THE WORST CLIMATE CATASTROPHE OF RIO GRANDE DO SUL

APRIL-MAY 2024

May 9th, 2024

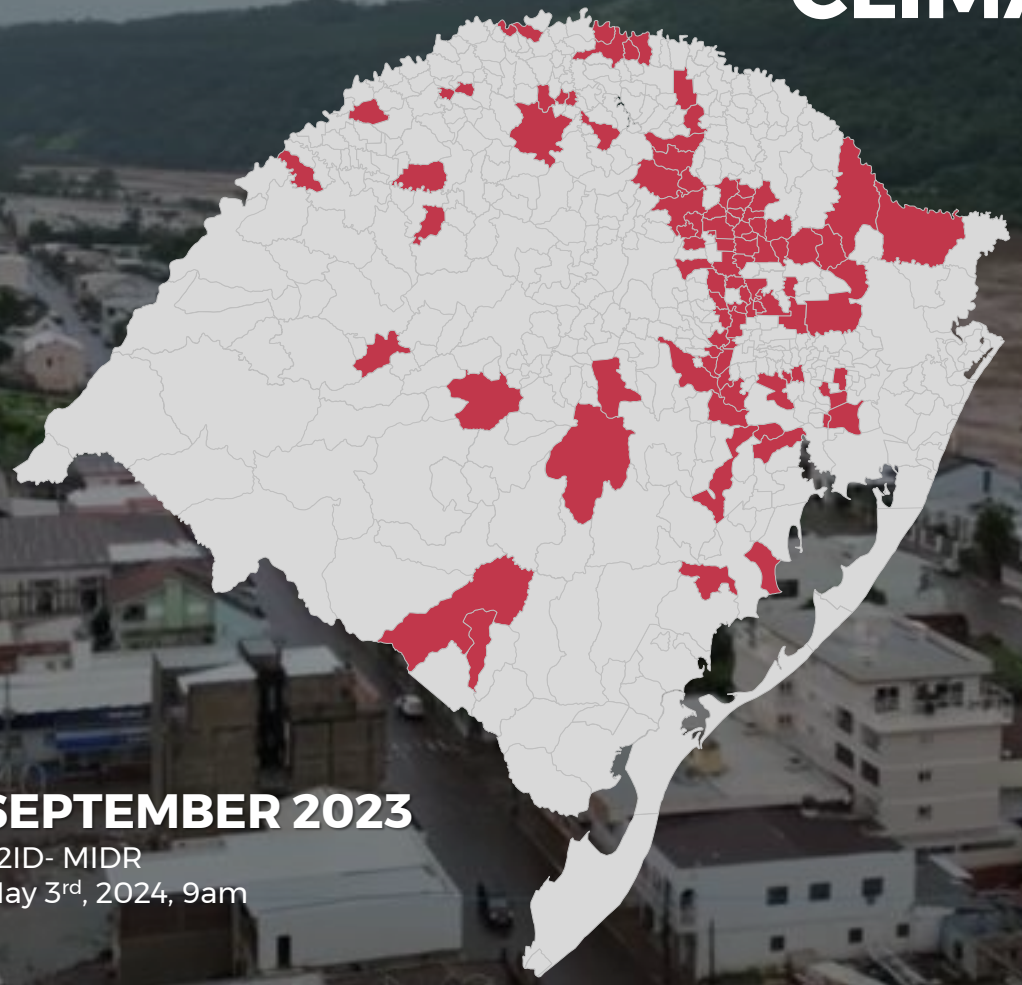
STATE GOVERNMENT
RIO GRANDE DO SUL
BRAZIL

425 AFFECTED MUNICIPALITIES

RS Civil Defense - May 9th, 2024, 9am

GOVERNO DO ESTADO
RIO GRANDE DO SUL
O futuro nos une.

FOUR TIMES MORE MUNICIPALITIES AFFECTED COMPARED TO THE LAST CLIMATE EVENT



SEPTEMBER 2023
S2ID- MIDR
May 3rd, 2024, 9am

APRIL-MAY 2024
RS Civil Defense
May 8th, 2024, 3pm

GOVERNO DO ESTADO
RIO GRANDE DO SUL
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67,542 **people in shelters**
164,583 **displaced**
1,476,170 **affected**
374 **injured**
136 **missing**

RS Civil Defense - May 9th, 2024, 9am

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107 DEATHS

+ 1 under investigation

RS Civil Defense - May 9th, 2024, 9am

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PERSISTENT RAINFALL IN EXTRAORDINARY VOLUMES

The equivalent of 3 months of rain in a few days

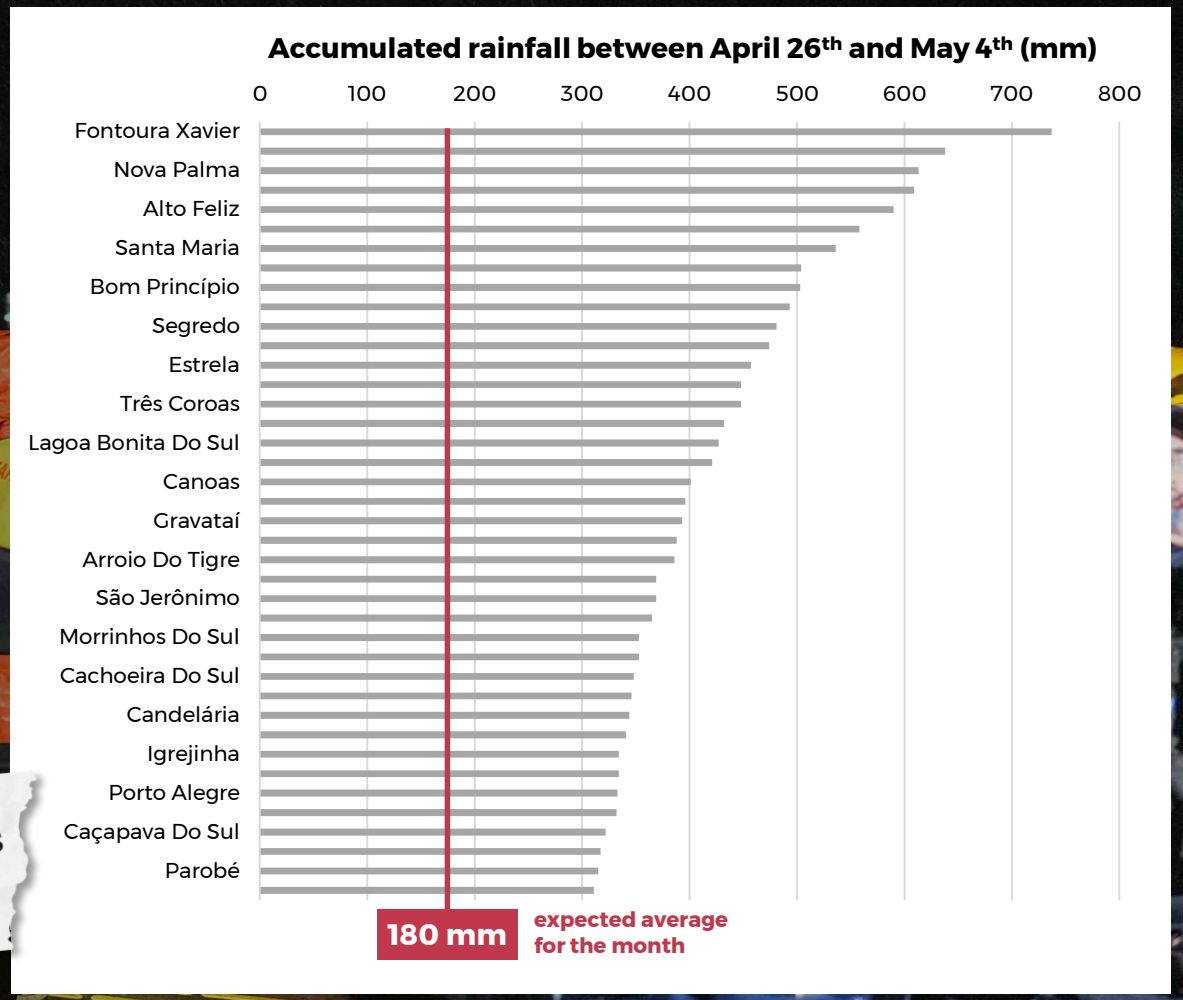
Average of 420 mm accumulated between April 24th and May 4th

The Guardian

May 7, 2024

Weather tracker: torrential rainstorms cause death and destruction in Brazil

Lauren Herdman (Metdesk)



CEMADEN- May 4th, 11pm

GOVERNO DO ESTADO RIO GRANDE DO SUL
O futuro nos une.

HISTORICAL RIVER LEVELS

BBC

May 4th, 2024

Brazil floods: Hundreds of Rio Grande do Sul towns under water

REUTERS

May 4th, 2024

Southern Brazil hit by worst flooding in 80 years

AP ASSOCIATED PRESS

May 7th, 2024

Too much water, and not enough: Brazil's flooded south struggles to access basic goods

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O futuro nos une.

18 DAMS UNDER PRESSURE

6 | **Emergency** level
5 | **Alert** level
7 | **Attention** level

Partial rupture of the dam at the "14 de Julho" hydroelectric plant required evacuation in 10 municipalities

ANEEL, ONS and SEMA-RS – May 5th, 2024, 3pm

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FLOOD CONTAINMENT SYSTEM UNDER STRESS

A floodgate burst in the capital, Porto Alegre, and dykes in the Metropolitan Region overflowed

CEIC-POA and City Halls - May 4th, 2024, 5pm

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O futuro nos une.

