Better disaster prevention and management through the use of climate information: example from Senegal.

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National Agency for Civil Aviation and Meteorology (ANACIM)
CLIMATE IMPACT ON SECTORS
The climate has an impact on all sectors of activity: air navigation, maritime navigation, small-scale fishing, agriculture, livestock, water resources, disaster risk prevention and management, health, tourism, energy, construction, etc.
CLIMATE SERVICE AVAILABLE

Forecast Bulletins

- Season monitoring report
- Daily forecast Bulletin
- 3 day forecast Bulletin
- Weekly forecast Bulletin
- Season forecast Bulletin
- Projection over decades
CHANNELS FOR THE DISSEMINATION OF WEATHER AND CLIMATE INFORMATION

- CLPA
- RURAL ORGANIZATIONS
- GTP
- FAO (mobile appli)
- Naatal Mbay
- DPM/DPSP – HASSMAR
- DPC
- Monitoring Committee (St-Louis et Mbour)
- Web site ANACIM: www.anacim.sn
- Mobile Application: Search for ANACIM On Google Play Store
- National Climate Services Framework web portal
- E-mail
- Online Press
- TV Weather Report
- Participation in TV shows
- Weather information in TV shows
- Yeewoulen(TFM), Sen Show(SEN TV), Kinkeliba (RTS) and RDV
- Voice alerts: fishermen (CLPA), farmer organizations, CNGI, technical services (fisheries, red cross, Enda NRJ, FAO, Ministries, etc.)
- SMS and VOCAL alerts: fishermen (CLPA), farmer organizations, CNGI, technical services (fishing, red cross, Enda NRJ, FAO, Ministries, etc.)

- Radio
- National Radios
- Programs
- URAC
- REJAQUES
- PRINT PRESS

- Plateforme de relais

- Internet

- TV

- SMS

- Voix
SENEGAL COMMUNITY RADIO NETWORK (URAC)

Source : https://uracsenegal.sn/
SETTING up
A CLIMATE INFORMATION
SERVICE TO AVOID DISASTERS
METEOROLOGICAL ASSISTANCE TO BASIC DEVELOPMENT

Forecast Over 3 months
Daily Forecast
Impending rain

Météo (ANACIM)

Local Authority (Divisional Officer)

Working group (10 days): Adapted weather info

Breed

Mayor

Rural Radio

Dry, Food

ANCAR

Seed Production

Plant Protection

Agriculture

Water & forests

Multidisciplinary Working Group

Rural Radio
Voice + Text message
Social Meetings
Bulletin

Beneficiaries
IMPACT OF THE USE OF CLIMATE INFORMATION ON FOOD SECURITY
TEMPERATURE VARIATION AND CARBON DIOXIDE CONCENTRATION (1880-2016)

Data Source CO2 (Siple Ice Cores): http://cdiac.esd.ornl.gov/ftp/trends/co2/siple2.013
Data Source CO2 (Mauna Loa): http://cdiac.esd.ornl.gov/ftp/trends/co2/maunaloa.co2

Graphic Design: Michael Ernst, The Woods Hole Research Center
GEO-PORTAL: IPCC PROJECTION (10 TO 100 YEAR TRENDS) FOR LONG-TERM PLANNING.
EXAMPLE IN THE FIGHT AGAINST FLOODS
Pour vous qui voyagez sur l’axe Thiès-Dakar, prenez vos précautions, la route est coupée en deux en ce moment à hauteur de Diamniadio. Seul issu: l’autoroute à péage.

Graves inondations à Keur Massar: Ils nagent pour rejoindre leur maison

DAKARBUZZ.NET
Graves inondations à Keur Massar: Ils nagent pour rejoindre leur maison - Dakarbuzz
## 2020 Rainfall Situation: Analysis of Extremes (event of September 05, 2020)

