

Bottlenecks of Quality Early Warning information management and Integration with Indigenous Knowledge Borena Zone Disaster Preparedness and Prevention Forum Case study

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Contents

Executive Summary.....	- 761 -
I. Background and Objectives	- 762 -
II. Overall objective of the case study	- 763 -
1. Key limitation/bottlenecks of quality early warning information	- 763 -
1.1 Timeliness, quality and consistence of early warning information	- 763 -
1.2 Inadequate coordination between sectors;.....	- 764 -
1.3 Inadequate workable system of interpreting; disseminating and using early warning information. .	- 764 -
1.4 Poor early warning data base managements	- 765 -
1.5 Inadequate integration between moderns and traditional local forecasters:	- 765 -
Box 1: Key traditional forecast information source	- 765 -
Figure 1 traditional forecaster reading intestine.....	- 766 -
Table 1 seasonal calendar	- 766 -
Table 2 Borena season cycle and rain patterns	- 766 -
2. Recommendation.....	- 768 -
3. Appendix	- 769 -
Table 3 Calendar and Season	- 769 -

Executive Summary

- Early warning data coming from Woreda are incomplete, inconsistency and not timely, moreover has disparities between sectors on same issues.
- Weak coordination between Woreda sector office observed

- Inadequate integration of between traditional/ indigenous early warning system with modern one.
- Disaster Preparedness and Prevention Office mandate not well understood by government cabinet; hence attention and support the office worth was not given, thus why the office struggle with delivering mandate.
- Shortage of manpower; the Office as a serious shortage of skilled manpower. Majority of staff assigned are not expert of early warning and attempt rarely made to improve their skill due shortage of budget.
- There is not well functional system of interpreting and disseminating of early warning information and alter community and let community use the finding prepared
- Attempts have been hardly made to integrate traditional/indigenous early warning system with modern early warning information. It looks like the system getting highly neglects despite still few agencies trying best.
- Coming Hagayya rain would be short and erratic and not encourage farming and pasture and water resource Development
- This Adolesaa/dry season are not that much concerning because last hayya had laid good base and fairly strengthened by late on set of with heavy shower of current ganna. However, Its effective would further aggravate coming bonna Gagayya/long dry season (December to early March) because of upcoming Hagayya rainy season would be short and erratic.
- Now we are approaching Gada Ginda period. This period would be tough for human and livestock's as well in history. Presumably forecaster prediction is supporting past experience of Gada system power transition period historically effects because majorities of the past, "Gada Ginda" period had been tough for both livestock's and human being as well. During this period livestock had been highly affecting by external parasite and other diseases.

I. Background and Objectives

Quality early information management guide informed decision of disaster preparedness and prevention, but often early warning information's receiving from community are inconsistency,

incomplete and not timely, even disparities among sectors office information observed. Thus, it has been concerning to use that information since sometimes not fairly represent real situation of area. Further hardly integrated with abundance of indigenous knowledge that community have been using and Borena community globally known for it. Hence disaster preparedness and prevention forum organized to unlock key bottleneck and take corrective action to improve subsequent disaster preparedness and prevention work. Hence major bottle neck identified were information aren't timely, incomplete and inconsistent, weak leadership buy-in, less resource and shortage of skill labor, weak coordinator between development sector, lack of good system to analysis and interpret and use information and weak integration with indigenously early warning system.

32 participants which consists of Early Warning Experts, development sector representative and indigenous knowledge Leader attend the for forum for three days.

II. Overall objective of the case study

- To improve quality, consistence and timely of early warning information
- In the long run; to identify root causes of disaster and to have consistence early warning information flow.
- To exchange early waring information at all level(Community- Federal level) with full package
- Identify bottlenecks of integration between traditional/indigenous and moderns early warning system.
- Create workable linkage/ coordination b/n different sectors at all level in getting quality timely and consistence early warning information/strong communication between sectors
- To Provide advice and early warns about impending disaster in each area, so that the necessary preparedness measure can be taken to minimize risk

1. Key limitation/bottlenecks of quality early warning information

Forum participant in-depth discussion on below list early warning indicator to identify bottlenecks of quality early warning information and to develop action plan for improvement

- Early warning indicators
- Stress indicators
- Late or out came indicator

1.1 Timeliness, quality and consistence of early warning information

Early warning information coming from community and Woreda are not timely, incomplete and inconsistence. Sometimes contradict each other weeks on weeks. Even receive later/out came

indicators information before having early warning indicators information; for example; woreda have been reporting livestock death before not having shrink of ponds and pasture information in the prior week's/months. Even surprising some time people reports just something which not representing real situation just to response phone call from Zone and this had automatically miss leading. Over all disparities of information wide observed in information received from sectors operating in one Woreda. All those vague emanate from:

- Weak communication between sectors, shortage of logistic and resource, particularly Disaster Preparedness and Prevention Office has very limited running cost and attention not because of its mandate not well understood by government senior management.
- Majority of the government senior management not well understood the mandate of Disaster Preparedness and Prevention office. As a result they future out that the office mandates as if only distributor of aid during crises/emergency thought its roles to aid community with early warning information and preparedness.
- Shortage of manpower; the Office as a serious shortage of skilled manpower. Majority of staff assigned are not expert of early warning and attempt rarely made to improve their skill due shortage of budget.