ESSENTIAL SERVICES INTERRUPTED

408,050 points **without electricity**

543,776 consumer units of State Sanitation Company (Corsan) **without water**

Dozens of municipalities **without telephony and internet**

SEMA-RS Infrastructure Bulletin - May 8th, 2024, 9am

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COMPROMISED LOGISTICS

Impossibility of vehicle and human traffic, including rescue forces and health teams

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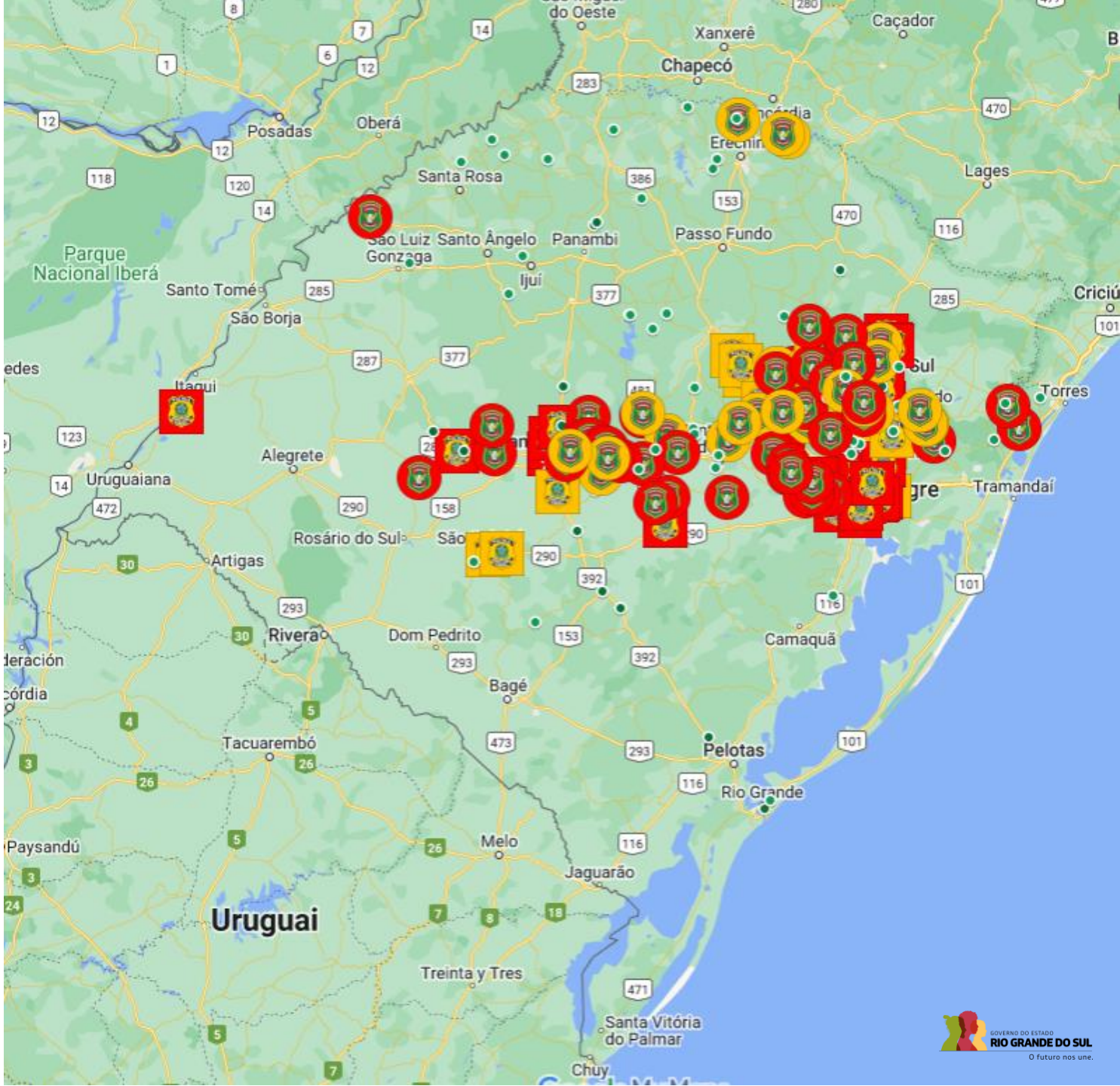
140 BLOCKED POINTS ON ROADS

97 total, 43 partial, 120 already cleared

Map of the situation on state and federal highways available for the population

Source: PRF e DAER-RS, May 8th, 2024, 10:40am



CLOSED AIRPORT

Salgado Filho International Airport (POA) is closed until at least May 30

FRAPORT – May 6th, 2024, 12pm noon

The Guardian

May 7th, 2024

Brazil floods: footage shows airport under water as death toll rises

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IMPACTS ON PRODUCTION

supply, employment and income

REUTERS May 7th, 2024

Brazil floods hit food silos, disrupt routes to major grains port

DTN May 2nd, 2024

South America Calling

Flooding Rain in Southern Brazil Threatens Harvest, Planting

The Poultry Site May 7th, 2024

Brazil flooding affects 10 poultry, pork plants - ABPA

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O futuro nos une.

IMPACTS ON INDUSTRY

inputs and stoppages

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O futuro nos une.

WORLDWIDE RECOGNITION OF THE CATASTROPHE

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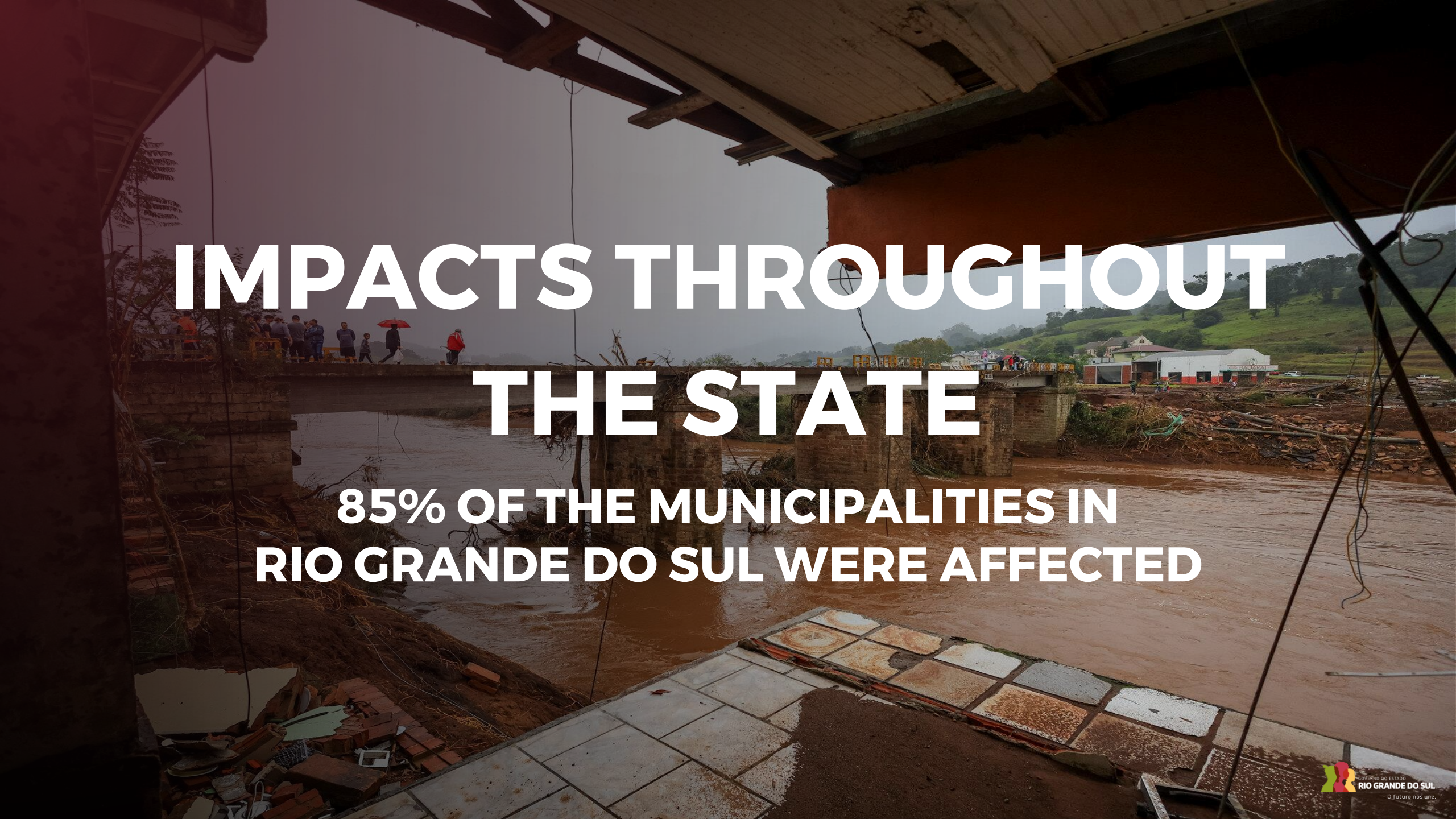

IMPACTS THROUGHOUT THE STATE

85% OF THE MUNICIPALITIES IN RIO GRANDE DO SUL WERE AFFECTED

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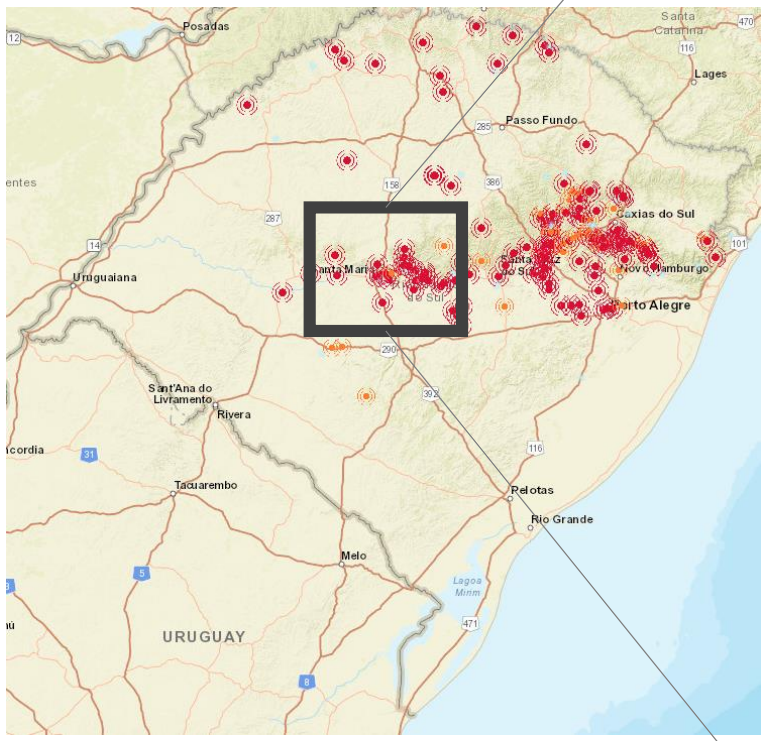
Central
Region

