Instrumentos para uma Política Nacional de Secas

Irani Braga Ramos
Secretario de Desenvolvimento Regional/MI

Dia Mundial da Água

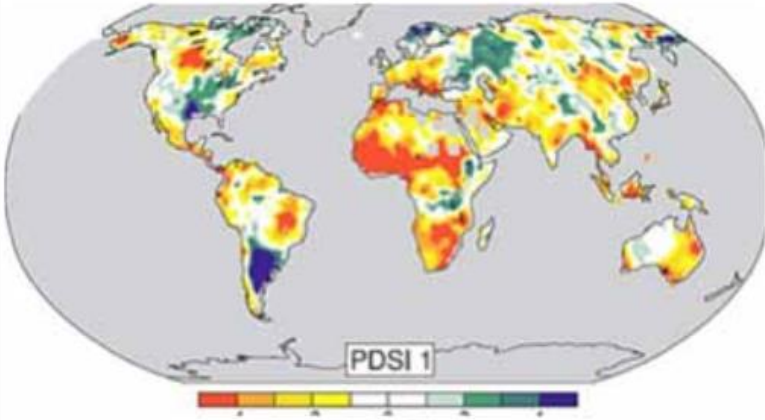
Segurança Hídrica para o Desenvolvimento Sustentável

Brasília-DF, 20 de março de 2015

Contexto Mundial

Fenômeno Frequente

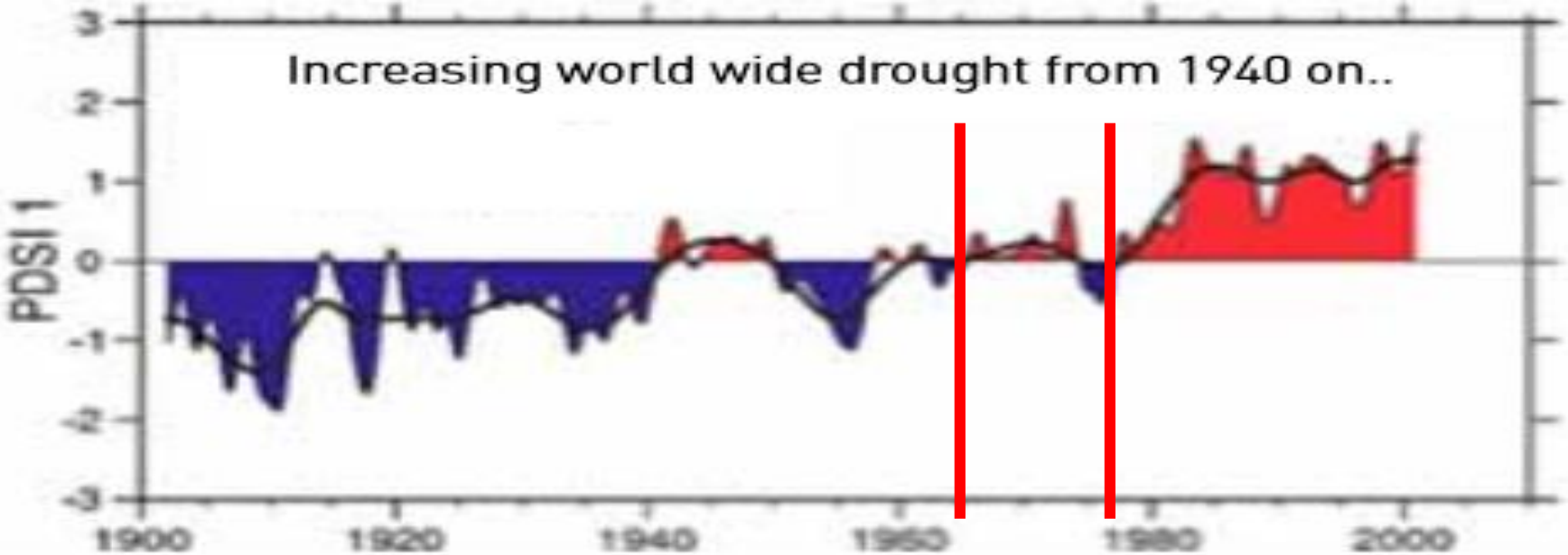
Há cenários do IPCC que sugerem incremento na intensidade das secas



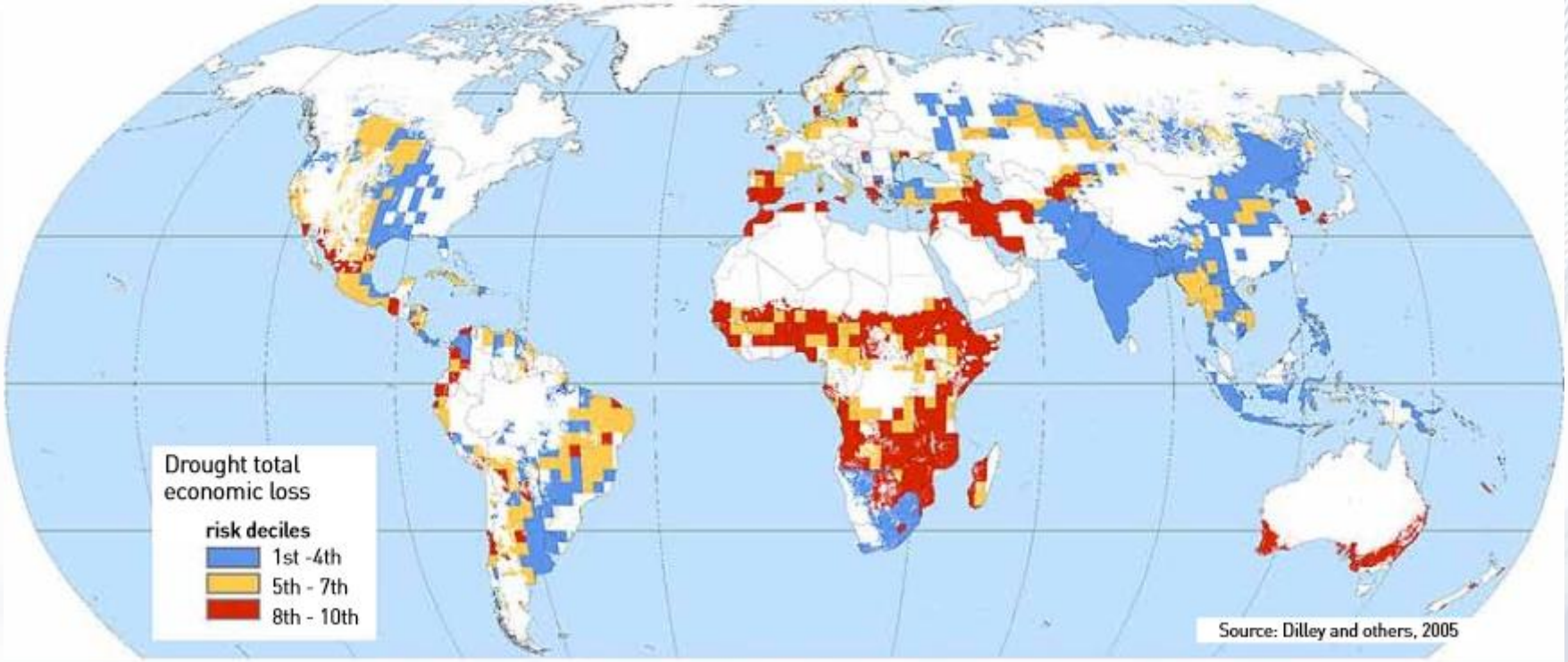
(IPCC, 2007) Palmer Drought Severity Index (PDSI).