1.2 Inadequate coordination between sectors;

Inadequate coordination between Disaster Preparedness and Prevention Office , other Government development Office and NGOs was witness from participants' confession. Disparities have been observing in information received from Woreda Disaster Preparedness and Prevention Office, Pastoralist Development Office and Health Offices. If they have been talking to each other this would haven't happened. for example, zonal Disaster Preparedness and Prevention office have been getting complete and coherent information on Nutrition from Woreda Health office due they had established good rapport with the Woreda health sectors to minimize disparities. This indicates the extent of Woreda sectors offices aren't talking to each other's.; they hardly made attempt to integrate with other Woreda development sectors and NGO working in the area as well, particularly Save the Children. The main reasons for not integrating are inadequate attention given by Woreda Cabinet to Disaster Preparedness and Prevention Office and/or misunderstood of mandate and office experts' commitment in delivering deliverables and promoting office mandates.

1.3 Inadequate workable system of interpreting; disseminating and using early warning information.

There is not well functional system of interpreting and disseminating of early warning information and alter community and let community use the finding prepared. Because majority of the Disaster Preparedness and Prevention Office staffs are not experts in early warning and/or not well trained in early information interpretation and dissemination to community. Apparently still slight attempt are round even in mobilizing local resource from community for preparedness in Dire,Arero and

Moyale Woreda. Furthermore, inadequate attention from Government Senior Management/Cabinet and not well resourced had play lion share in not interpreting and using of early warning and local resource mobilization for preparedness.

1.4 Poor early warning data base managements

Inadequate skilled manpower affects properly early warning data base management. As result the office couldn't management to have well integrated data base as expected which would have been easy assistance management decision.

1.5 Inadequate integration between moderns and Indigenous Knowledge :

Borena community has irreplaceable traditional local forecaster/ early warning system which they have been using for a generation. This indigenous and very marvellous social asset has been serving Borena from generation to generation in strengthening resilience by providing early alerts and preparedness. This includes

- “Uchu” forecasting situation by looking at slaughtered animal intestine by elders called “Uchu”
- Urjii Laltu: forecasting situation by looking at starts” traditional astronomy”
- Looking at behaviour cattle are showing day and night; this includes separating of oxen from the rest of heard in the night (loss of appetite to mate) and cattle urinate and defecate without stand up in the compound night.
- Environmental variances
- The Gada Cycles.

Box 1: Key traditional forecast information source

- Reading intestine of slaughtered cattle
- Reading the starts
- Cattle body language
- Cattle appetite (sex and food)
- The Gada Cycles –like gada power transition period Gada Ginda
- Environmental variances (changes in leaves of tree and shrubs, winds and humidity etc

And this system often very accurate compared with modern early forecaster despite under treat from different social-cultural influences and radical resistance to devalue its result by radicalistic who just criticize groundlessly.

Moreover attempts have been hardly made to integrate with modern early warning information. It looks like the system getting highly neglects despite still few agencies like Mercy Corps are trying to integrate this indigenous knowledge with modern forecasting system and capitalize on the finding in strengthening resilience.



Accordingly, discussion was made with traditional forecasters on what coming Adolesaa dry season (June- August), Hagaya rain (September-December), short dry season (Mid-December- February) and Gana season (March-May) fates would look like

Table 1 seasonal calendar

Months	J	F	M	A	M	J	J	A	S	O	N	D
Borana	Boona hagaya (long dry season)		Gaana (long rainy season)			Adolesaa (short dry season)			Hagaya (short rainy season)			

Source: literature review

Traditional forecaster had tried to give depth insight about the coming Adolesaa dry (short dry season), Hagayya rain (short rainy season), bonna Hagayya(long dry season) and Ganna rain season fate by connecting with last Hagayya and recently passed Ganna rainy season effect. Because wouldn't be possible to just predict effects of one season just exclusively based on single season rather its connection and continuity of number of years; traditionally called Marra Ganna/season cycles (*see table: 2*). As illustrated by forecaster virtuous season/cycles rainy start early mark (traditionally called amajii dry season show raining sign on 70 day) and hagayya rain sign observed in Armado month.

