

CRIFS Risk Profiles II:

NIGERIA & MAHARASHTRA, INDIA: Risk Perceptions and Weather Information

Pre-read for August 17 Presentation: DRAFT

Risk Profiles I focused on how small-scale producers (SSPs) understand the terms, and are aware of, “improved variety” and “hybrid” and how risk perceptions may affect agricultural technology adoption decisions. In this presentation, we focus more on risk communications. **To understand SSPs’ perceived risk and incentives to respond to weather messaging and agricultural advisories, and invest in adaptive behaviors, we explore:**

- Attitudes: innate risk tolerance (individual) and value orientation (influenced by social norms).
- Exposure and Vulnerability: past climate exposure (which vary by AEZ and gender), impacts (which vary by resilience) and sense of control over particular climate events (which vary by hazard).
- Future Aspirations and Climate Hazard Expectations.

We begin with the findings that 52% of SSPs in Nigeria (NGA) and Maharashtra, India (MAH) report not acting on received weather information.

NIGERIA: With the Nigerian National Bureau of Statistics, we conducted a phone survey of 696 farming households drawn from the nationally representative General Household Survey (GHS), to leverage that farm and household data.¹

With Dev-Afrique, we conducted focus groups and market visits in five villages across Nigeria’s three main agroecological zones (AEZs) to speak directly with farmers and agro-dealers. AEZs from north to south are: semi-arid, sub-humid, and humid.

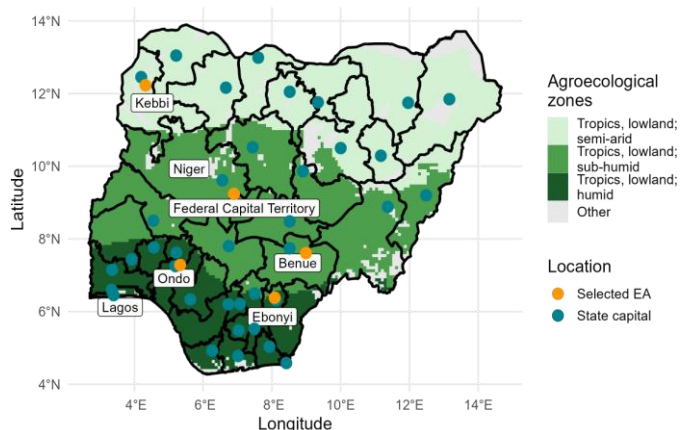


Figure 1: Nigeria AEZs and fieldwork locations

INDIA: Maharashtra is India’s third largest state by population, with an estimated population of 126.4 million and land area over 300,000 sq. km. Maharashtra ranks #3 in climate vulnerability. With the support of local partners Academy of Management Studies (AMS) and Mahila Arthik Vikas Mahamandal (MAVIM), we surveyed over 2,000 households including an intra-household subset of 800. AEZs from west to east are: humid, semi-arid, and sub-humid.

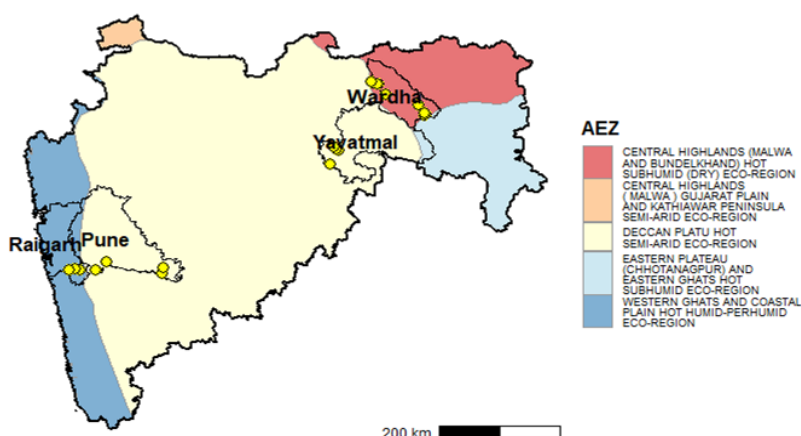


Figure 2: Maharashtra AEZs and fieldwork locations

¹ Built using data on historical (1980-2010) AEZs from GAEZ V4

1. Key Findings: Risk Perceptions and Communication

Information reduces uncertainty and should, in principle, help SSPs manage risk, however they perceive it.

But we cannot assume that SSPs make predictions the same as models do. To begin with, SSPs, like investors, consider the risk and benefit-cost of non-adoption, but SSPs also consider the relative risk and benefit-cost of moving from the status quo.

Perceived risk differs from measured risk. The perceived risk of an event is influenced by both statistical assessments and a suite of qualitative dimensions including reversibility, proximity (immediate vs. delayed), impacts across time (chronic vs. catastrophic), fairness (outcomes across a population), familiarity or dread, control (voluntary vs. involuntary) and conditioned on innate risk-taking attitudes and worldviews (Slovic, 1987).

Table 1: Key takeaways from recent fieldwork.

KEY TAKEAWAYS FROM RECENT FIELDWORK	
The messenger and medium	• Continue to leverage radio and television, and for less familiar technologies use multiple media and for new AI / digital lead with trusted humans. • Government extension and farmer's groups are more trusted than market sellers or traders across all AEZs.
The message	• Message to inform, not sell. • The most salient information is likely to offer deviations from norms, rather than levels and provide thresholds. • Prioritize immediacy and simplicity, lead with risks perceived to be controllable, be upfront about costs, and frame in terms of gains.
The recipient	• Balance AEZ, hazard, and SSP heterogeneity with the desire to scale. • Women receive less messaging but have higher uptake rates. • For the many respondents who do not expect rising future climate risks, messaging in terms of market or other risks may offer more uptake incentives. • Some attitudes are associated with the likelihood of uptake and can be identified through proxies like social norms but may be difficult to change.