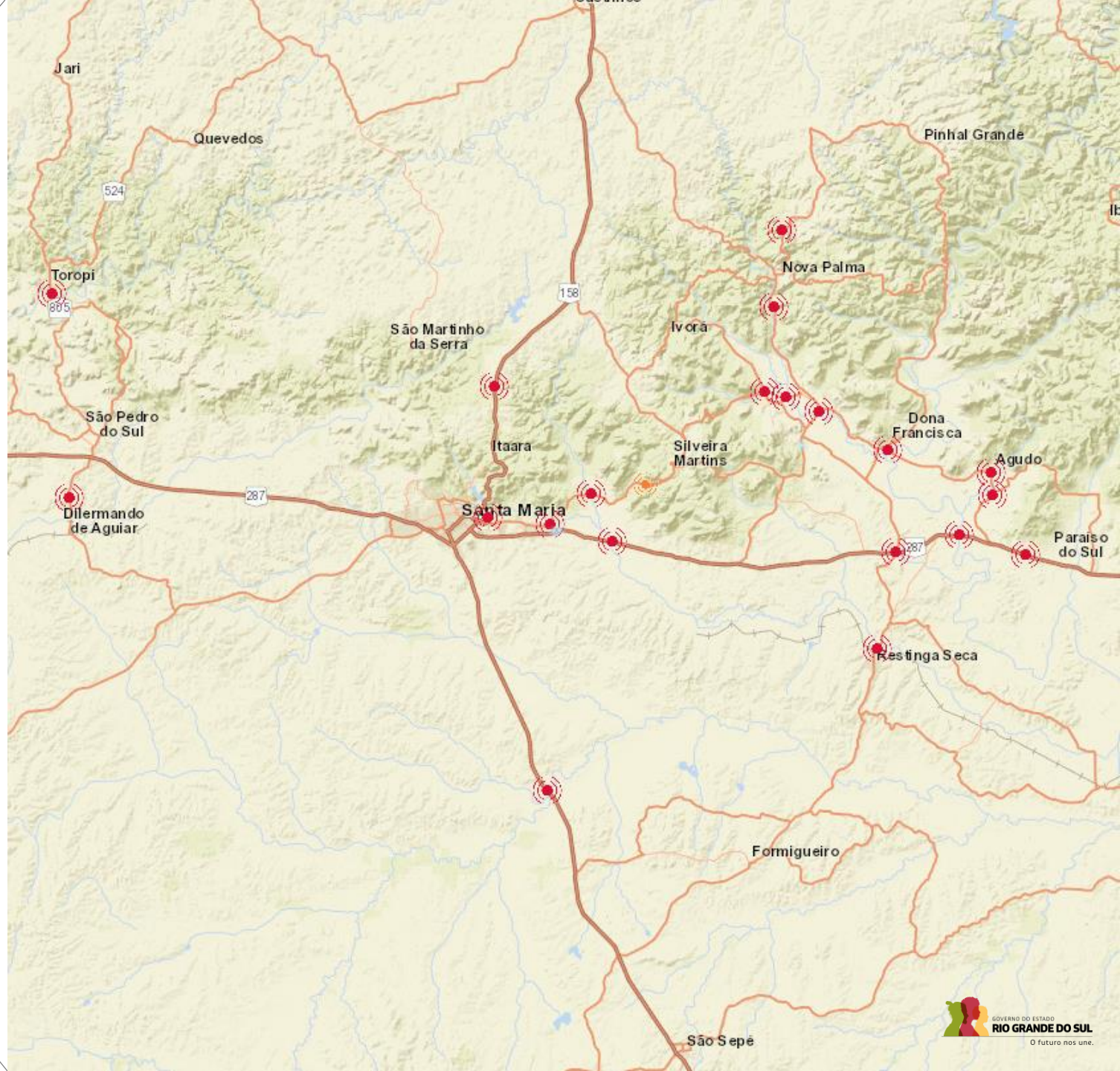
Hydrographic basin:

- Baixo Jacuí
- Alto Jacuí
- Vacacaí and Vacacaí Mirim Rivers
- Ibicuí River

Central

Road blocks





Source: RS Civil Defense, PRF and DAER-RS, May 4th, 6pm

Santa Maria

May 2nd, 2024, Photo by City Hall

May 4th, 2024, Photo by Diário de SM

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RIO GRANDE DO SUL
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Santa Maria

April 30th, 2024, 11am, Photo by GZH

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Cachoeira do Sul

May 4th, 2024, Photo by Portal O Correio

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Agudo

May 3rd, 2024, 10am, Photo by Diário de Santa Maria

Santa Cruz do Sul

April 30th, 2024, Photo by RBS

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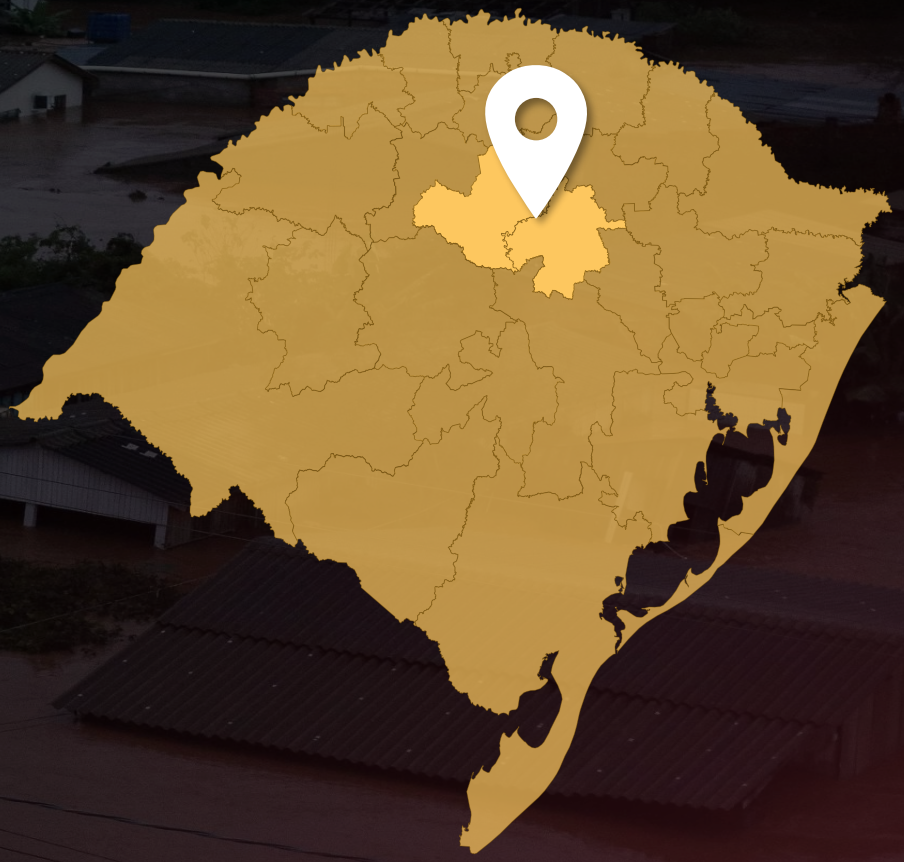
Jacuí

Region

Hydrographic basin:

- Alto Jacuí
- Taquari-Antas River
- Pardo River
- Ijuí River



Espumoso

May 3rd, 2024, 9am, Photo by GZH

Cruz Alta

May 1st, 2024, 9am, Photo by City Hall of Cruz Alta

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Taquari and Rio Pardo

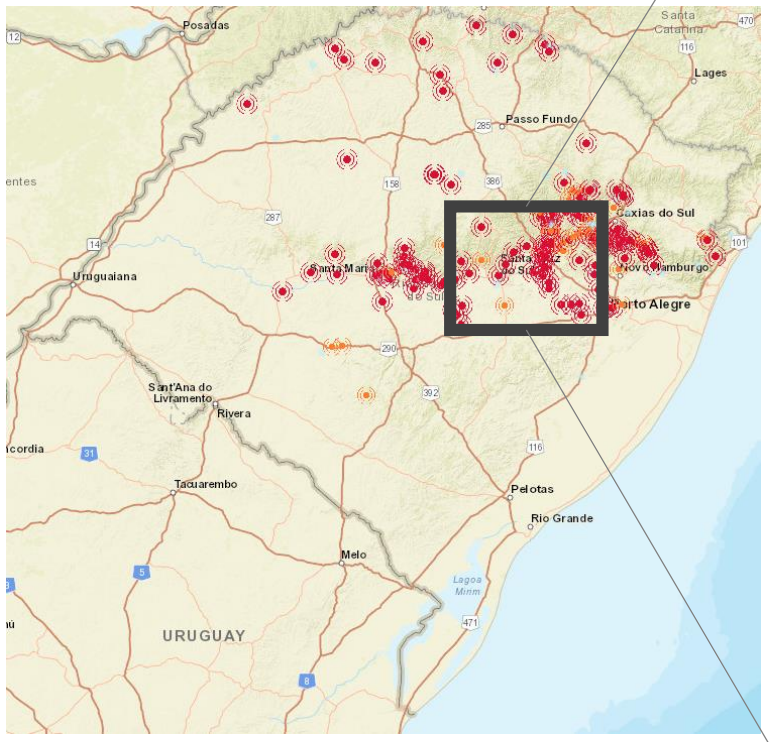
Region

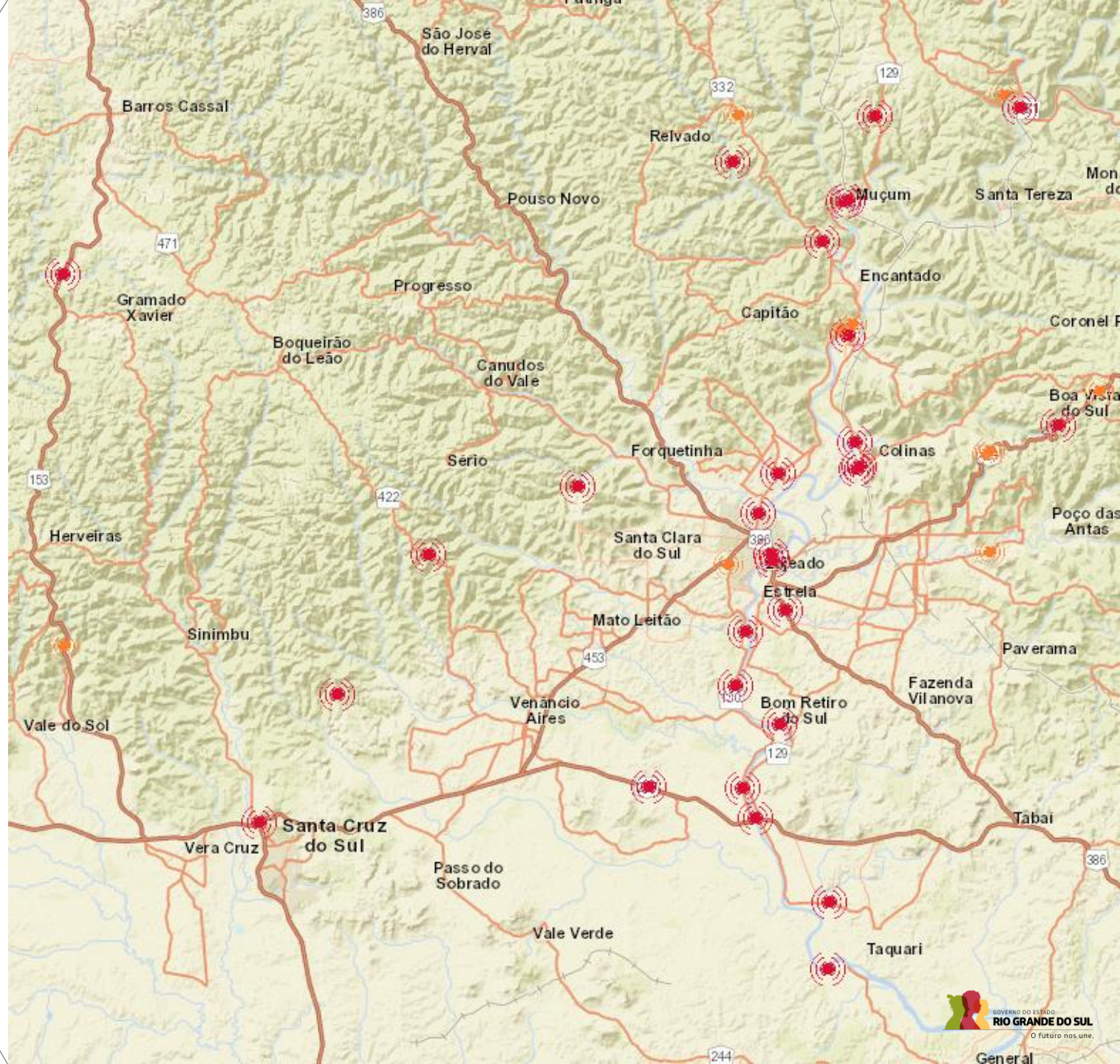
Hydrographic basin:

- Taquari-Antas River
- Pardo River
- Alto Jacuí
- Baixo Jacuí

Taquari and Rio Pardo

Road blocks





Source: RS Civil Defense, PRF and DAER-RS, May 4th, 6pm

Arroio do Meio

May 6th, 2024, 11am, Photos by Folha de SP

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Forquetinha | Bauereck Bridge (ERS-424)

May 1st, 2024, 12pm noon, Photo by Grupo A Hora

Canudos do Vale

May 3rd, 2024, 2pm, Photo by the City Hall of Canudos do Vale

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Encantado

May 3rd, 2024, 7am, Photo by Portal A Hora

Estrela

May 2nd, 2024, 2pm, Photo by Correio do povo

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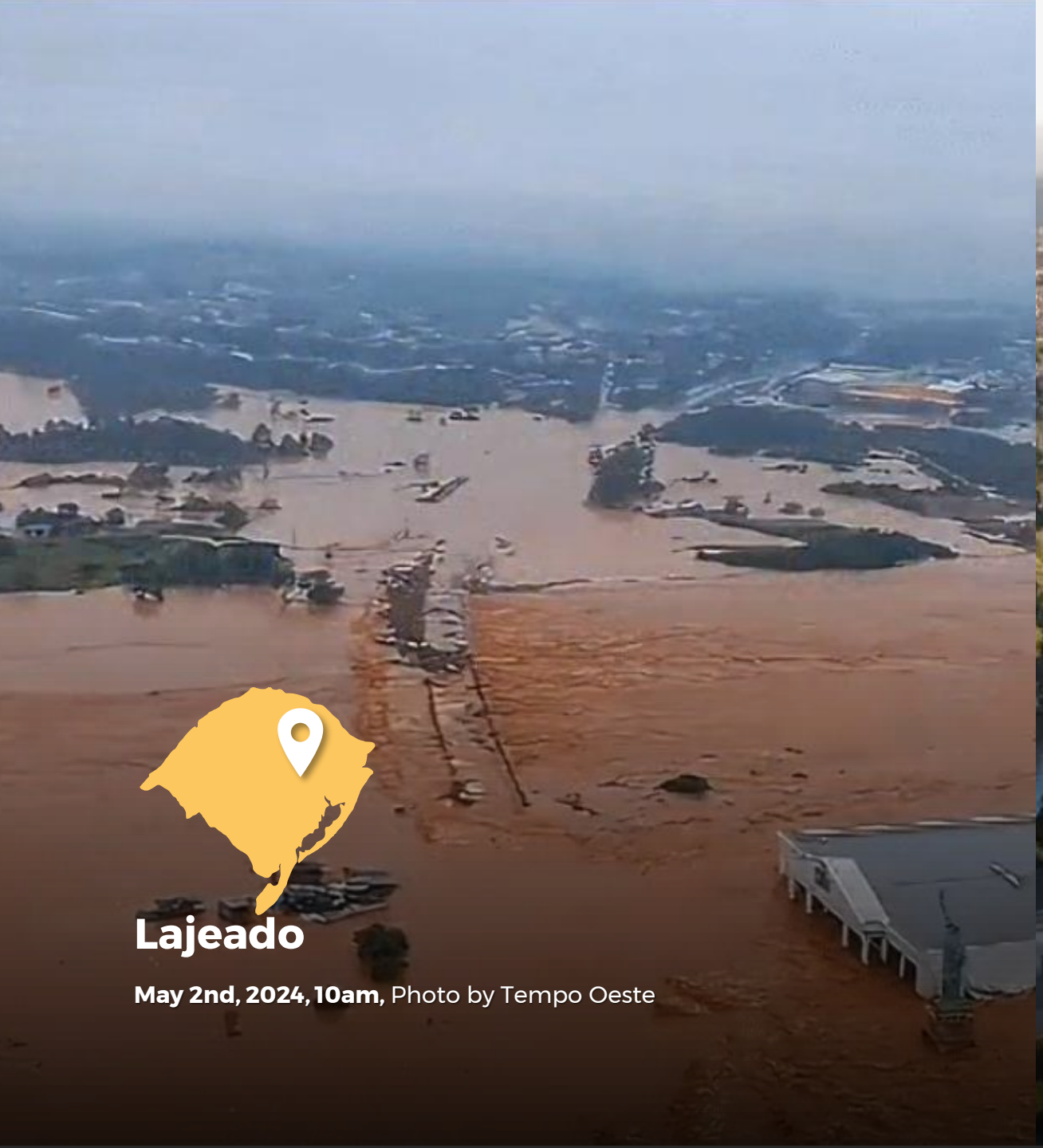
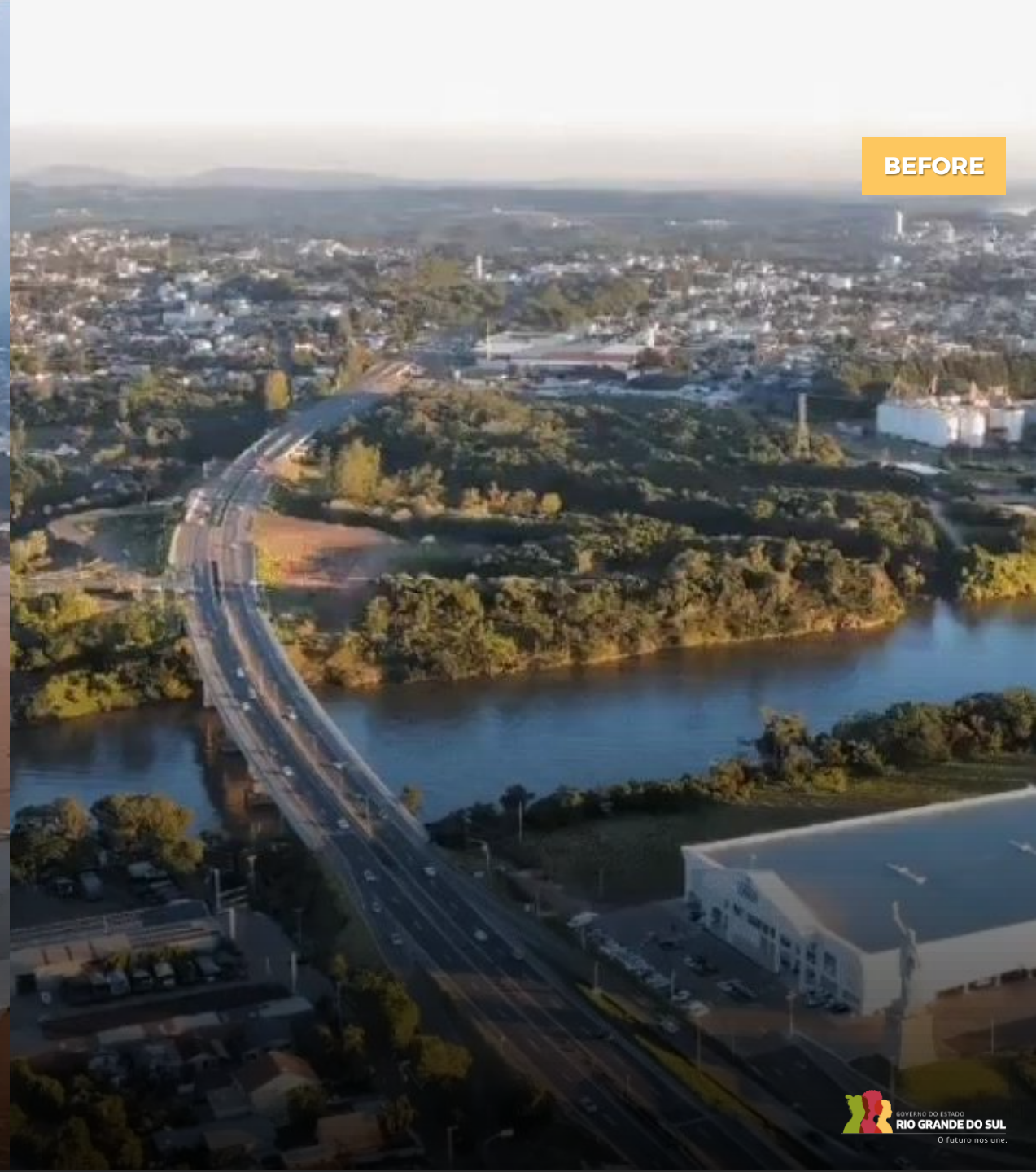
O futuro nos une.