Maiores frequência e intensidade

http://www.fao.org/docrep/017/aq191e/aq191e.pdf



Perdas Econômicas



Perdas econômicas como proporção do PNB (FAO, 2012)

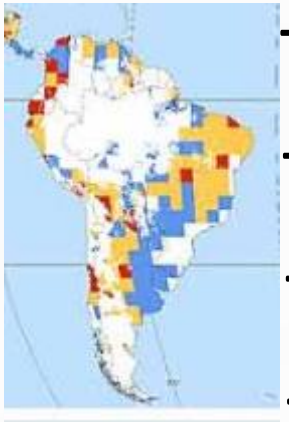
http://www.fao.org/docrep/017/aq191e/aq191e.pdf

US$ 191 bilhões (1970-2012) – World Meteorological Organization

http://www.wmo.int/pages/prog/drr/transfer/2014.06.12-WMO1123_Atlas_120614.pdf

Perdas Econômicas por Desastres Naturais

- Ásia – 6% de US$ 790 bi
- América do Norte e Caribe – 6% de US$ 1.009 bi
- Europa – 11% de US$ 376 bi
- Austrália – 18% de US$ 118 bi
- África – 19% de US$ 27 bi
- América do Sul – **23%** de US$ 72 bi
- MUNDO – 8% de US$ 2.391 bi



http://www.wmo.int/pages/prog/drr/transfer/2014.06.12-WMO1123_Atlas_120614.pdf

Perdas Humanas

- Desde 1900 mais de 11 milhões de mortes e 2 bilhões de afetados
- Causa primária de doenças de veiculação hídrica ou má nutrição

Atlas of Mortality and Economic Losses from Weather, Climate and Water Extremes (1970–2012)

http://www.wmo.int/pages/prog/drr/transfer/2014.06.12-WMO1123_Atlas_120614.pdf

Contexto Brasileiro

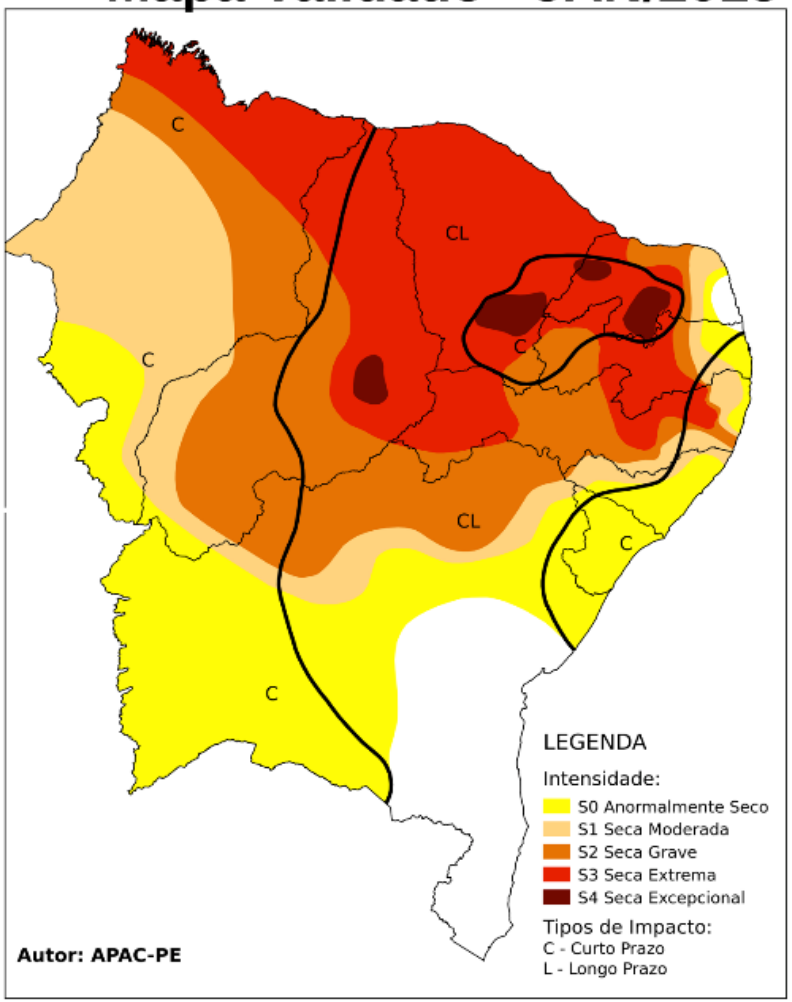
Políticas seculares (desde o império)

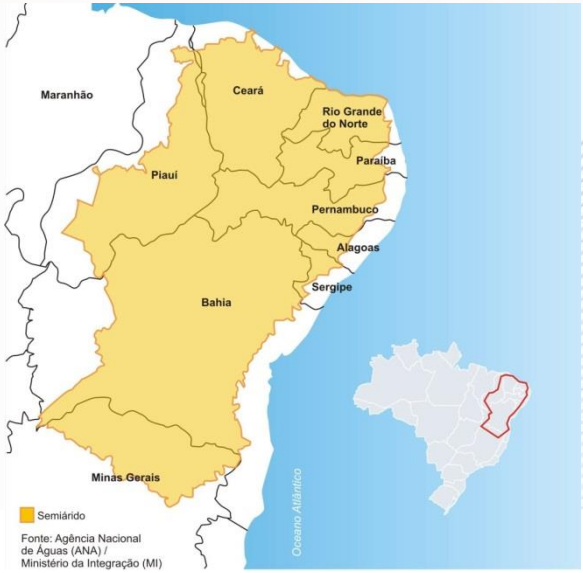
- Ações emergenciais
  - Carros Pipa
  - Evacuação
  - Frentes de trabalho
- Ações estruturantes
  - Reservação (açudagem)