Figure 3: Women farmers in Yavatamal (fieldwork, May 2026)

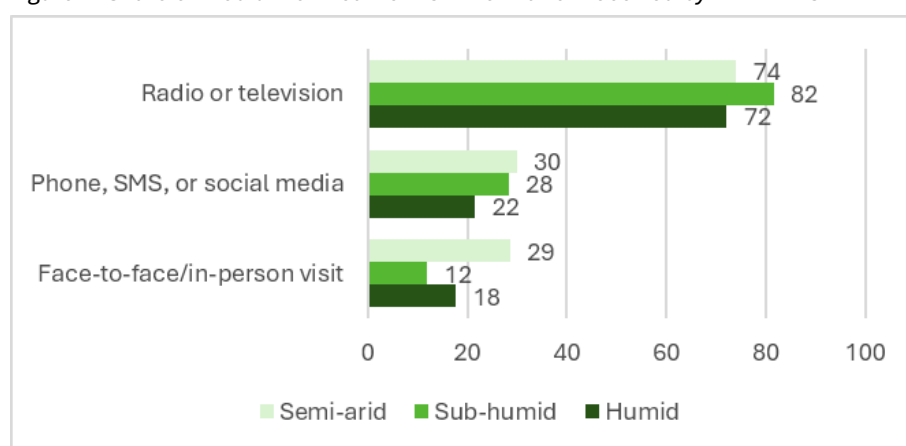
Below we present findings and implications from our fieldwork and the literature where relevant. Our findings are preliminary, and multivariate analysis is associative, not causal. Some results, such as women farmers in NGA, are based on small numbers and we are continuing to test for other factors driving relationships among attitudes, observable proxies for those attitudes, and behaviors. Tables and figures drawing on data from **Nigeria are in green**; and those drawing on data from **Maharashtra are in orange**.

2. Implications from Recent Fieldwork

Takeaways on the messenger and medium: continue to leverage radio and television, and for less familiar technologies use multiple media and for new AI / digital lead with trusted humans. Government extension and farmer's groups are more trusted than market sellers or traders across all AEZs.

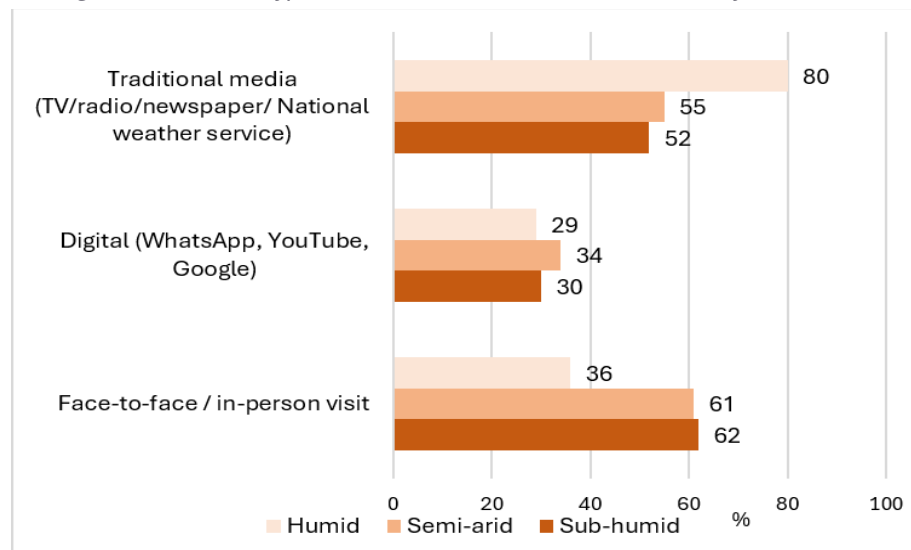
Traditional sources of information largely continue to dominate in reach and trust: Across NGA AEZs and the humid AEZ of MAH, 72 – 82% of SSPs report receiving information by radio or TV, only 12-29% of farmers in NGA and 36% of SSPs in MAH report delivery during in-person visits.

Figure 4: Share of medium of weather risk information received by AEZ in NGA



CRIFS Phone Survey, March 2025 (n=248): "In what form did you receive weather/extreme weather event risk information?" (among households who received weather information in the last 12 months).

Figure 5: Share and types of weather risk information received by AEZ in MAH



CRIFS Household Survey, May 2026 (n=992): "From which of the following providers did you receive DAILY (1-3 days) weather information in the last 12 months?" (among households who sought or received agricultural advisory in last 12 months).

It is unclear if low sourcing of face-to-face and extension services for weather information reflects availability or choice based on trust. In NGA, AEZ in-person sourcing is low, yet trust in government extension and farmer's groups is high, suggesting access might be the issue. In contrast, in MAH, respondents in the humid AEZ have the lowest sourcing and trust of face-to-face relative to radio-television and newspaper. Radio and TV are tied for trust with government extension in the semi-arid and third behind extension and digital options including WhatsApp / YouTube / Google in the sub-humid AEZ. The share of respondents reporting sourcing digital options was only slightly more consistent across AEZs (29-34%), than the share reported trust (20-35%).

Table 2: Trusted providers of weather information by AEZ in NGA.

Source	% Humid	% Sub-humid	% Semi-arid
Government extension service	16	30	41
NGO	03	12	20
Farmers Group/Association/Co-Op	17	31	42
Farmer field school (FFS) or lead farm	03	09	19
Other peer farmer	08	11	24
Trader, market stakeholder, or private	01	09	20
National Weather Service	23	13	16
Radio or television program	59	52	49
Other	11	00	00

CRIFS Phone Survey, March 2025 (n=695): “Which of the following providers of weather/extreme weather event information do you trust? Read out loud and select all that apply.”