<table>
<thead>
<tr>
<th>Régions</th>
<th>Départements</th>
<th>Localités</th>
<th>Pluies du 05 septembre 2020</th>
<th>Pluies maximales historiques</th>
<th>Dates</th>
<th>90ème percentile</th>
<th>99ème percentile</th>
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</thead>
<tbody>
<tr>
<td>Fatick</td>
<td>Fatick</td>
<td>Fatick</td>
<td>104.4 mm</td>
<td>182.1 mm</td>
<td>9 septembre 1971</td>
<td>116.01 mm</td>
<td>170.9 mm</td>
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<td></td>
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<td>Diakhao</td>
<td>158.7 mm</td>
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<td></td>
<td></td>
<td>Diaoulé</td>
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<td>Foundiougne</td>
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<td>Foundiougne</td>
<td>48.5 mm</td>
<td>159.2 mm</td>
<td>10 octobre 2002</td>
<td>116.88 mm</td>
<td>164.75 mm</td>
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<td></td>
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<td>Toubacouta</td>
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<td>203 mm</td>
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<td></td>
<td></td>
<td>Nioro Alassane Tall</td>
<td>186 mm</td>
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<tr>
<td>Thiès</td>
<td>Mbour</td>
<td>Mbour</td>
<td>97.1 mm</td>
<td>232.7 mm</td>
<td>26 août 1962</td>
<td>128.88 mm</td>
<td>192.39 mm</td>
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<td></td>
<td>Popenguine</td>
<td>148.1 mm</td>
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<td></td>
<td></td>
<td>Thiès</td>
<td>126.9 mm</td>
<td>163.8 mm</td>
<td>28 août 1975</td>
<td>107.07 mm</td>
<td>161.33 mm</td>
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<td>Khombole</td>
<td>225.8 mm</td>
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<td></td>
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<td>Pout</td>
<td>124.4 mm</td>
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<td>Dakar Yoff</td>
<td>Dakar Yoff</td>
<td>Dakar Yoff</td>
<td>93.3 mm</td>
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<td>26 août 2012</td>
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<td>Dakar Bel Air</td>
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<td></td>
<td>Rufisque</td>
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<td>Diamniadio</td>
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<td>Guédiawaye</td>
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<td>Kaolack</td>
<td>Kaolack</td>
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<td>214.5 mm</td>
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<td>Nioro du Rip</td>
<td>Nioro du Rip</td>
<td>68.6 mm</td>
<td>214.3 mm</td>
<td>04 septembre 1966</td>
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<td>Passy</td>
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<td>Sokone</td>
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<td>Wack Ngouna</td>
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<td>Diourbel</td>
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<td>147.1 mm</td>
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<td>152.6 mm</td>
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<td></td>
<td></td>
<td>Réfane</td>
<td>150 mm</td>
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</tbody>
</table>
DISSEMINATION OF WEATHER AND CLIMATE INFORMATION: SAP SMS & VOICE

SAP SMS & VOICE was triggered from September 04, 2020, to alert the authorities (National Flood Management Committee, technical services, etc.), SAP targets of rain-storm events scheduled for September 5 and 6, 2020. Ci Below are screenshots of text messages received by users:

Vend, 4 Sept 2020

Des orages et pluies seront notes cette soiree et la nuit sur tout le pays notamment sur les regions nord ou l'intensite sera moderee a assez forte.

Vend, 4 Sept 2020

Orages et pluies intermittentes et d'intensites variables attendus sur tout le pays au cours de cette journee et la nuit.

Vend, 4 Sept 2020

Les orages et pluies vont se poursuivre durant cette nuit et la journée du dimanche sur une bonne partie du pays notamment sur les regions ouest.
STRONG PRESENCE ON SOCIAL NETWORKS

The other dissemination channels (voice, facebook, twitter, emails, etc.) were also used to alert on the rainy-stormy events scheduled for September 5 and 6, 2020. Below are the captures:
A FEW FIGURES ON ALERTS

2017:
Agriculture: 59,315 SMS

2018:
Agriculture: 97,573 SMS et 36,614 vocal calls; 
Fishery: 106,847 SMS et 93,248 vocal calls;

2019:
Agriculture: 148,162 SMS et 36,126 vocal calls; 
Fishery: 88,168 SMS et 66,343 vocal calls.

2020:
Agriculture: 508,420 SMS et 50,170 vocal calls
Fishery: 122,592 SMS et 66,497 vocal calls

2021:
Agriculture: 840,081 SMS et 3,130 vocal calls (business model)
Fishery: 108,775 SMS et 46,480 vocal calls

These alerts targeted nearly four thousand (4000) information relays for agriculture and nearly one thousand five hundred (1500) relays for fishing. Presence on: Facebook, Twitter, youtube channel,
CONCLUSION

• Africa is experiencing the impact of climate variations
  • Very vulnerable + Limited means
• Substantial progress in climate science
• IT (computing power) + Observations (satellite, etc.)

• Need to transmit information:
  • Decision-makers (states, private, NGOs) + Community (FO, population)

• The Role of the Media:
  • Committed: environmental issues, avant-garde (laws)
  • Specialized: climate expertise
  • Presence: climatic events (COP), dedicated day (tree, weather, ozone, environment, etc.)