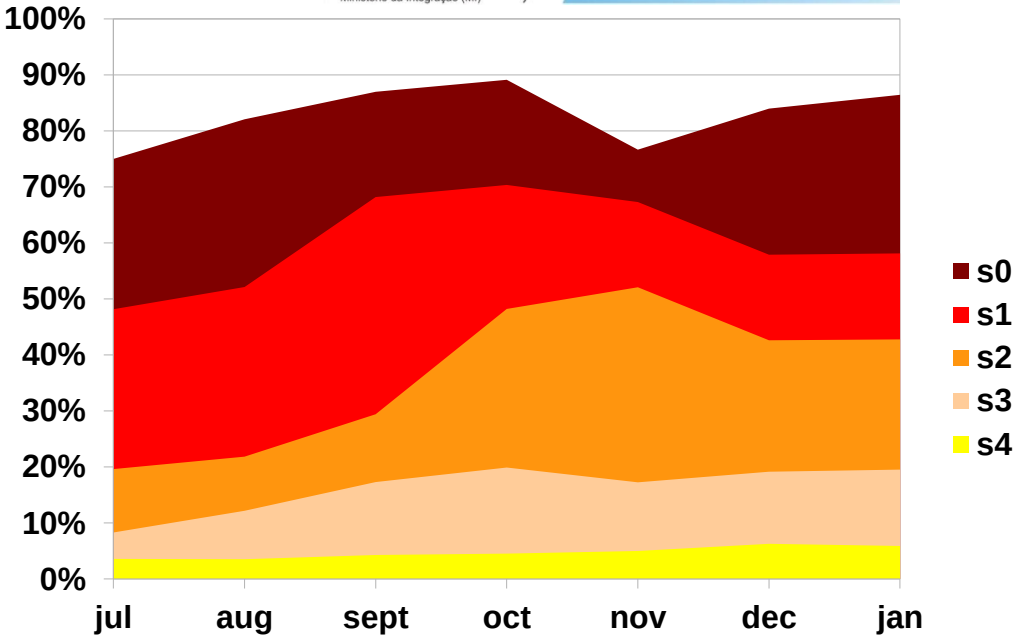
Magalhães, A R, Martins, E S. Drought and Drought Policy in Brazil.

http://www.usda.gov/oce/reports/weather/National_Drought_Policy.pdf

Monitor de Secas do Nordeste
Mapa Validado - JAN/2015







Atual Seca (desde 2012)

- Ações emergenciais
  - Operação Carro Pipa
  - Venda de milho subsidiado
  - Adutoras emergenciais
  - Bolsa-Estiagem
- Ações estruturantes
  - Grandes infraestruturas
  - Outras infraestruturas (PAC-SECA)
  - Abastecimento rural (cisternas e SSA)

R$ 20 bilhões

Outra Abordagem

Outra abordagem: pra quê?

- Apenas ampliar a infraestrutura não basta
- Com recursos limitados é preciso melhorar a alocação, tanto no tempo quanto no espaço
- Medidas menos drásticas com alocação adequada podem evitar outras mais drásticas
- É possível reduzir perdas
- Incertezas (cenários climáticos, antropização) exigem gestão dos riscos e perdas
- Ações devem ser desmobilizadas com critério

O que estamos construindo

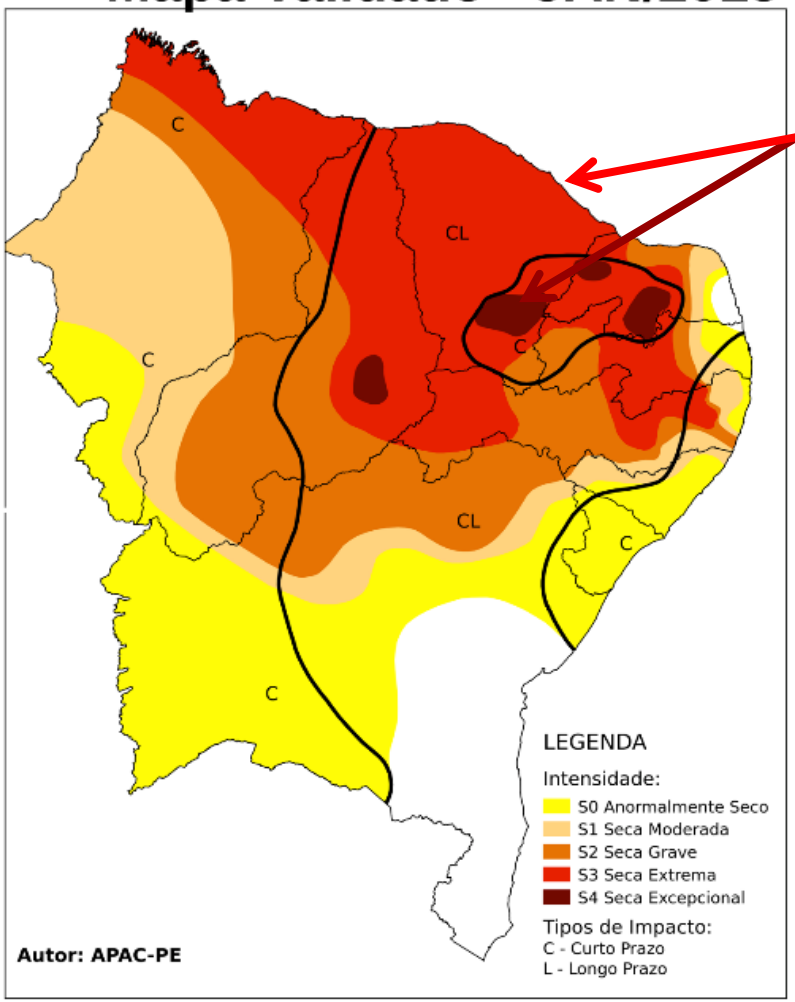
A mudança da atuação reativa, baseada na gestão da crise, para a gestão pró-ativa, calcada na gestão dos recursos

PERENE

Pilares:

- Monitoramento para alerta precoce e subsidio aos tomadores de decisão
- Identificação das vulnerabilidades e avaliação de impactos
- Planejamento e preparação