Table 3: Most trusted providers of weather information by AEZ in MAH.

Source	% Humid	% Sub-humid	% Semi-arid
Radio / TV / newspaper	61	33	39
Government extension service / KVK	24	43	39
WhatsApp / YouTube / Google	20	35	29
Farmers’ group / association / co-op	15	18	18
National Weather Service	10	16	12
Farmer call center	3	12	7
Input dealer / trader	5	3	7
Other	3	1	2
NGO	2	2	1

CRIFS Household Survey, May 2026 (n=2034): “Which of the following providers of weather information do you trust the most?” Select up to 3 responses.

Diversifying SSP sources of consistent and trusted information could be valuable: Across all AEZs, receiving information by phone, SMS, or social media continues to be the exception rather than the norm. But SSPs may need multiple information sources and reminders before they adopt to reinforce the message, including extension, agro-dealers, local radios, producer groups, and especially farmer social networks, which can create highly beneficial spillovers (Carter et. al., 2021).

Table 4: Factors important in influencing SSPs to act on weather information, by AEZ in MAH.

Factors	% Humid	% Sub-humid	% Semi-arid
Trust in source of message	18%	24%	22%
Timing of message	8%	31%	23%
Belief that it could reduce damage	21%	16%	23%
Easy to understand	44%	22%	25%
Online social networks	4%	3%	4%
Producer or other community groups	3%	2%	2%
Agro-dealer	1%	1%	1%
N	146	286	390

CRIFS Household Survey, May 2026 (n=822): “Which of the following was most important in influencing you to act?” (among households who made any changes for the upcoming season in response to weather information).

Tailor to technology familiarity: For unfamiliar technologies, like AI Chatbots, SSPs may need multiple information sources and reminders before they adopt to reinforce the message, including agro-dealers, local radios, producer groups, and especially farmer social networks, which can create highly beneficial spillovers (Carter et. al., 2021). Regardless of the messenger, making references to similar technologies “in-use” may help, for instance, pertaining to correct dosage and/or technique (Magruder, 2018; Takahashi et. al., 2019).

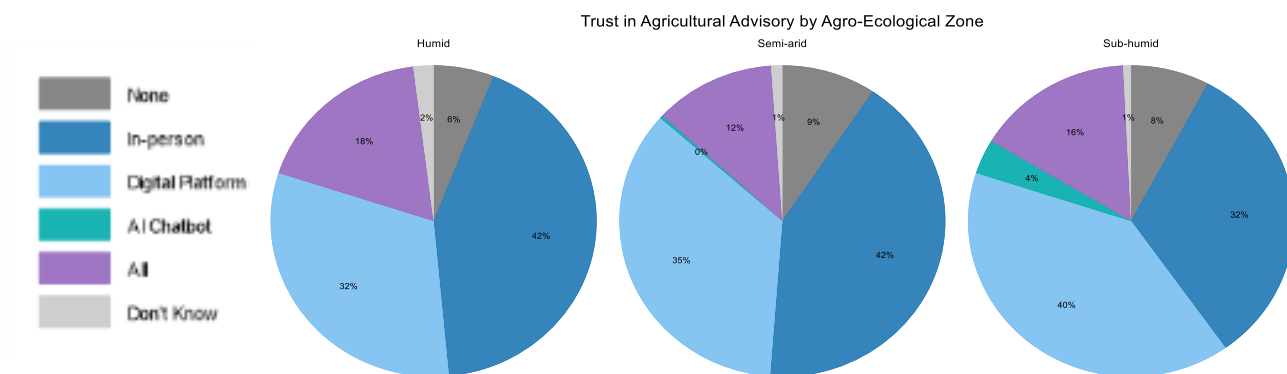


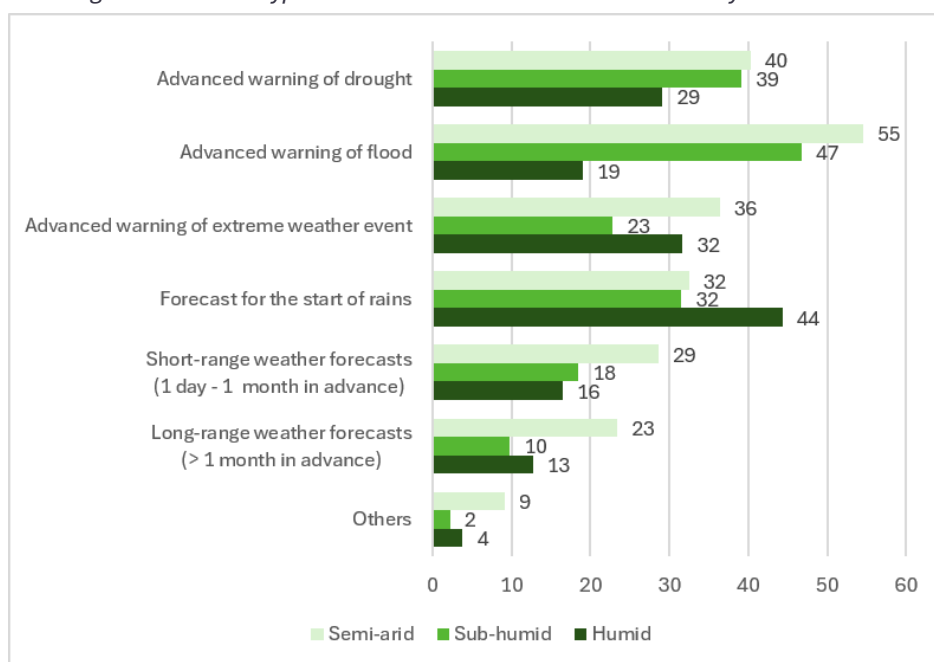
Figure 6: Trust in agricultural advisory by AEZ

Takeaways on the message: the most salient information is likely to offer deviations from norms, rather than levels (e.g., “hottest week this year”, “drier than the previous 2 seasons”) and provide thresholds (e.g., at temperatures that are likely to reduce milk yields). Information will prioritize immediacy and simplicity, especially in northern NGA and eastern MAH, lead with risks perceived to be controllable, be upfront about costs, and be framed in terms of gains.

