Closing actionability gaps of climate services for farmers, agriculture planners and advisors

Elisabeth Simelton, Climate change scientist, CCAFS Project leader

Tam T Le, Tuan M Duong, Hoa D Le, Johanna Gammelgaard
World Agroforestry Centre (ICRAF Vietnam); Email: e.Simelton@cgiar.org

APEC Climate Symposium, Papua New Guinea, August 21-23 2018
- Do you understand the agroadvisory?
- Yes, because I made it …
• Context: CCAFS climate service projects
• Starting point: Vietnam, Laos, Cambodia
• Climate services – the value chain
• Actionability
• ACIS – five models how bottom-up met top-down
• Lessons learned

Champion farmer who set up a Zalo-group with fellow farmers to exchange knowledge, Vietnam
Context: CCAFS Flagship projects on climate services

- Projects across Southeast and South Asia, Africa and Latin America
  - Climate services, risk and insurance, hazard planning - different degrees of participatory processes, mobile phone services
  - Gender and youth focus
  https://ccafs.cgiar.org/flagships/climate-information-and-advisory-services-farmers

- Tools, approaches & capacity
  - CRAFT Crop model software realtime spatial monitoring/forecast for 28 crops
  - PICSA Participatory Integrated Climate Services for Agriculture
    http://www.walker.ac.uk/projects/participatory-integrated-climate-services-for-agriculture-picsa/
  - ENACTS Enhancing National Climate Services
    https://iri.columbia.edu/resources/enacts/
  - ACToday Support to Met offices in Bangladesh & Vietnam
    https://iri.columbia.edu/topics/actoday/
Starting point for ‘ACIS’

Agro-Climate Information Systems for women and ethnic minorities in Southeast Asia

Source: Coulier, Baseline studies for ACIS (2015-16) n=1333 households
Starting point for ‘ACIS’

Agro-Climate Information Systems for women and ethnic minorities in Southeast Asia

**LIMITATIONS**

- Not detailed enough (large scale)
- Available for few crops
- Too late (0-50%)
- Difficult to understand (too technical) (30-69%)
- Not useful

**Source:** Coulier, Baseline studies for ACIS (2015-16) n=1333 households
The ‘traditional’ value-chain of climate services

Production → Translation → Transfer → Use

(Clima...
Gaps in the SEA climate service value chain

**Met bureau**
- No downscaled weather information
- Too general indicators

**Ag public planners**
- Farming calendar without forecast

**Ag advisors, extension**
- May (not) communicate climate information
  - Do not reach all farmers

**Smallholder farmers**
- Too general forecast
- Diverse farming systems

**Main user groups of climate information**
- Farmers
- Smallholder farmers
- Ag advisors, extension
- Ag public planners
- Met bureau

**Main producers of climate services**
- Institutions
- Advisors

**Attempts at connecting them**
- Different intermediate functions: translating climate information into plans or recommendations
- Advisors: extension service, who may translate and transfer climate information to end users: female and male smallholder farmers, whose decisions may be based on none or to a range of climate services sources; who have diverse farming systems for which there are no inclusive smartphone apps.
Gaps in the climate service value chain

- Different & disconnected actors
- Supply-driven
- One-way = top-down
- No feedback → demand / usefulness unknown
Actionability gaps from user perspective
The ACIS approach

Institutions

Climate data

Agroclimate zoning

Hazard mapping
Farming calendar
Ground truthing

Seasonal forecast

Agroadvisory

Participatory Scenario Planning

Updated forecast

Local knowledge

Farmer Networks
The co-production value-chain of climate services

Production ➔ Translation ➔ Transfer ➔ Use

Participatory Scenario Planning
Extension, planners and meteorologists meet in the village

Local met observations

Farmers’ and ‘scientific’ knowledge
Planning and feedback

Various formats
Does it matter what forecast to use?

Rainfall
- Total rainfall during the period: Windyty underpredicted and AccuWeather overpredicted
- After 1-2 days chances are below 50:50 for correct forecast of rain or not.

Temperature
- All forecasted temperatures were on average lower than to the observed
- AccuWeather was closest to the observed temperatures
- No systematic differences

Roy, Simelton & Quinn (2017) CCAFS InfoBrief
Co-production improved forecast skills

• **Towards demand-driven**
  - Forecast indicators changed after farmers need for indicators and timing were considered

• **Self-evaluation**
  - Provincial meteorological services test different forecast approaches and evaluate
  - Farmers feedback on forecasts included

• **Buy-in**
  - District co-investment: buy forecasts and downscale
  - Forecast distributed on province website, at district website with agroadvisory
Participatory Scenario Planning

- **Who?** Meteorologists, extension, farmer champions, leaders, farmer organization + facilitator
- **What?**
  - Previous forecast & advisory evaluated
  - Seasonal forecast and relevant response strategies discussed and agreed
  - Distribute
- **When?** 2-3 times/ crop season
- **Where?** Village/commune centre
- **How?** Joint activity with other meetings, e.g. savings & loans associations, farmer field schools

Leaders from “scaling villages” testing participatory scenario planning for the first time, Vietnam
Do women and men farmers have different preferences?

Indicators
Understandable
Useful
Appropriate
Take time to read

Women liked

<table>
<thead>
<tr>
<th></th>
<th>Understandable</th>
<th>Useable</th>
<th>Appropriate</th>
<th>Take time to read</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men liked</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women liked</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Duong et al 2017
What did farmers appreciate the most with ACIS climate service after 3 years?

- **Timing**
  - Ranked No 1

- **Knowledge sharing**
  - Ranked No 2

- **Crop choice**
  - Ranked No 3

- **Yield increase**
  - Ranked No 4

- **Resource use efficiency**
  - Ranked No 6

*Pilot survey, Focus group discussion July 2018  n=7 men + 6 women*
Five climate service models in one

- Sms Loudspeaker VSLA
- Dynamic Crop Calendar VSLA
- Online forecasts Rain gauge Farmer-designed icons Theatre VSLA
- Alo Weather (sms) VSLA
- District policy Forecast/ bulletin published online Zalo-group Community Innovation Fund for CSA

VSLA = Village Savings & Loans Association
Lessons learned

• No one-fits all

• **Engage local actors**
  - Put all stakeholders in one room and let them talk about their needs, expectations, priorities and what is realistic to achieve
  - Listen to female and male farmers’ needs

• Have one exit strategy from the start – but **things may change**

• Explore how to **connect subnational and national forecast developers**
  - Global Framework for Climate Services, Monsoon Forum, National Adaptation Plans
  - Clarify difference between ‘wrong’ forecasts and ‘wrong’ advice and when emergency alerts take over

• **Cost-sharing models**
  - Link agroadvice with local agriculture planning & rural development programs e.g. Climate Smart Agriculture
  - Link agroadvisory development with engaging village activities, e.g. savings & loans, farmer field schools, school vegetable gardens

• **Participatory models** increase farmers awareness and ability to know where to go and what to ask for, and willingness to pay
More information

- Climate Change, Agriculture and Food Security - Southeast Asia (CCAFS)
- Enhancing National Climate Services initiative (ENACTS)
- Participatory Integrated Climate Services for Agriculture (PICSA)
- Agro-Climate information for women and ethnic minority farmers (ACIS)
- Rwanda Climate Services (RSA)

CCAFS is carried out with support from CGIAR Fund Donors and through bilateral funding agreements. For details please visit https://ccafs.cgiar.org/donors.