Monitor de Secas do Nordeste
Mapa Validado - JAN/2015



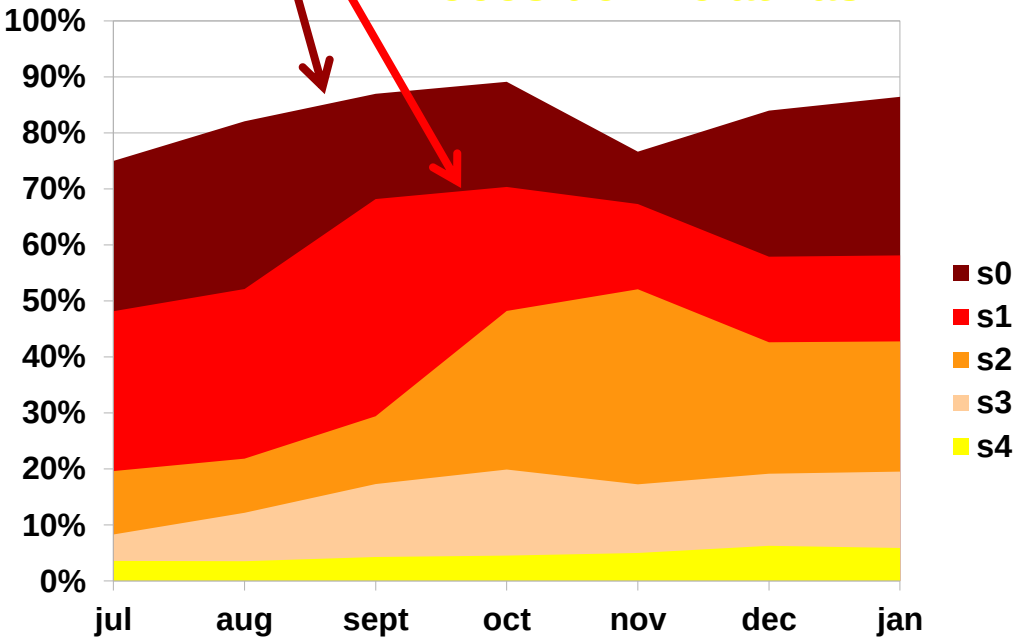
Blocos de iniciativas A

Blocos de iniciativas B

Blocos de iniciativas C

Blocos de iniciativas D

Blocos de iniciativas E



Monitor de Secas

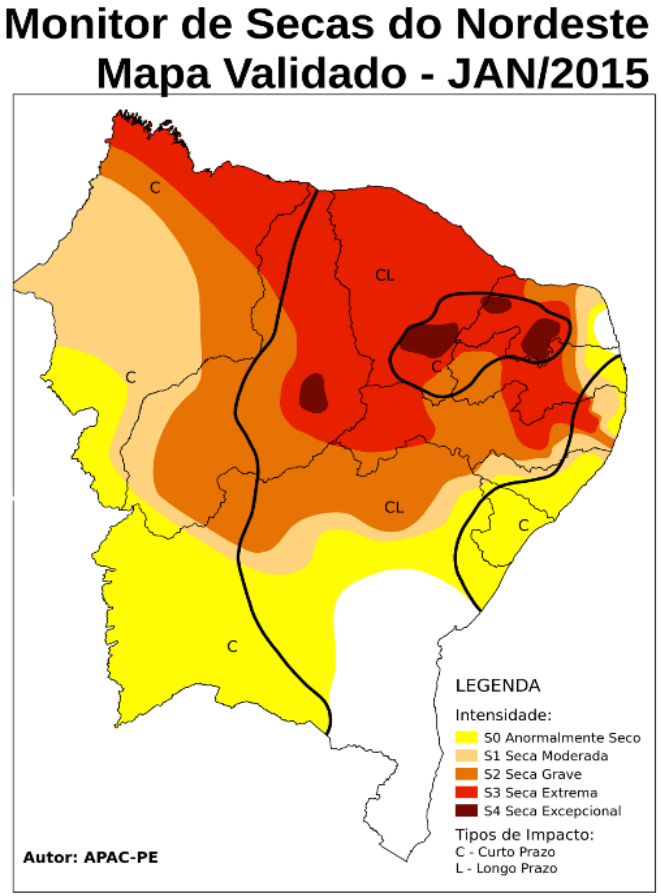
Monitor de Secas do Brasil

ATORES E DADOS FEDERAIS E ESTADUAIS

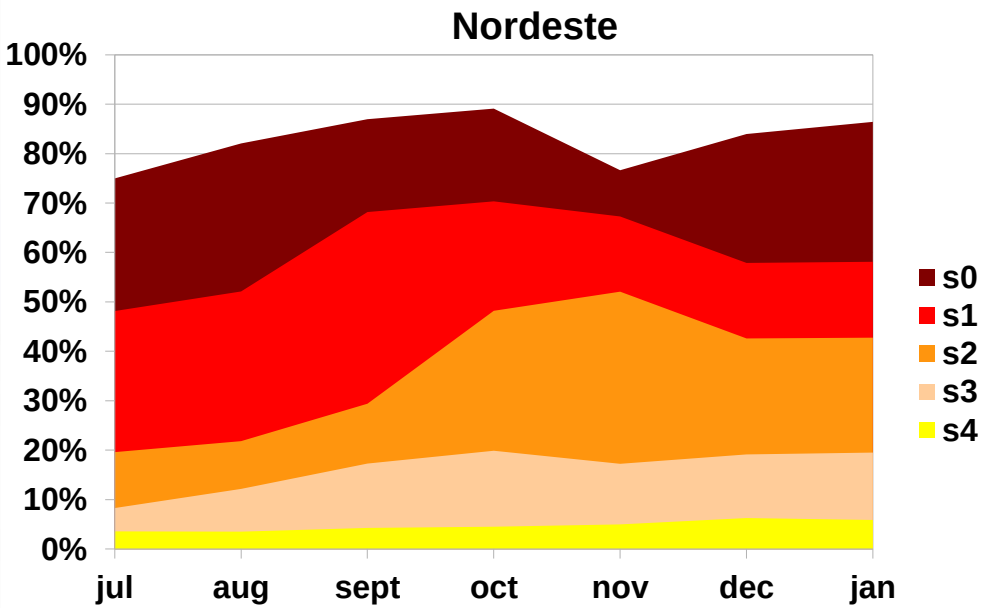
AGRICULTURA

METEOROLÓGICO

ATORES E DADOS FEDERAIS E ESTADUAIS



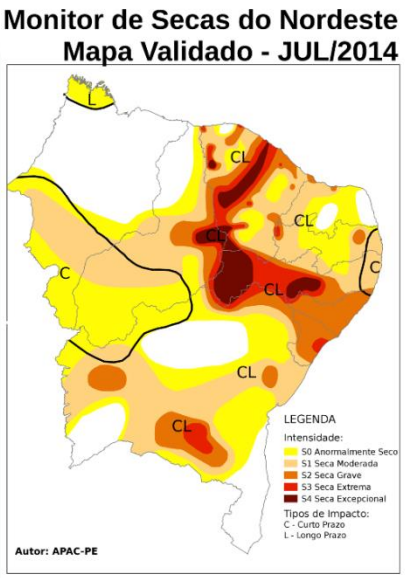
- 5 categorias
- Frequência mensal
- Validação local