Prioritize immediacy and simplicity: Expectations about climate extend into the future, but especially for NGA Female Headed Households (FHH), time horizons are short, and messages that emphasize near-term productivity outcomes rather than longer-run adaptation benefits may be more effective.

In NGA, fewer than half of SSPs received advanced notice of any given weather event (except for flood warnings in the semi-arid AEZ). The particular type of weather event is expected to vary by AEZ according to frequency and potential impact, with the exception that short range forecasts were more common than long range (> 1 month). Still, less than a quarter of SSPs received short run forecasts. In MAH, timeliness and difficulty understanding stood out (except for the humid AEZ) as primary reasons for not acting on weather information. These reasons were also often cited in the (most northerly/inland) semi-arid AEZ of NGA, somewhat mirroring the (most easterly/inland) sub-humid AEZ of MAH.

Figure 7: Share of types of weather risk information received by AEZ in NGA



CRIFS Phone Survey, March 2025 (n=248): “What types of weather/extreme weather event risk information did you receive?” (among households who received weather information in the last 12 months, 248 of 695).

Information-to-action pathways are more uncertain and often more complex in long-run forecasts with multiple dimensions of weather risk, including precipitation totals, onset and cessation dates, etc. (Carleton et al., 2024). Weather information traction is easier when focused on more immediate decisions, e.g., when and what to plant given monsoon onset dates and a simple three-month precipitation forecast (Rosenzweig & Udry, 2014).

While just over 70% of respondents in MAH’s sub-humid AEZ indicated that they did not want to be told what to do on their farm, two-thirds found that “being told what to do” was the most important advisory information. Regressing SSPs who acted on information, conditional on the type of presentation, being told what to do is associated with 49% higher odds of making changes. In NGA, among households who acted on weather information received in the last 12 months, 58 – 94% reported using weather information to change their planting time. Far fewer changed their income strategies or relocated.

Figure 8: Share of information presentation by AEZ in MAH

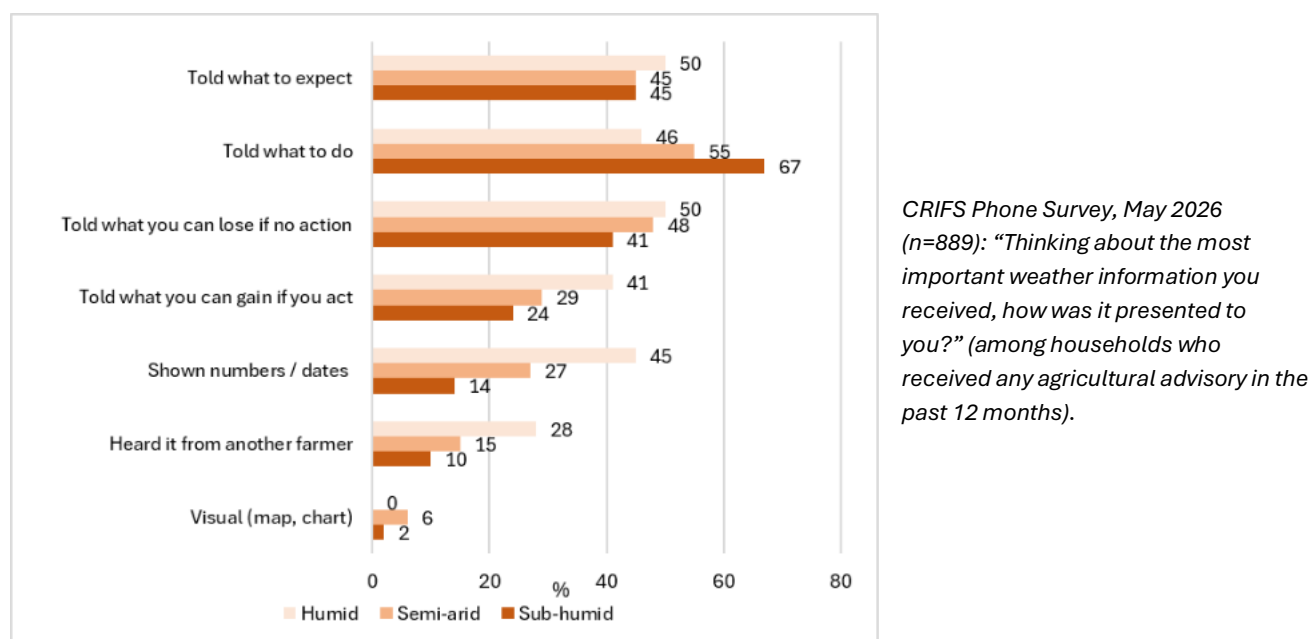
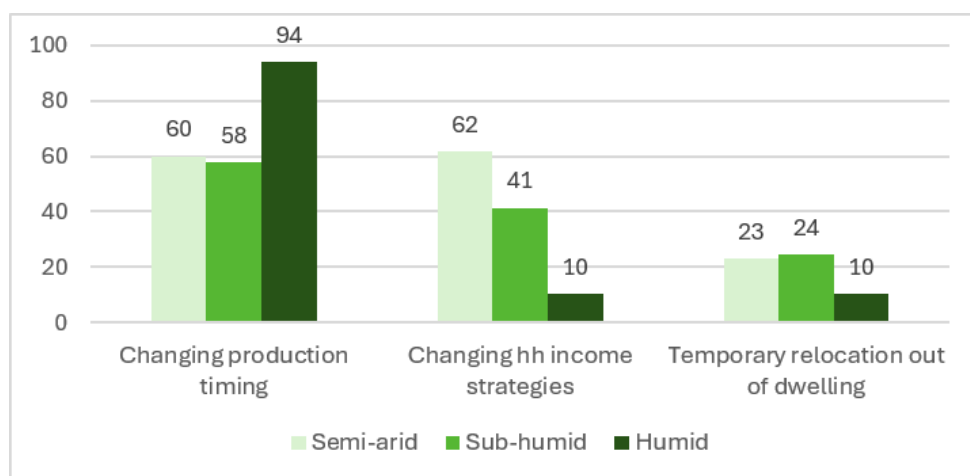