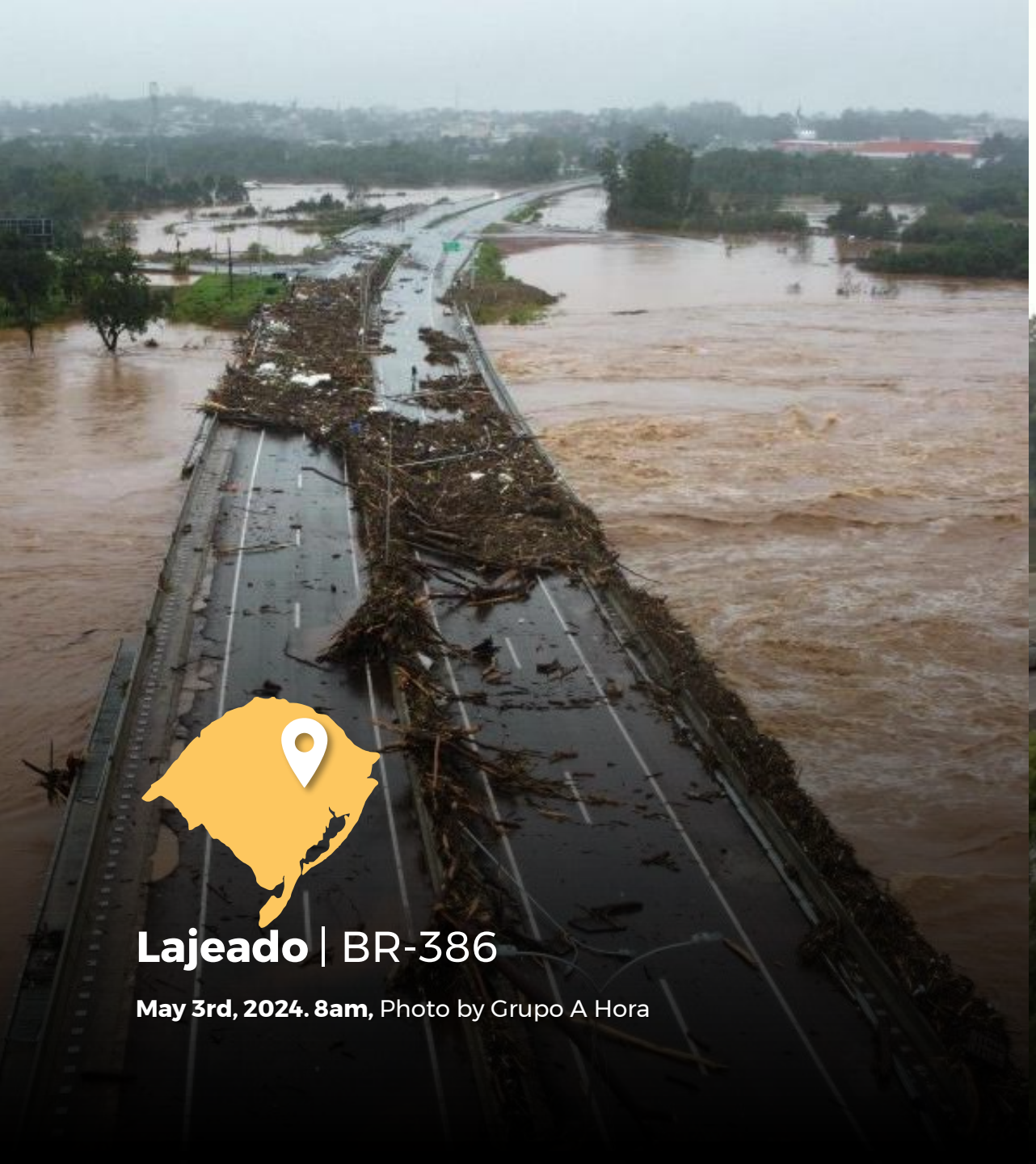


Lajeado

May 2nd, 2024, 10am, Photo by Tempo Oeste

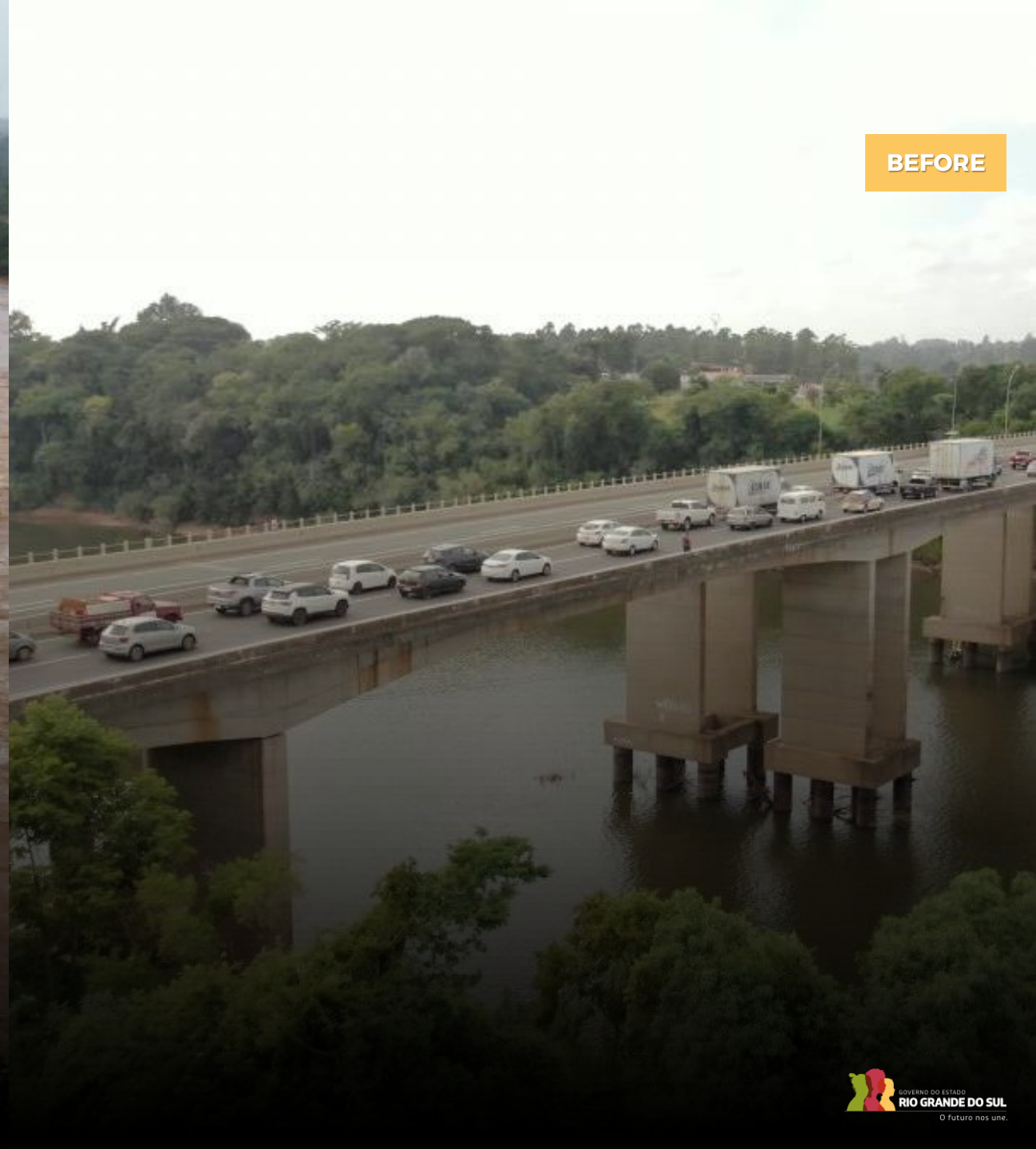


GOVERNO DO ESTADO
RIO GRANDE DO SUL
O futuro nos une.



Lajeado | BR-386

May 3rd, 2024. 8am, Photo by Grupo A Hora



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Roca Sales

May 4th, 2024, 5pm, Photo by O Independente

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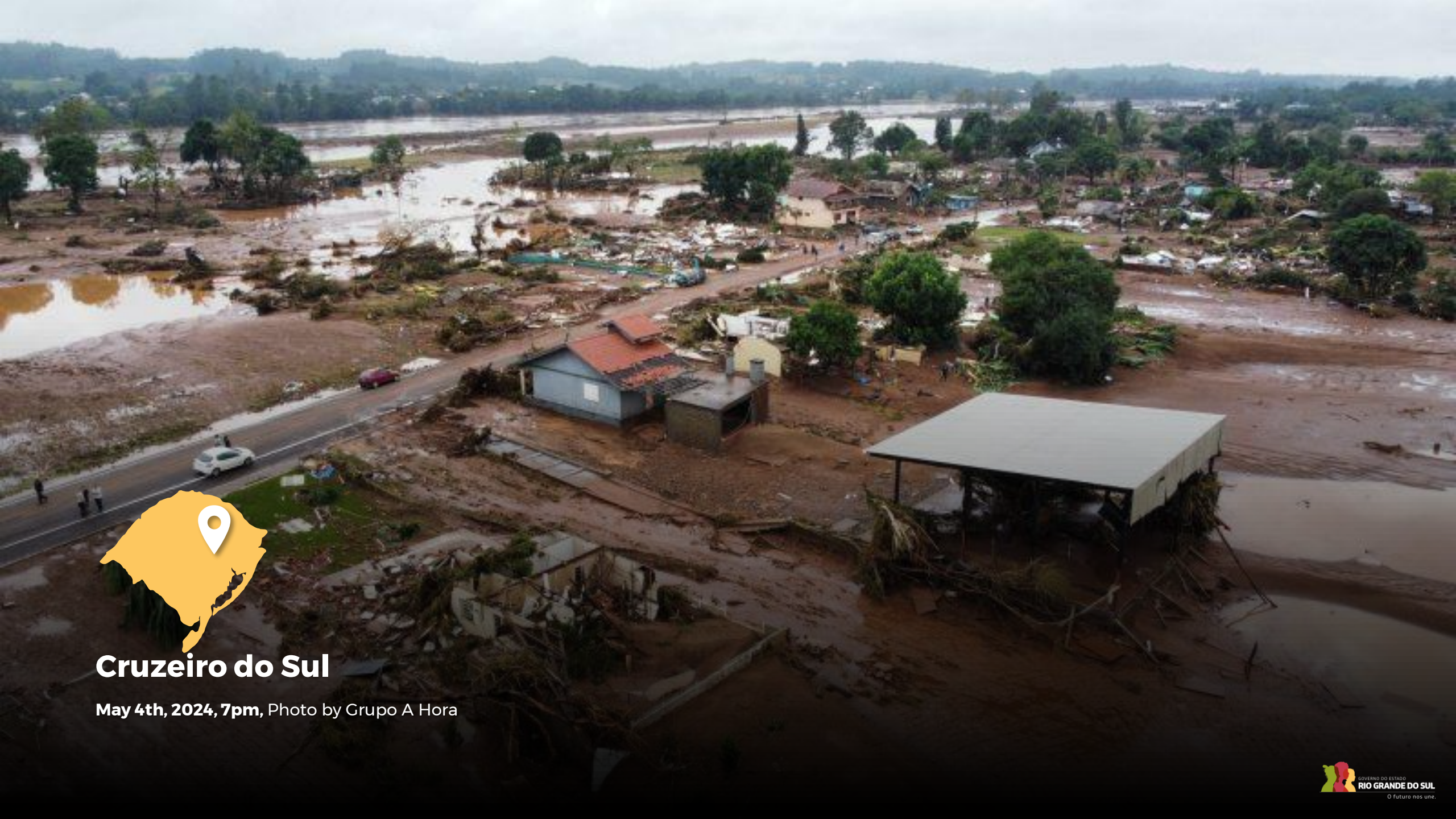
O futuro nos une.