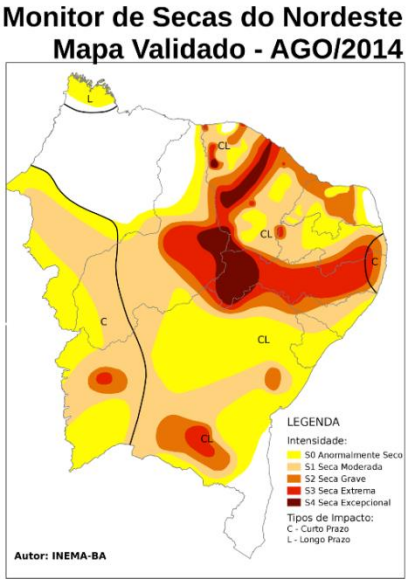


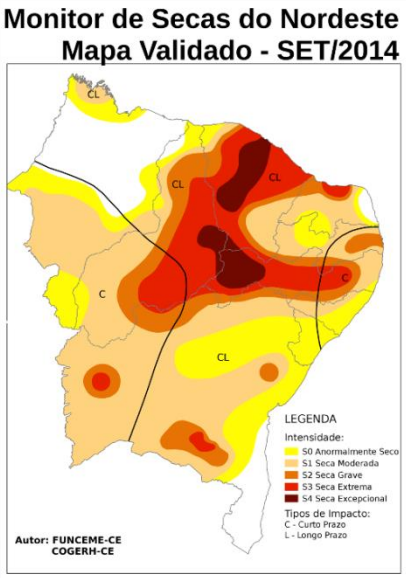
RECURSOS HÍDRICOS

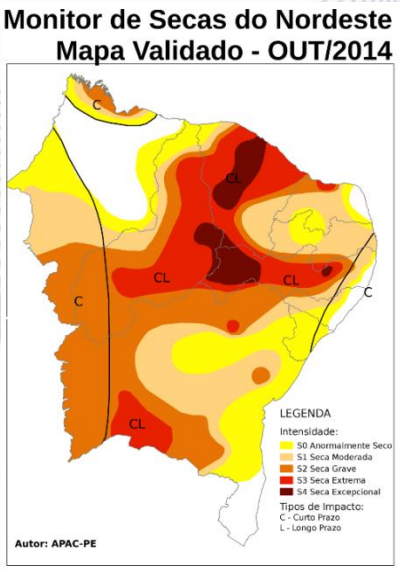
ATORES E DADOS FEDERAIS E ESTADUAIS

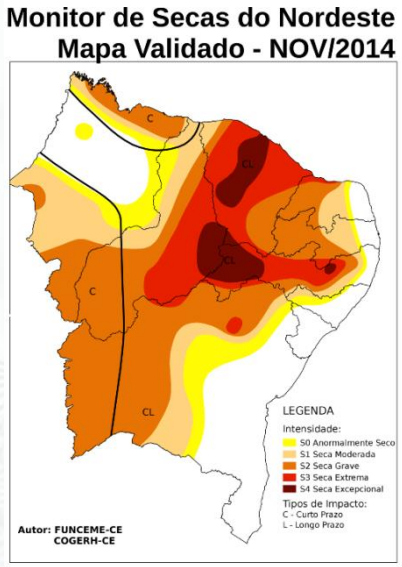
Monitor de Secas do Brasil

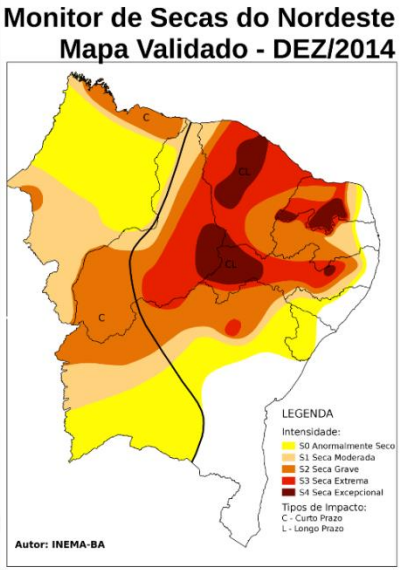


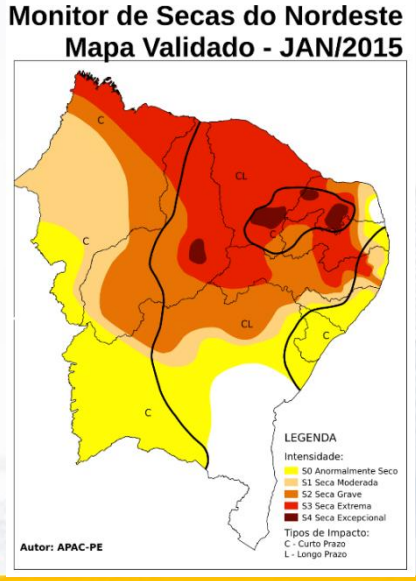












Fase Piloto
Experimental

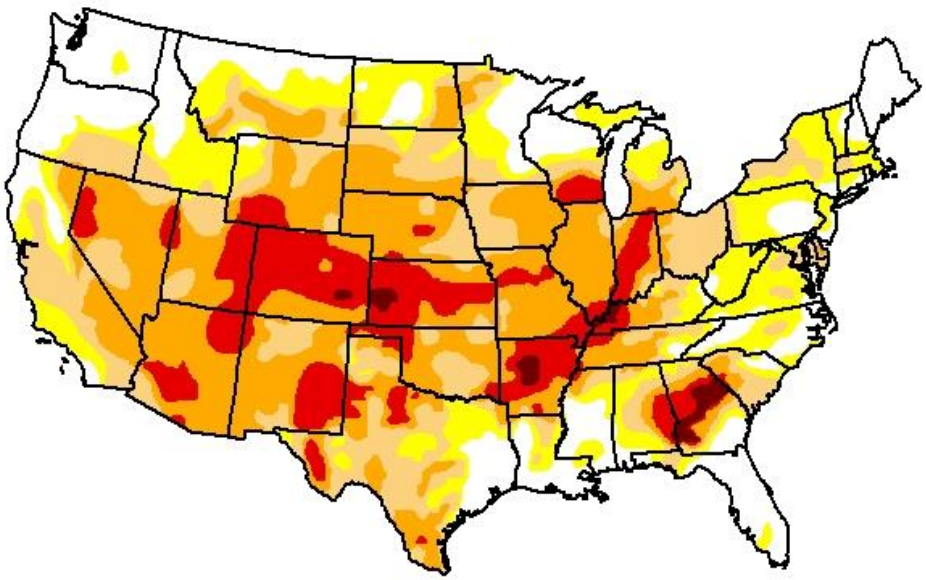
U.S. Drought Monitor

Total U.S.