Figure 9: Share of how weather/extreme weather event risk information was used by AEZ in NGA

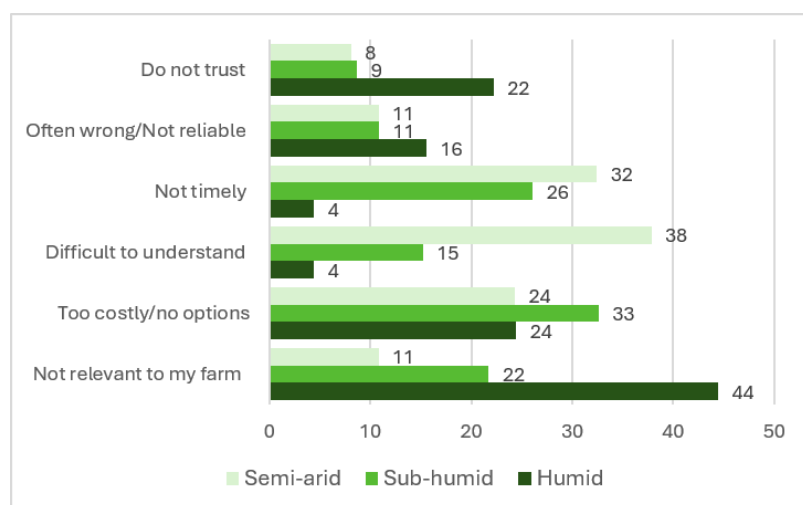
CRIFS Phone Survey, March 2025 (n=120): “How was the weather/extreme weather event risk information used?” (among households who acted on weather information received in the last 12 months, 120 of 248).



Foreground the controllable risk(s) and pair weather information with options to respond: Across AEZs in NGA, we find that SSPs report feeling more control over pests and diseases relative to weather shocks, such as high winds, drought, and flood. In MAH, SSPs beliefs in controllability of hazards varied across AEZs. Except for pests, households in the humid AEZ felt the least control over the onset of rains, floods, drought, and heat. For pests, over half of sub-humid households felt they had no control but only 14% in the humid AEZ. Message uptake may be higher if SSPs feel some control over the hazard.

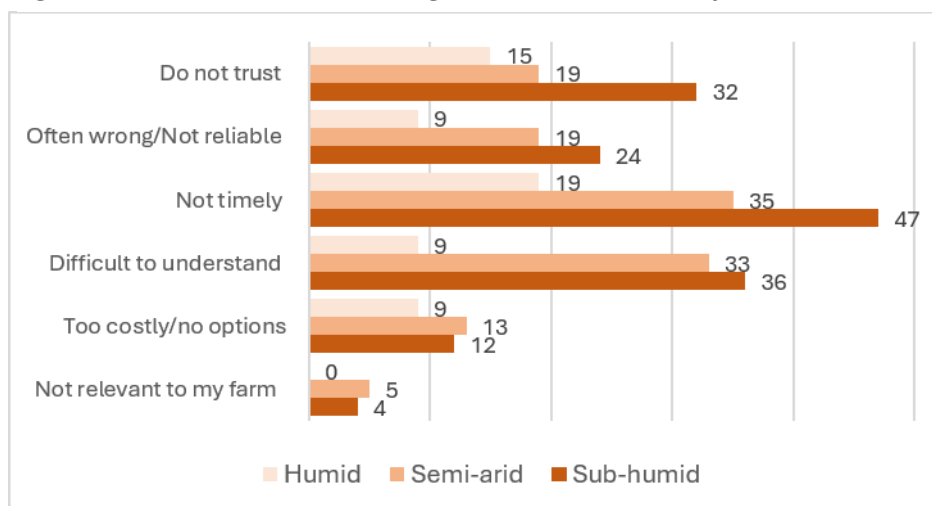
Among those receiving information in both countries, just over half (52%) reported not acting on it. Irrelevance and lacking affordable options were two of the most cited reasons in NGA, but two of the least cited in MAH where timeliness and difficulty understanding stood out (except for the humid AEZ). The onset of the monsoon rains was the most commonly sought piece of information in MAH, and barely second to pest prevalence for advisory received.

Figure 10: Share of reason for not acting on weather information by AEZ in NGA



CRIFS Phone Survey, March 2025 (n=128): "Why didn't your household make use of the information on weather/extreme weather event risk?" (among households who did not use weather information received in the last 12 months, 128 of 248).

Figure 11: Share of reason for not acting on weather information by AEZ in MAH



CRIFS Household Survey, May 2026 (n=465): "Why didn't your household make use of the information on weather/extreme weather event risk?" (among households who did not make any changes for the upcoming season in response to weather information).

Experienced climate events differ from the meteorological record: A majority of NGA households exposed to meteorological drought do not report being affected. This is consistent with earlier work finding up to 38% of households in Ethiopia and Malawi report a drought experience despite no meteorological measure of exposure to abnormally low cumulative rainfall. Recognizing the potential for measurement error from both sources, larger households and more diversified livestock holdings may buffer hazard sensitivity (Mayorga et. al., 2026). In MAH, we have found no measured climate indicators that can predict self-reports by hazard.