Cruzeiro do Sul

May 4th, 2024, 7pm, Photo by Grupo A Hora

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O futuro nos une.

Muçum

May 2nd, 2024, 1pm, Photo by GZH

Pouso Novo

April 30th, 2024, 09am, Photo by A Hora

GOVERNO DO ESTADO
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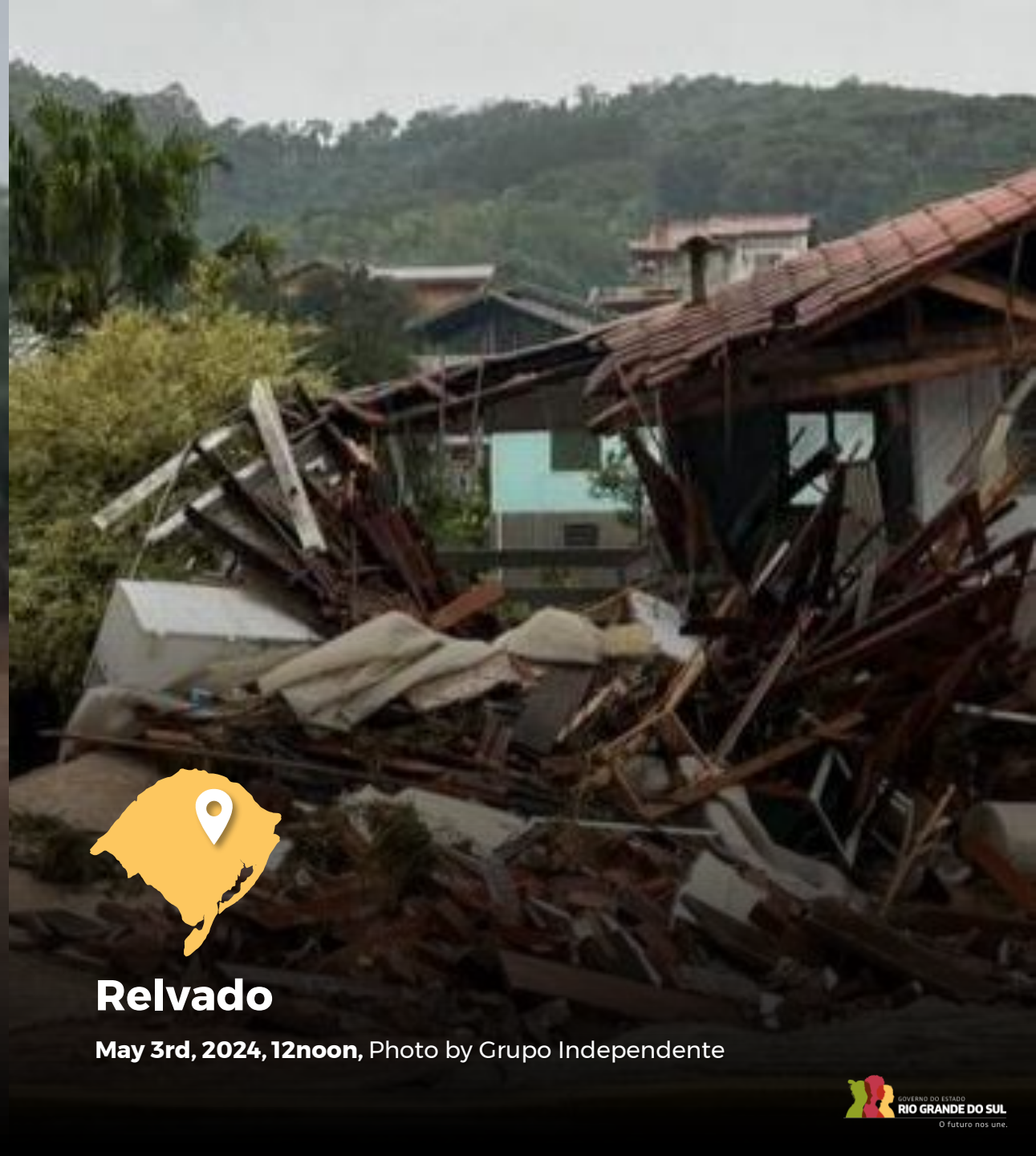
Putinga

May 1st, 2024, 5pm, Photo by G1 RS



Relvado

May 3rd, 2024, 12noon, Photo by Grupo Independente

GOVERNO DO ESTADO
RIO GRANDE DO SUL
O futuro nos une.

Serra and Vale do Caí

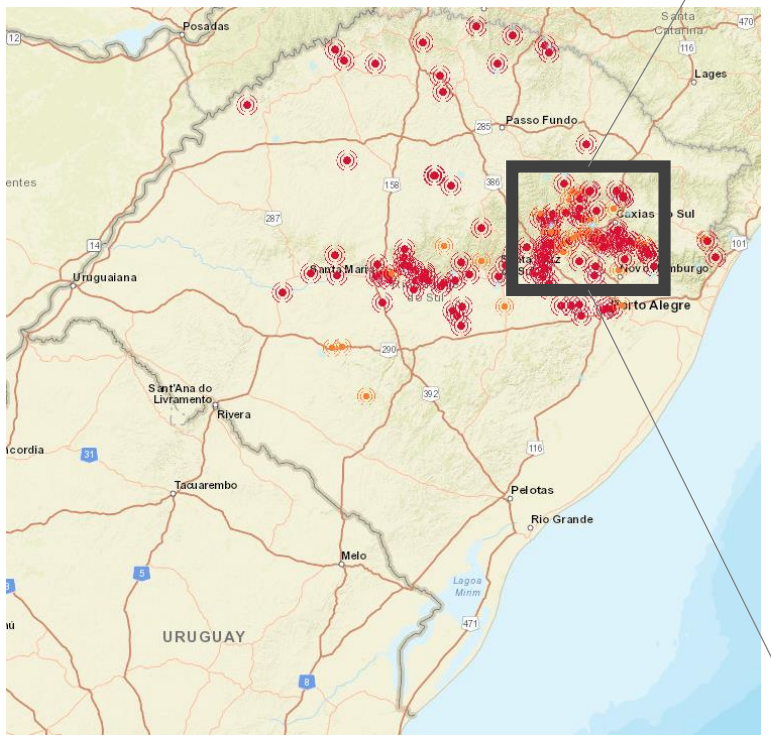
Region

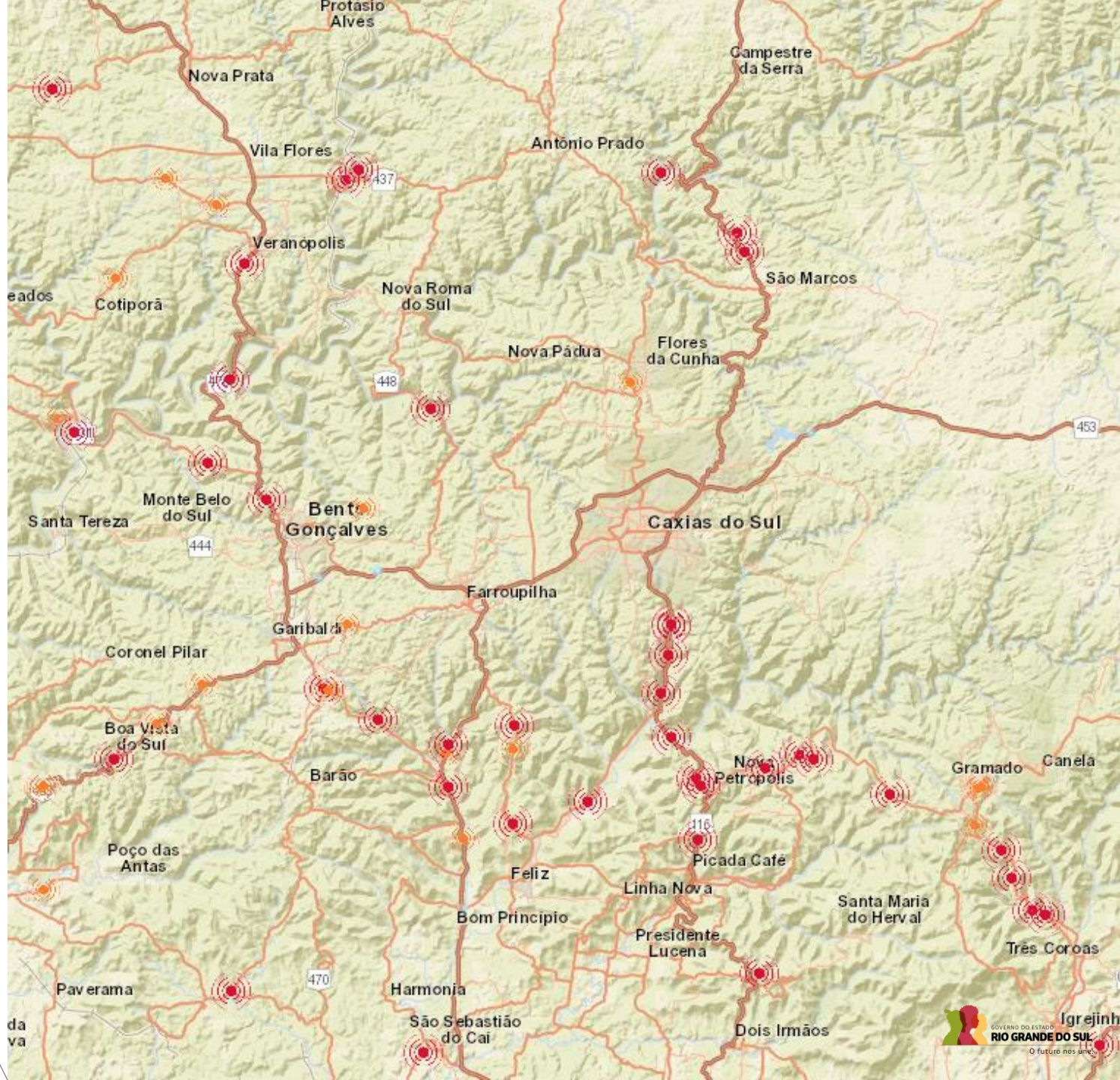
Hydrographic basin:

- Sinos River
- Caí River
- Taquari-Antas River
- Tramandaí River
- Mampituba River
- Baixo Jacuí

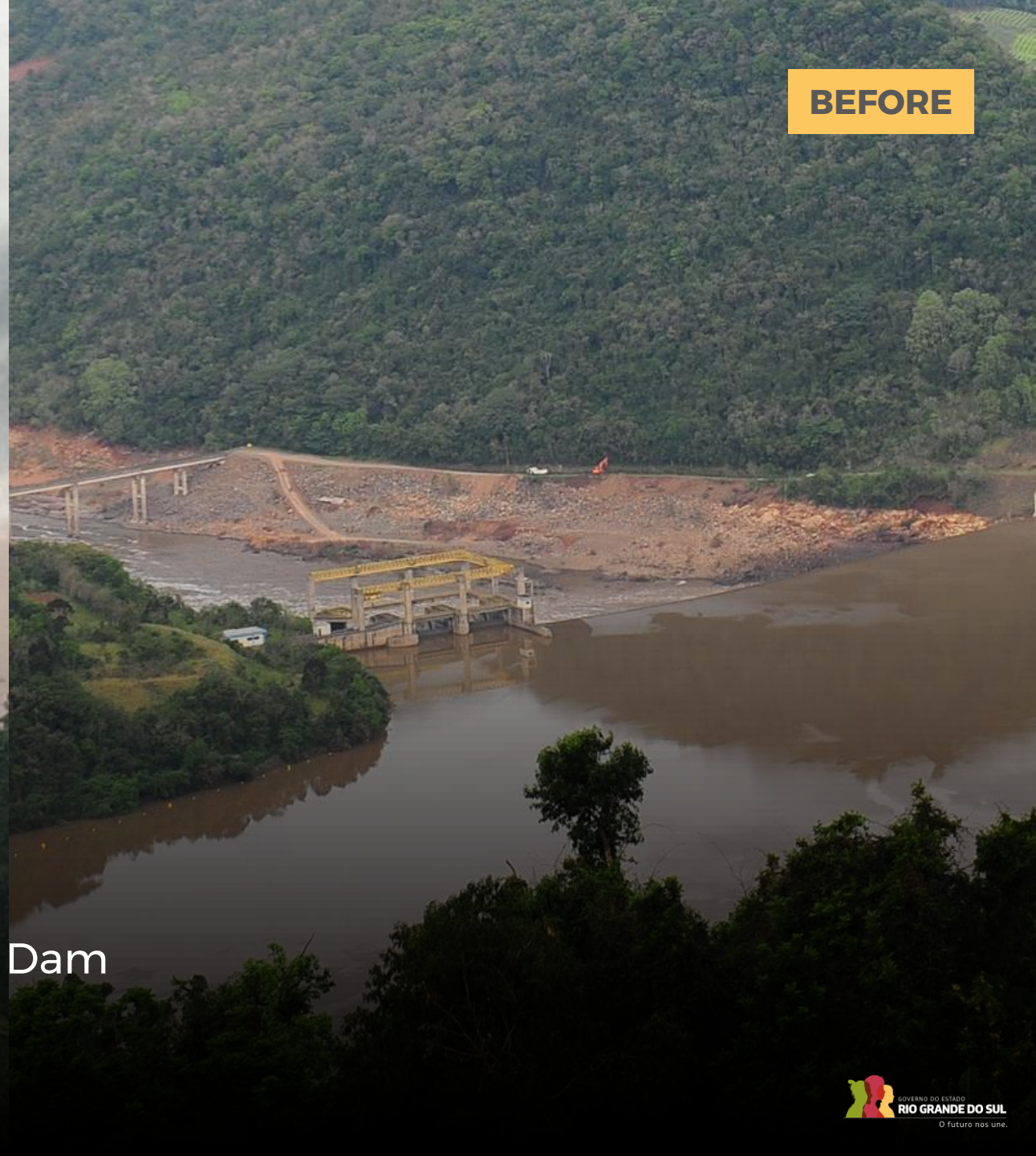
Serra and Vale do Caí

Road blocks





Source: RS Civil Defense, PRF and DAER-RS, May 4th, 6pm



Bento Gonçalves and Cotiporã | 14 de Julho Dam

May 2nd, 2024, 5pm, Photo by GZH

GOVERNO DO ESTADO
RIO GRANDE DO SUL
O futuro nos une.

Feliz | Picada Cará Bridge

May 2nd, 2024, 1pm, Photo by Correio do Povo

Nova Petrópolis | ERS-235

May, 4th, 2024, 11am, Photo by the City Hall of Nova Petrópolis

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Boa Vista do Sul

April 30th, 2024, 06am, Photo by O Independente

Veranópolis

May 1st, 2024, 2pm, Photo by Portal Leouve

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São Francisco de Paula

May 2nd, 2024, 9pm, Photo by GZH

Nova Pádua

May 3rd, 2024, 12noon, Photo by Grupo Leouve

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Flores da Cunha

May 2nd, 2024, 6pm, Photo by the City Hall of Flores da Cunha

Farroupilha | ERS 122

May 2nd, 2024, 10am, Photo by Grupo Leouve

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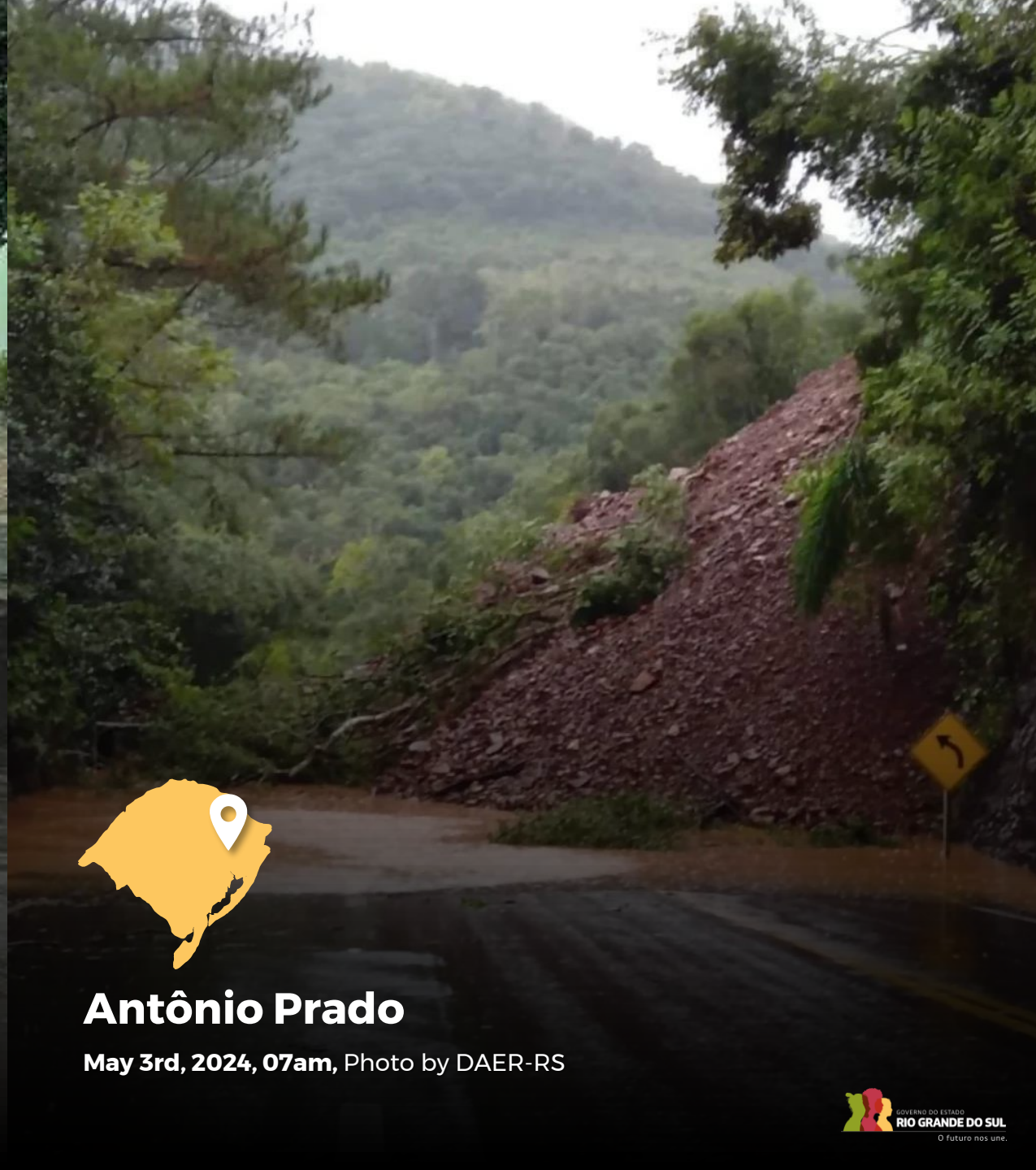
Carlos Barbosa