July 17, 2012

(Released Thursday, Jul. 19, 2012)

Valid 7 a.m. EST



Drought Conditions (Percent Area)

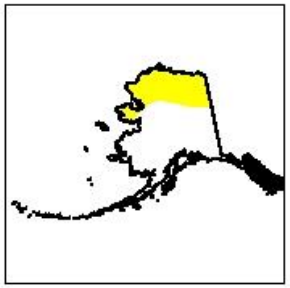
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	27.62	72.38	53.17	35.33	11.32	0.83
Last Week *7/10/2012*	28.30	71.70	50.92	31.11	9.71	0.62
3 Months Ago *4/17/2012*	50.23	49.77	30.95	16.44	5.50	1.58
Start of Calendar Year *1/3/2012*	58.47	41.53	26.73	15.78	8.51	2.77
Start of Water Year *9/27/2011*	63.45	36.55	24.42	19.61	14.87	9.50
One Year Ago *7/19/2011*	66.05	33.95	23.76	19.41	15.06	9.11

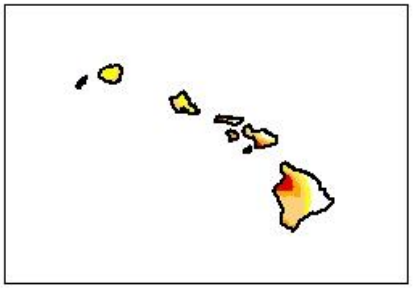
Intensity:

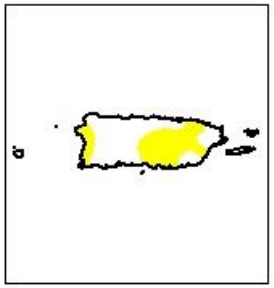
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
Richard Heim
NCDC/NOAA







USDA National Drought Mitigation Center

http://droughtmonitor.unl.edu/

Suivi nord-américain des sécheresses

28 Février 2015

Parution : Vendredi, le 13 Mars, 2015

http://www.ncdc.noaa.gov/nadm.html

Analystes:
Canada - Trevor Hadwen
Dwayne Chobanik
Mackenzie Costabile
Mexico - Reynaldo Pascual
Adelina Albanil
U.S.A. - David Simeral
Michael Brewer*
* Responsable d'assembler la carte de NA-DM et le texte

Intensité de la sécheresse:

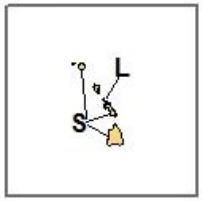
- D0 Sécheresse anormale
- D1 Sécheresse modérée
- D2 Sécheresse grave
- D3 Sécheresse extrême
- D4 Sécheresse exceptionnelle

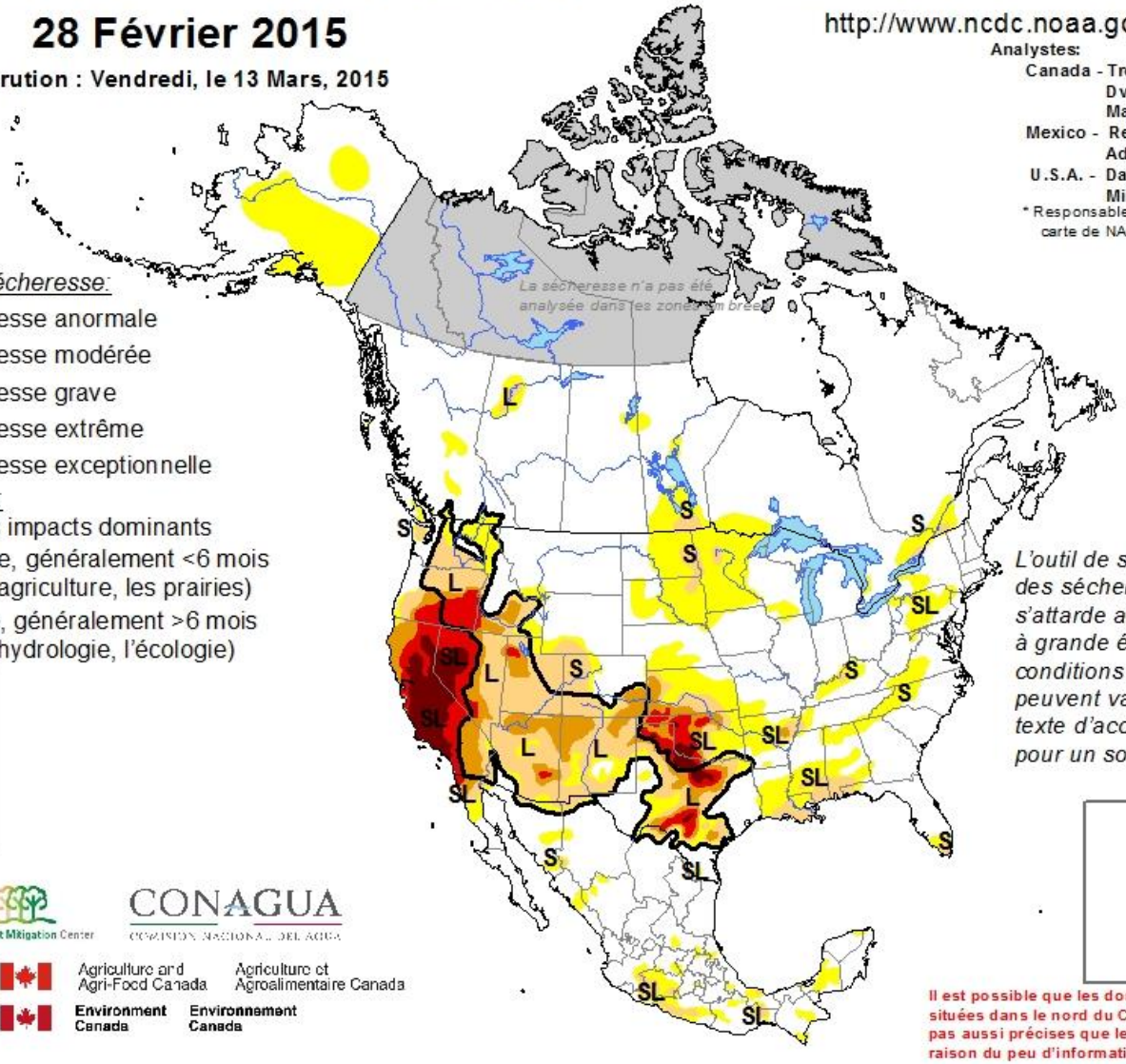
Types d'impacts:

Délimite les impacts dominants

S = à court terme, généralement <6 mois (p. ex., sur l'agriculture, les prairies)

L = à long terme, généralement >6 mois (p. ex., sur l'hydrologie, l'écologie)





L'outil de surveillance des sécheresses s'attarde aux conditions à grande échelle. Les conditions locales peuvent varier. Voir le texte d'accompagnement pour un sommaire général.

Il est possible que les données sur les régions situées dans le nord du Canada ne soient pas aussi précises que les autres régions en raison du peu d'information disponible.

USDA
National Drought Mitigation Center
CONAGUA
COMISIÓN NACIONAL DEL AGUA
NOAA
Agriculture and Agri-Food Canada / Agriculture et Agroalimentaire Canada
Environment Canada / Environnement Canada

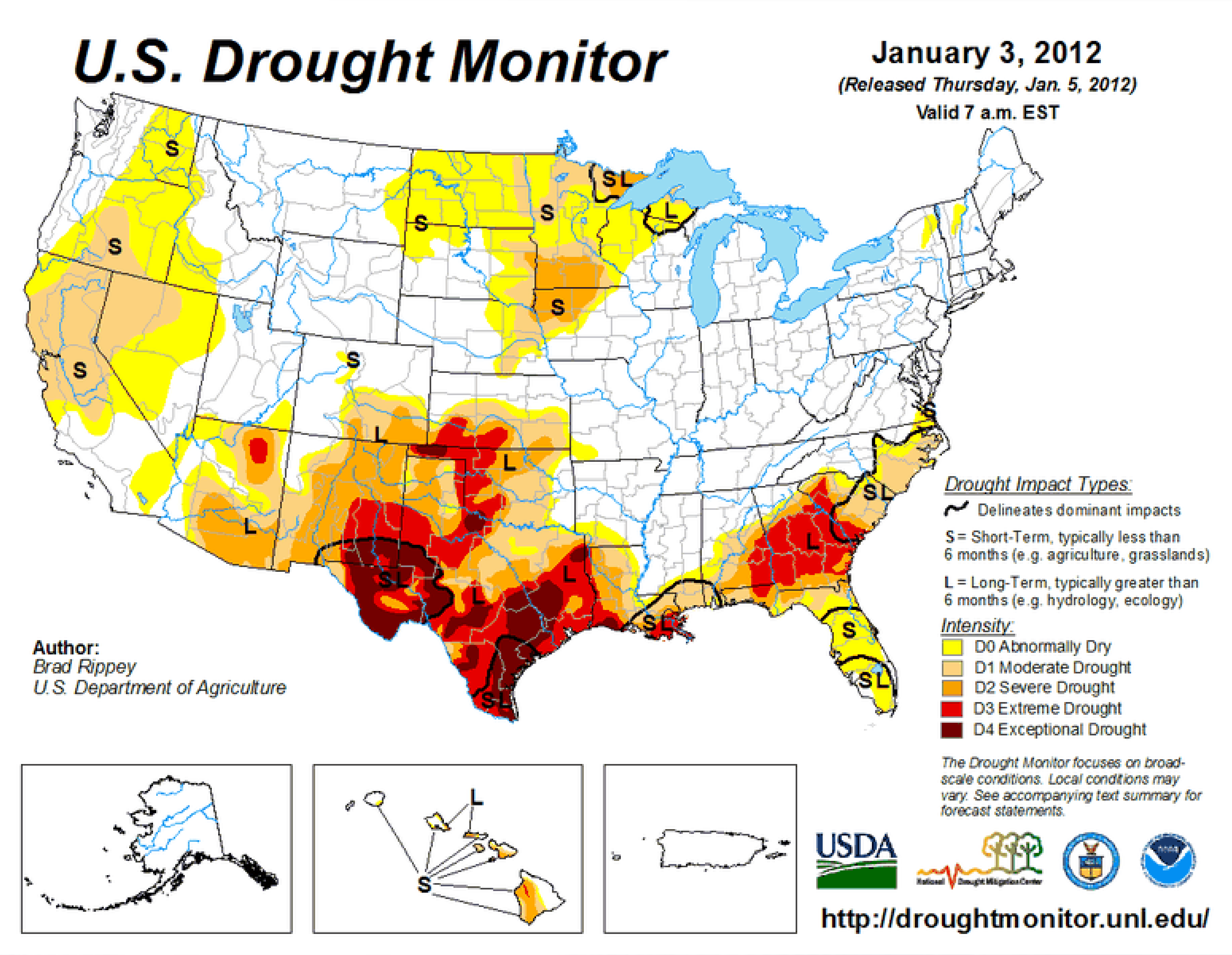
Obrigado

Irani Braga Ramos

Secretario de Desenvolvimento Regional/MI

Irani.ramos@integracao.gov.br

61-2034-5633


U.S. Drought Monitor
January 3, 2012
(Released Thursday, Jan. 5, 2012)
Valid 7 a.m. EST
Drought Impact Types:
Delineates dominant impacts
S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)
L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)
Intensity:
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought
Author:
Brad Rippey
U.S. Department of Agriculture
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.
USDA
http://droughtmonitor.unl.edu/