Experienced weather is relative: In NGA, 70% of households in the coolest AEZ (humid) reported occasional or regular exposure to > 40°C heat, compared to 34% in the semi-arid AEZ with the most >40°C days. Previous exposure may have prompted adaptative behaviors that affect self-reports. Some baselines are more fixed and certain decisions are only relevant above or below a threshold, e.g., heat above a plant or animal biophysical threshold, costs, liquidity and credit limits. The value of new information relies on assisting decision makers in discerning the likelihood of the state of the world falling above or below the relevant threshold (Raiffa H., 1968).



Figure 12: Onions harvested in Yavatamal (fieldwork, May 2026)

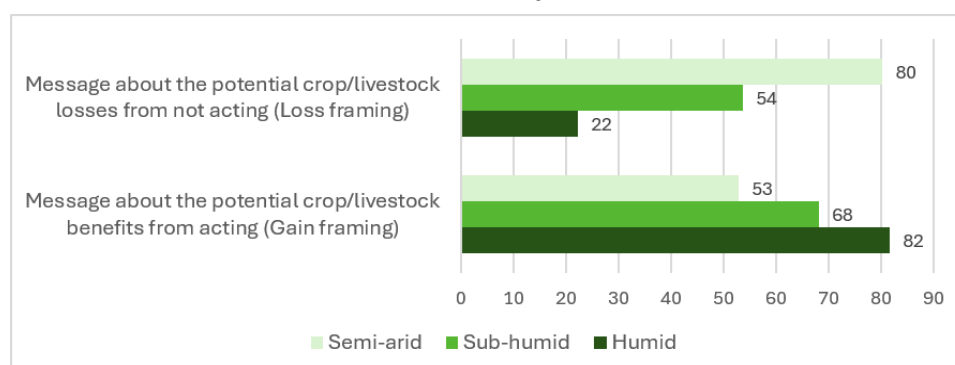
Consider how framing affects SSP perceived utility of the information:

Weather information can be framed to emphasize losses if an SSP does not act or gains if an SSP does act. Existing evidence suggests that framing is most effective in terms of gains (e.g., increased productivity) or curative (addressing an existing condition to improve outcomes). Loss framing can create a 'double negative' that can trigger avoidance rather than action (Ngo et al., 2022; Pope et al., 2018; Yanuarti et al., 2026). Our findings suggest this is mostly, but not universally, true. In NGA, SSPs in our sample appeared open to GMOs, but where media reports of

some GMO mistrust exist, gain-framed messaging (e.g., "X% more harvest, "fewer sleepless nights over fall armyworm"), may be more effective once baseline trust is in place. Leading with big yield/export numbers (e.g., as some of the government's own messaging has done) risks reading as salesmanship and may reinforce a "hidden agenda" narrative.

In NGA, the likelihood of acting on gain vs. loss framing varied significantly across AEZs. Whereas in the humid and sub-humid AEZ gain framing appeared more compelling, SSPs reported a higher likelihood of acting on loss framing in the semi-arid AEZ. Loss framing is predicted to be more effective in inciting action across all MAH AEZs. In NGA, gain-framed messages work more equally for both (72% for women, 66% for men), suggesting gain framing may be the stronger way to reach the majority with weather information.

Figure 13: Share of message framing most likely to influence SSPs to act on weather risk information received by AEZ in NGA



CRIFS Phone Survey, March 2025 (n=694): "Which of the following messages is more likely to influence you to act?"

Uptake is likely to be most effective if the message acknowledges the perceived risks, is upfront about costs, and both encourages and facilitates additional legitimate information channels, such as the national weather service: Provide clarity around total and future costs (e.g., annual seed purchases, fertilizer and labor costs, and in NGA, the sustainability of the initiative post-Gates Foundation funding support). Use concrete information, comparative data, and farmer testimonials where possible. In MAH, respondents who actively sought agricultural advice were more likely to act than non-seekers (51% vs. 34%).

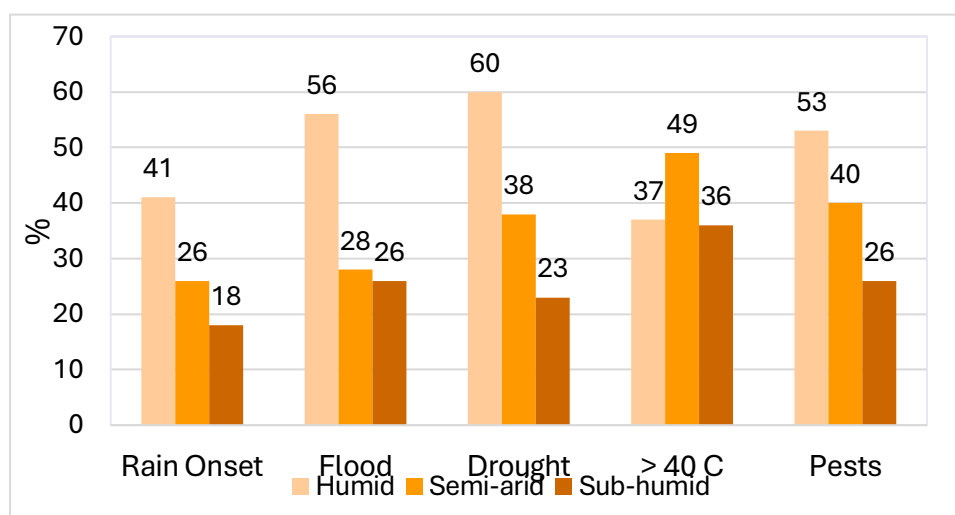
Takeaways on the recipient: analysis is preliminary, but attitudes (especially aspirations, fatalism, confidence and risk taking) differ by age, gender and AEZ and have some predictive association with acting. Exposure and vulnerability are similarly associated with AEZ and also assets, including livestock. The marginal returns to targeting women or at least ensuring their access to information may be higher than men. Don't assume that everyone believes climate risk is increasing. It may be important to balance messaging for this heterogeneity with opportunities to scale.

