farmer's inputs
 - i. Cultivar & planting date & plant population & fertilizer etc
 - ii. Compare model & farmers yields
 - iii. Repeat till farmers are happy the model can give good yield prediction
- d) Brainstorm & **discuss options for interventions**
- e) Researchers work overnight to develop model runs for these scenarios
- f) Next day **meet farmers again** and share long-term model results for various interventions
- g) Allow much discussion & questioning
- h) **Develop plan for on-farm mother trials** with selected promising interventions