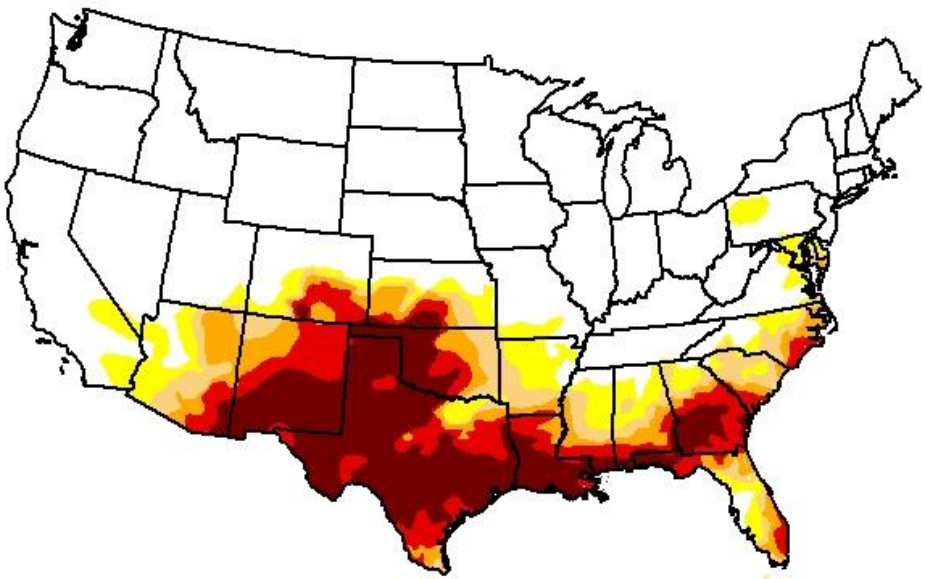
U.S. Drought Monitor

Total U.S.

July 12, 2011

(Released Thursday, Jul. 14, 2011)

Valid 7 a.m. EST



Drought Conditions (Percent Area)

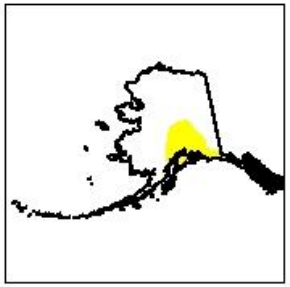
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	66.74	33.26	24.00	19.80	15.60	9.99
Last Week *7/5/2011*	65.31	34.69	24.49	19.70	15.55	9.83
3 Months Ago *4/12/2011*	65.71	34.29	23.88	15.32	7.52	0.78
Start of Calendar Year *1/4/2011*	63.43	36.57	18.23	7.13	2.17	0.00
Start of Water Year *9/28/2010*	61.92	38.08	11.13	2.67	0.31	0.01
One Year Ago *7/13/2010*	72.69	27.31	6.67	1.19	0.26	0.01

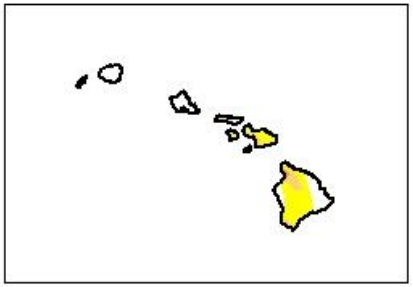
Intensity:

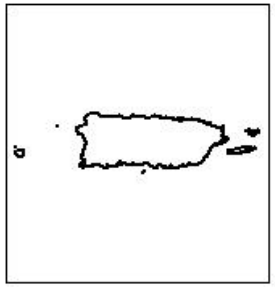
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
David Miskus
NOAA/NWS/NCEP/CPC

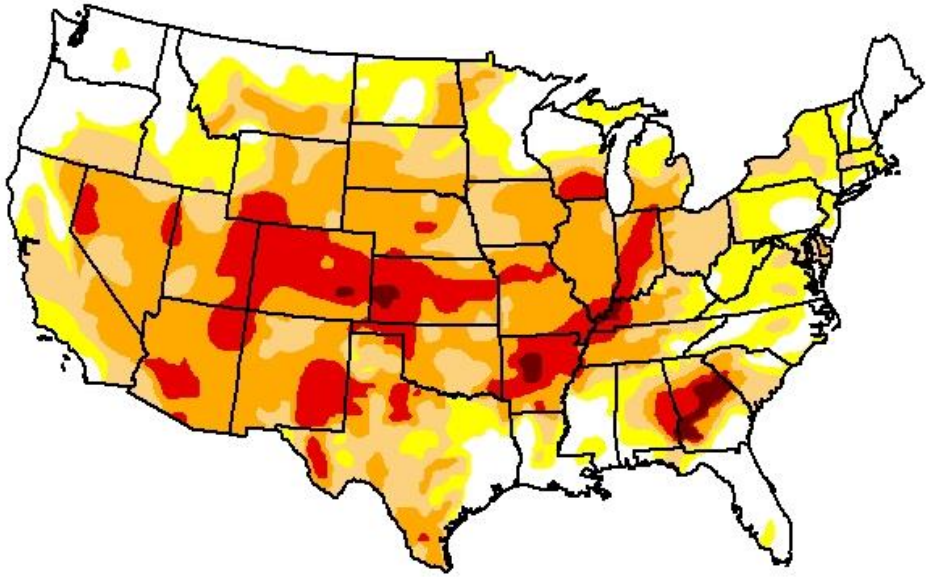


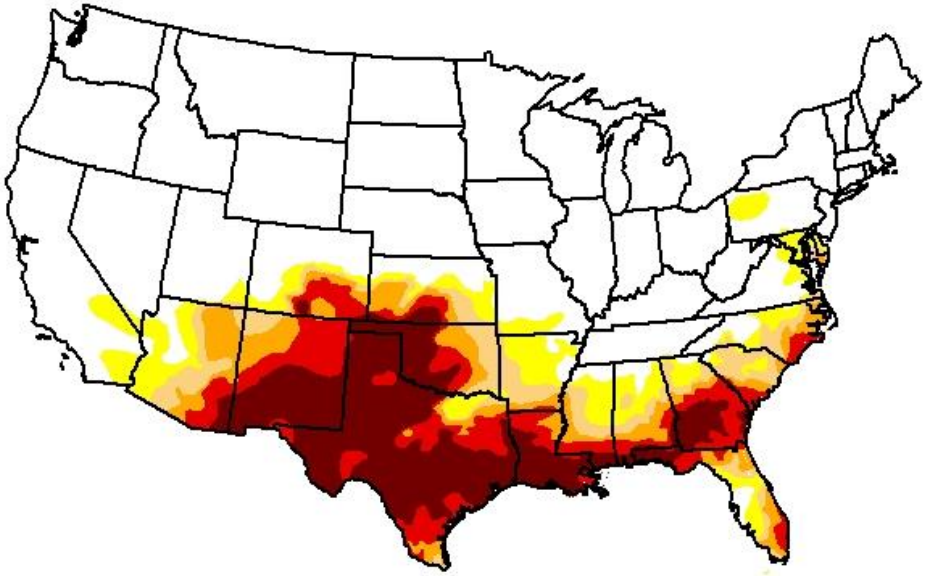




USDA National Drought Mitigation Center

http://droughtmonitor.unl.edu/



Julho/2012
Maior área atingida em seca
72%

Julho/2012
Maior área em seca mais severa
10%