National and state averages mask considerable expected AEZ-level variation in exposure and vulnerability.

In NGA, self-reported exposure varied by AEZ, with the greatest divergences in heat, drought, and flood. SSPs in the humid AEZ are twice as likely to report drought or heat than SSPs in the semi-arid AEZ, but roughly half as likely to report floods. SSPs in semi-arid AEZ were more likely to report high winds or pests than other AEZs.

In MAH, there was limited AEZ variation in reported exposure to climate hazards, but considerable AEZ variation in SSPs' feelings of control over different hazards. With the exception of pests, households in the humid AEZ perceived the least control over the onset of rains, floods, drought, and heat. Specific to pests, over half of sub-humid households felt they had no control, but only 26% in the humid AEZ said so.

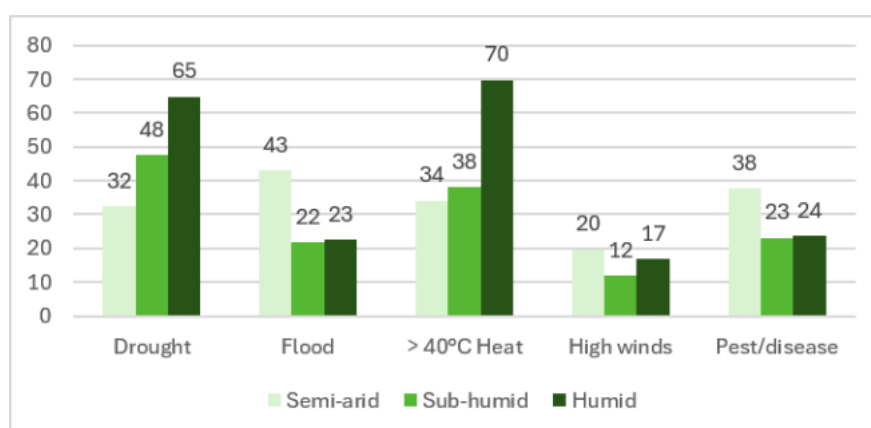
Figure 14: Share of respondent expectations of weather events by AEZ in MAH



CRIFS Household Survey, May 2026: "How likely do you think [[event_name]] is to occur in the next 1-2 years?"

Figure 15: Share of frequency of experiencing weather event by AEZ in NGA

CRIFS Phone Survey, March 2025 (n=695): "During the past 5 years, how frequently did your household experience [EVENT]?"



****Consider segmenting communications based on risk attitudes, willingness to act, and aspirations:** In NGA, age is positively associated with farming confidence. In MAH, older respondents are slightly less likely to believe that climate will become more unpredictable and are less fatalistic, though in both NGA and MAH, older respondents are less interested in changing to a new economic activity. In NGA, individuals with Qur’anic or Integrated Islamic education as the highest level of educational attainment are associated with a higher degree of fatalism and autonomy, which may limit behavior change. SSPs in the semi-arid however, are more likely to say that they want their children to become farmers than in the sub-humid and humid AEZs, which could incentivize investment. Contrary to other similarities between NGA’s north, SSPs MAH’s eastern AEZ’s are less likely than those in the humid AEZ to want their children to become farmers.

****In MAH, those who would like their children to become farmers are also more likely to adopt land management and water management practices.** Autonomy in farm decision-making is positively associated with acting on weather information, but negatively with adopting land management practices. Fatalism is negatively associated with acting on weather information. We also find both farmer confidence and fatalism are negatively associated with the adoption of ICT-based agro-advisory, while the desire for children to be farmers, believing climate will become more unpredictable in the future, as well as exposure to flood shocks are positively associated.

Table 5: Risk-taking and worldview by AEZ in NGA.

Statement	% Humid		% Sub-humid		% Semi-arid	
	Disagree	Agree	Disagree	Agree	Disagree	Agree
I am confident in myself as a farmer	6	92	4	96	2	93
I consider myself a person who is willing to take risks in farming	12	85	8	88	5	92
If misfortune is meant to strike my farm I cannot avoid it. (Fatalism)	32	60	23	72	16	76
I do not want anyone to tell me what to do on my farm (Autonomy)	53	40	62	34	49	45

CRIFS Phone Survey, March 2025 (n=695): “Indicate your level of agreement with [STATEMENT]?”

Table 6: Risk-taking and worldview by AEZ in MAH.

Statement	% Humid		% Sub-humid		% Semi-arid	
	Disagree	Agree	Disagree	Agree	Disagree	Agree
I am confident in myself as a farmer	2	98	14	86	8	92
I consider myself a person who is willing to take risks in farming	3	97	18	82	10	90
If misfortune is meant to strike my farm I cannot avoid it. (Fatalism)	17	83	40	59	35	65
I do not want anyone to tell me what to do on my farm (Autonomy)	25	75	29	71	31	69

CRIFS Household Survey, May 2026 (n=2034): “Please answer to what extent do you agree or disagree for each statement.”

****Resources may also shape attitudes and expectations.** In MAH, farmers with higher land size report higher confidence, willingness to take risks, independence in farm decision-making, but also have stronger expectations that climate will become more unpredictable. Higher livestock holdings are associated with higher confidence, optimism, and greater willingness to take risks, although households with more livestock are also less likely to want their children to become farmers. Disadvantaged caste and relatively poor households are more likely to adopt ICT-based agro-advisory and land management practices than general caste households.