Table 2 Borena season cycle and rain patterns

No	Season Cycles	Rain patterns
1	Talaasa	Driest Gana, full of misery
2	Arbaa	Dry
3	Kamisaa	A lot of rain, prosperous gana season
4	Gummata	A lot of rain, animal became fat and reproductive

5	Sabdii/safxii	A lot of rain, animal became fat and reproductive
6	Aada	Dry or rain, animal may be fat or thin
7	Halsinina	Just enough rain

Source: Traditional forecaster discussion

Traditional forecaster had elaborate connection of effects of season on season. Virtuous season cycles flow each other (its build-up of one effect on others); thus, good season with adequate pasture flow each other's (**Kamissa-Gummata-Sabdii/safxii**) with a lot of rain and encourage livestock body condition improvement and reproduction. On contrary for wicked season (**Halsinin-Talassa-Arbaa**) which is dry and tough for living things. For example, last Hagayya was a good season in terms of pasture and water and also followed by late onset of ganna which just build on last virtuous Hagayya. This ganna dry season/Adolesaa are not that much concerning because last hayya had laid good base and fairly strengthened by late on set of with heavy shower of current ganna. However upcoming Hagayya rainy season would be short and erratic.

Golicha Guyo, "Uchu", Elders/prominent traditional forecaster- Yabello Woreda-Dharito Kebele said on his own words; about the fate of upcoming hagaya/short rainy season, he said *"The upcoming haggaya(mid-September- late November) rain distribution is very erratic around Melbe(Dilo and half parts of Teltele Woreda), Golbo(half parts of Dire, Miyo and Moyale Woreda) Dire(half parts of Dhas , Miyo and lower parts of Dire Woreda). Bit fair around Gommole(Arero, Half parts f D/dawa and Lower part Of Yabello up to Dhedhertu, Charii and Elwaye Kebele surrounding).Thus wouldn't encourage farming, pasture and water development. More importantly very concerning and I fear for livestock mainly cattle (grassers)"*

Hence this Adolesse/short dry season (June-Mid-September) effect would be elongated and would be elongated further heightened to coming bonna Ganna/long dry season (December-February) because coming Hagayya is very short and erratic and good rain wouldn't expected as illustrated above. In other words, long dry season (July-Mid-March) with few hagayya showers would be expected as per the forecaster prediction.

Forcaster Golicha Guyo, advice HH head to properly save this ganna farming bulks, pasture, enclosure and harvest because he was concerned with Adolessa dry season would further elongate to coming Bona gana/long dry season since hagayya rain is erratic and short.

Furthermore, star called "Bakalchaa" play crucial role in traditional early warning system of Borena community. Usually its signs are very accurate and promising. And forecaster are put forthcoming seasons fate as follows; they said that "Now this star stand at the centre during sunset locally called "Galmuchaa" and this star had score 33 days today since not observed and would further remain invisible for coming 27 days. So possibly return/became visible around 60 days because as this would take beyond 60 days. Often when season fate is very concerning return/became visible after scoring 100 days. For example, during Gada Jilo Agaa period drought (olaa arbbaa Titee) and Gada Boru Guyyo drought which is a transition period from Jilo Agaa to

Boru Guyyo had scored 100 days before returning/get visible. During these two period droughts had highly affects Borena community. However, for moment wouldn't goes beyond 60 days. But highly affect upcoming Hagayya/short rainy season. Strong bonaa hagayya/long dry season (December- Mid-March would highly affects living things that not well recovered from Adelessa/dry season as a result short and erratic hagayya/short rain season.

Coming gana/long dry season is called "Harsinina" which short, but adequate water; so, it wouldn't concerning though Ammajii dry season devastate situation.

Additionally, they try to connect with history of Gada system power transition period traditionally called "Gada Ginda." During Gada Gindaa situations have been challenging for a generation, now we are on the eve of Gada Ginda. This period would be tough for human and livestock's as well in history. Presumably forecaster prediction is supporting experience of Gada system power transition period historically effects because majorities of the past, "Gada Ginda" period had been tough for both livestock and human being as well. During this period livestock had been highly affecting by external parasite and other diseases.

2. Recommendation

- To have quality and timely early warning information Disaster preparedness Office should create strong coordination with Woreda development sector and community
- Woreda Disaster Preparedness and Prevention Office should create room on how to integrate modern and traditional/indigenous early warning system
To get relief of budget and logistic short Woreda Disaster Preparedness and Prevention Office staff should devise workable strategies on how they would integrate with NGOs and government development sector.
- Would be better of Zonal Disaster Preparedness and Prevention Office work with development Organization on developing workable early warning data base and early warning result dissemination system, like ratio program.

3. Appendix

Table 3 Calendar and Season

English	Oromo	Borena	Season	Season
January	Amajji	Amajji	Bona	Long dry
February	Gurrandhala	Gurrandhala	Bona	Long dry
March	Bitoottesa	Bitoottesa	Gana	Long rainy
April	Ebla	Caamsa	Gana	Long rainy
May	Caamsaa	Buufa	Gana	Long rainy
June	Waxabajji	Wacabajji	Adolessa	Short dry
July	Adolesa	Hoboraa Guddaa	Adolessa	Short dry
August	Hagayya	Hoboraa Diqqaa	Adolessa	Short dry
Sept	Fulbana	Birraa	Adolessa	Short dry
Oct	Onkololessa	Ciqaawaa	hageya	Short rainy
Nov	Sadassa	Sadaasa	Hageya	Short rainy
Dec	Muddee	Abraasaa	Bona	Long dry

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