Women likely have different information needs and preferences than men, rooted in both attitudinal differences and constraints: In NGA, women appear to be less receptive to loss-framing. Men are significantly more likely to be swayed by loss framed information (56% versus 35% for women).

In NGA, after accounting for observable socio-economic household characteristics and exposure to low rainfall shocks in recent years, women are less likely than men to want their children to become farmers. In MAH,

controlling for other factors, fatalism is higher across men (71%) than women (61%). Female-headed households also have significantly lower confidence as farmers and are less willing to take risks in farming. These results reverse if the >50% of women respondents from male-headed households (MHH) are included with FHH respondents.

For the greatest marginal gain, work to reach women farmers who have some decision authority: Women report receiving weather information less often than men, but act on it at a higher rate.² From decades of evidence, most of us know that female SSPs have less access to productive resources: lower quality plots, with lower quality soil, using fewer improved inputs. Additionally, the marginal productivity gain from the first packet of improved seeds is higher when starting from a lower baseline (Anderson et. al., 2017). Where structural barriers are deepest, awareness may be insufficient for uptake.

Message and design technologies

recognizing women's adaptive needs but

compromised options:

In NGA, women report higher exposure to drought and extreme heat than men. The share of women reporting exposure to drought is twice that of men (30% vs. 15%) and the share of women reporting exposure of heat is 1.5 times greater (36% vs. 23%). Newer work across 31 African countries finds that women are also more likely than men to engage in agricultural employment in drought-prone areas, as well as in areas affected by heat waves (Nico & Azzari, 2024), and that women's work intensity falls during heat waves by 40% less than men's, concluding that "being female seems to mitigate the negative impact of heat waves on farmers' work intensity in agriculture." A year later in Burkina Faso, health scientists similarly found more "adaptive" behaviors by men – reducing their work intensity more than women and focusing outdoor work in the cooler morning and evening hours while women's Physiological Strain Index (PSI) to track via heart rate and core body temperature how much reserve capacity is consumed under heat stress, worsened (Eggert et. al, 2025). There is no evidence that "being female" confers a physiological advantage to withstanding the ill effects of extreme heat, only that it increases exposure and reduces adaptive options (Yanovich et. al., 2020; Giersch et. al., 2025).



Figure 16: Participants of a mixed Focus Group Discussion in Bolorunduro, Ondo State, Nigeria (fieldwork, March 2025)

Exposure is not always predictive: In NGA, across all AEZs, the most control is felt over pest and disease, and the least over high winds. Lowest past exposure to, and most control over, wind and heat in the semi-arid AEZ follow the same pattern, as do the highest share of households in the humid AEZ reporting past exposure to drought and expectations of future drought (humid AEZ). There are no patterns for flooding or pests and disease. In MAH, precipitation events including rain onset, flood and drought loosely follow patterns across AEZ for past exposure, control and future expectations, whereas no such pattern exists for extreme heat and pest infestations.

Don't assume everyone believes in rising exposure: Approximately 24-43% of respondents across both countries and all AEZs expect more future exposure to all climate hazards; this means more than half do not. Messaging that can offer behavior change incentives beyond potential climate risk, e.g. managing market risks, may be more widely taken up.

² Similarly, in NGA, awareness of hybrids was half as much among women than men (11% v. 22%), but among the aware, women's use rates were higher (57% v. 73%).

3. Conclusion

Obviously, given AEZ, hazard, and SSP heterogeneity, the more AI Advisory messaging can calibrate performance and cost expectations under localized weather and other conditions, e.g., soil nutrients, water accessibility, plot slope, household labor, cropping choices, and input availability. And while it is premature for us to know the extent to which attitudinal variables influence behavior, in addition to creating trust to the extent that outcomes are better, localization may create “psychological ownership” to increase uptake (Saccardo, S., Dai, H., Han, M.A. et al. 2024).



Figure 17: Visit with the community head at Tufa Community, Niger State, Nigeria (fieldwork, March 2025)

We want to further analyze links between risk perceptions and behaviors. Evidence from experiments largely in the U.S. and Europe suggest that individuals regularly overestimate the risk of small, dreaded, unfamiliar, unfair and involuntary events (Cullen and Anderson, 2017; Cullen et al., 2018; Castellini, G. et al., 2024). We also have outstanding questions on why given the prevalence of televisions and phones, at least among male farmers, only 36% of respondents claim to have received weather information in NGA and 44% in MAH. We expect that timing and frequency influences the attention and traction information receives, and that SSPs, like most people, rely on heuristics - cognitive shortcuts for selecting and interpreting signals about uncertain outcomes (Wachinger et al., 2013; Tversky & Kahneman, 1974).



Figure 18: Livestock in Yavatamal (fieldwork, May 2026)

We are confident, however, that it is critical to acknowledge, in messaging and decision-making, what for some is the chronic grind of agricultural risk. The ex-post (realized) consequences of risk are generally visible and modelled as discrete events - a crop that suffers from catastrophic infestation, a flood that destroys land and livestock. But the ex-ante costs of risk - the hourly, daily, and annual decisions made to manage the risks in one's life – are the repetitive, incremental costs that compromise growth potential (Dercon, 2006, p.6).

Risk Profiles by AEZ, References and Appendices Will be Available in the Full Report

We will include five appendices for further detail in the full report: Appendix 1 is background on risk and the CRIFS conceptual model of an SSP technology adoption decision pathway; Appendix 2 lays out the methodology behind the NGA and MAH field work; Appendix 3 presents some biophysical thresholds from the literature; Appendix 4 presents other relevant background, mostly from the LSMS-ISA GHS and NSSO; and Appendix 5 presents more detailed econometrics and intrahousehold (for MAH only) results.