April 29th, 2024, 4pm, Photo by GZH



Antônio Prado

May 3rd, 2024, 07am, Photo by DAER-RS

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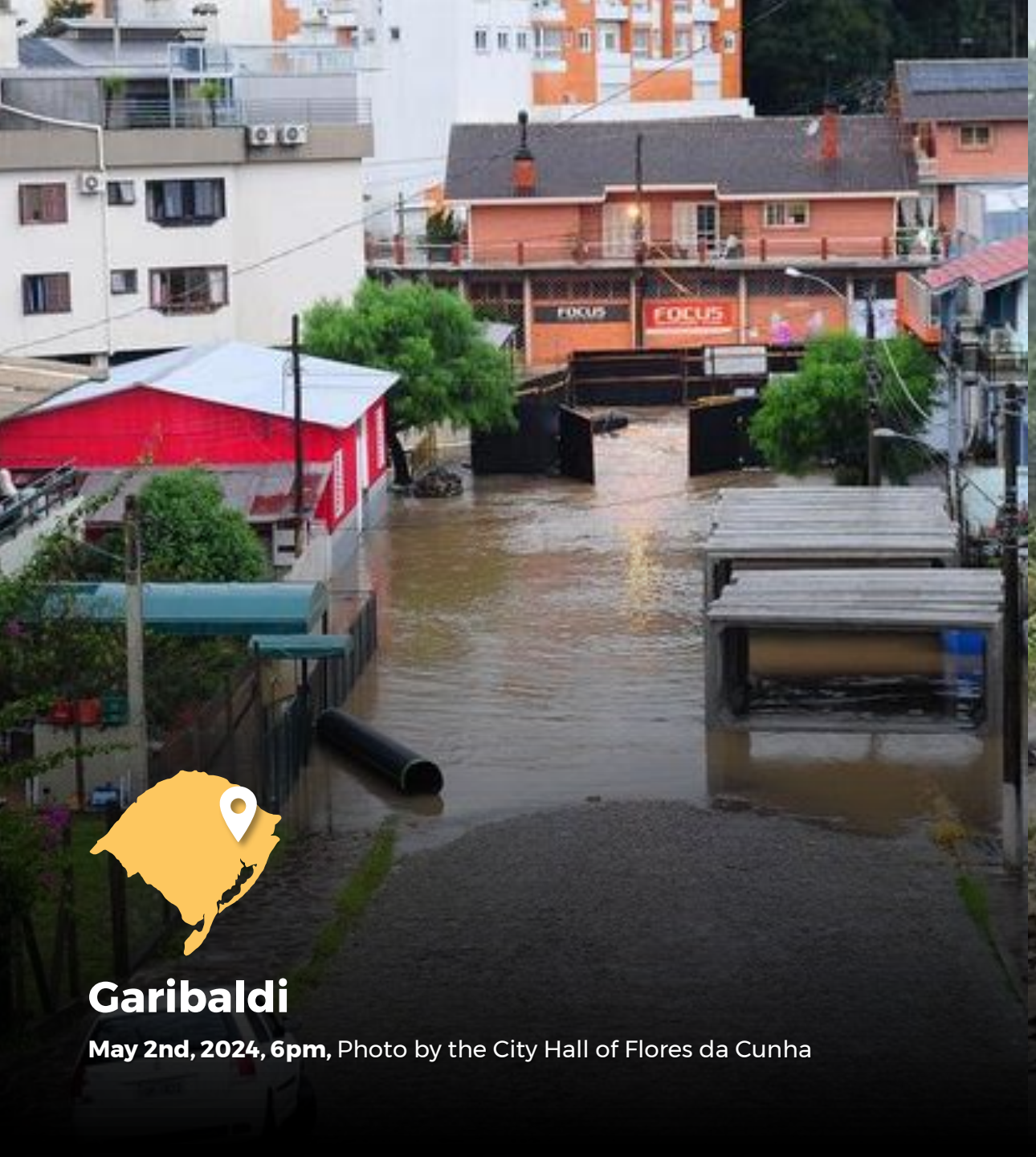

Garibaldi

May 2nd, 2024, 6pm, Photo by the City Hall of Flores da Cunha

May 2nd, 2024, 2pm, Photo by Correio do Povo

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Gramado

May 2nd, 2024, 1pm, Photo by Pioneiro

Canela

May 3rd, 2024, 6am, Photo by abc+

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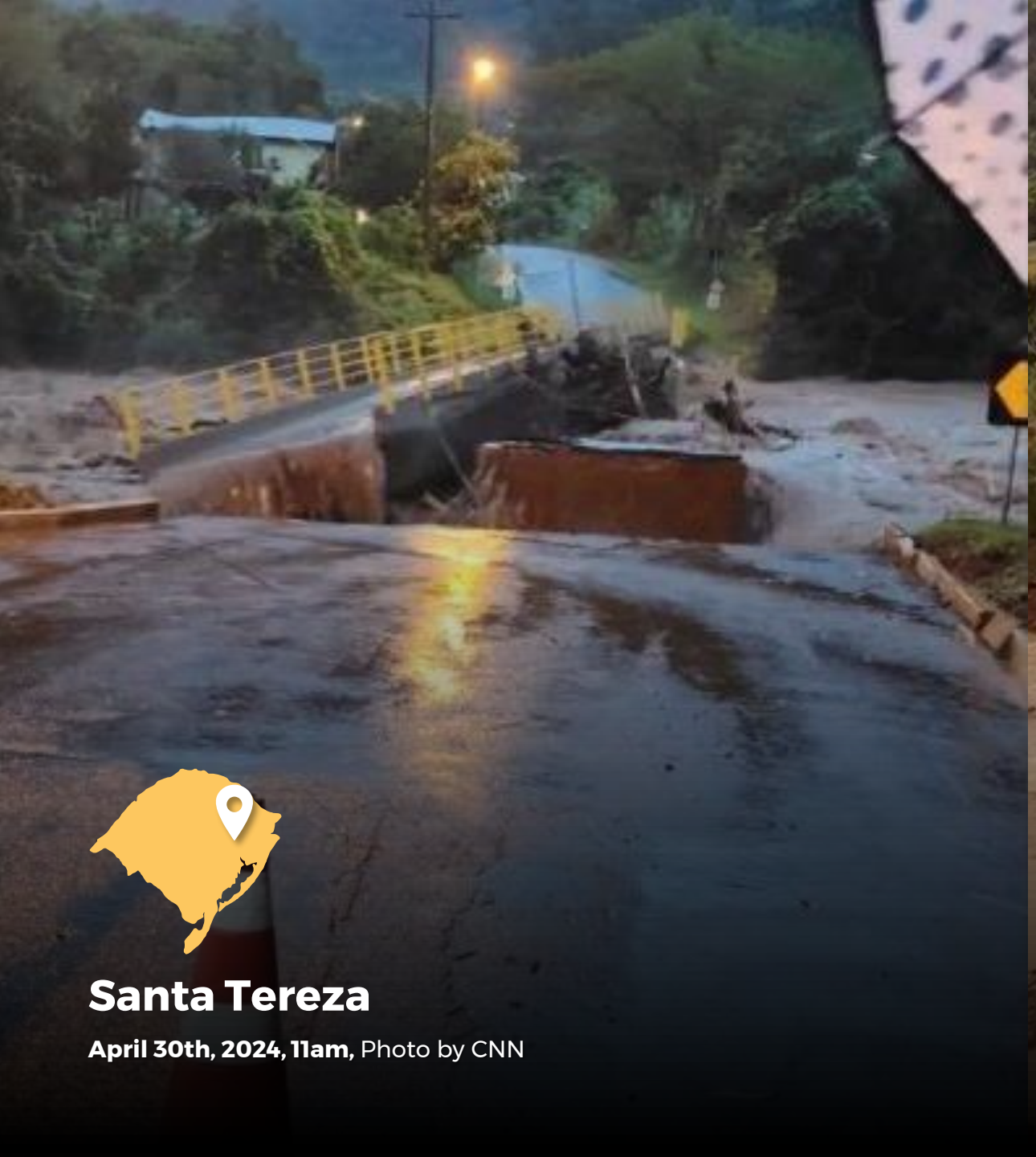
O futuro nos une.



Santa Tereza

April 30th, 2024, 11am, Photo by CNN

Caxias do Sul | BR-116

May 4th, 2024, 2pm, Photo by GZH

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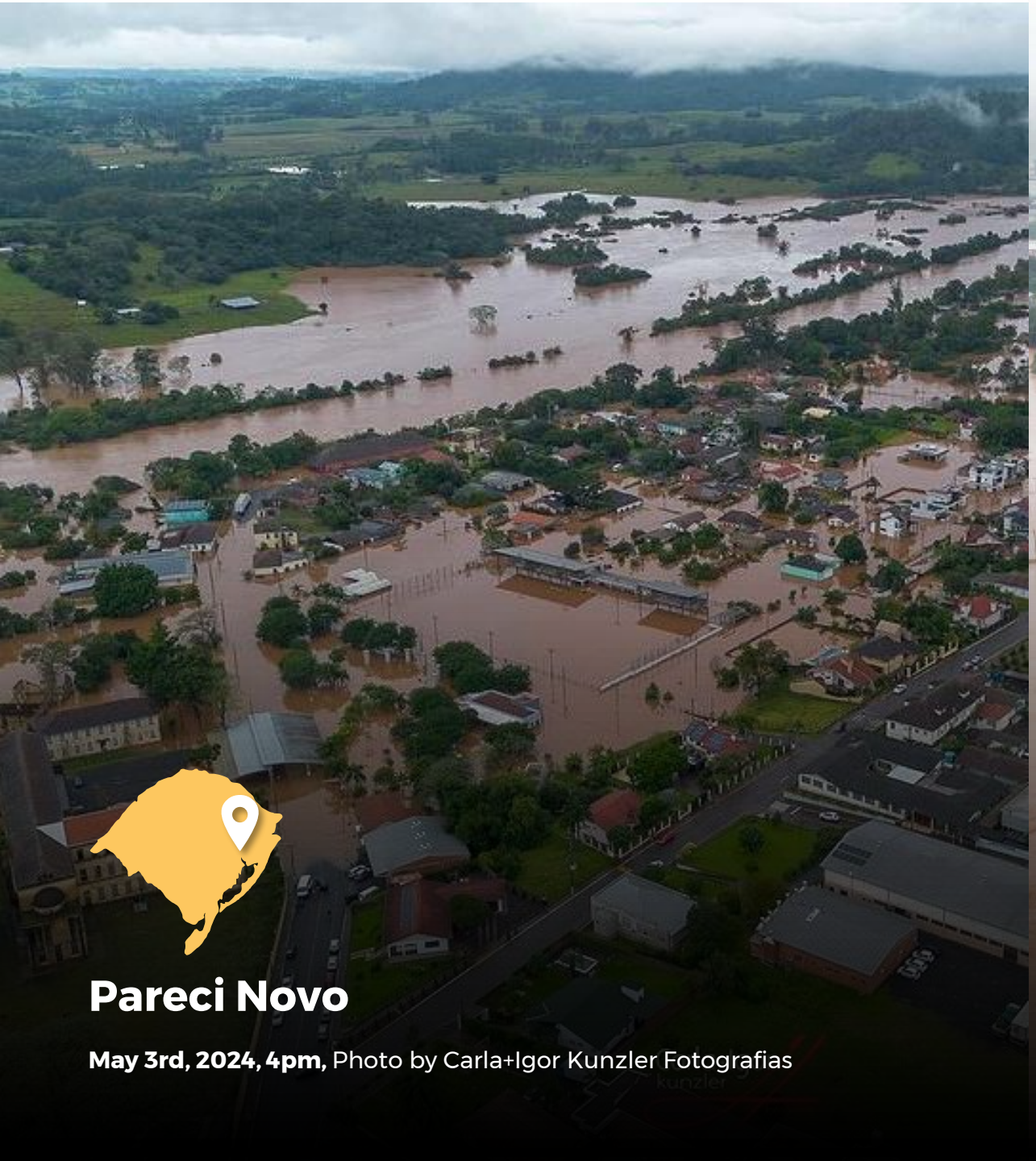
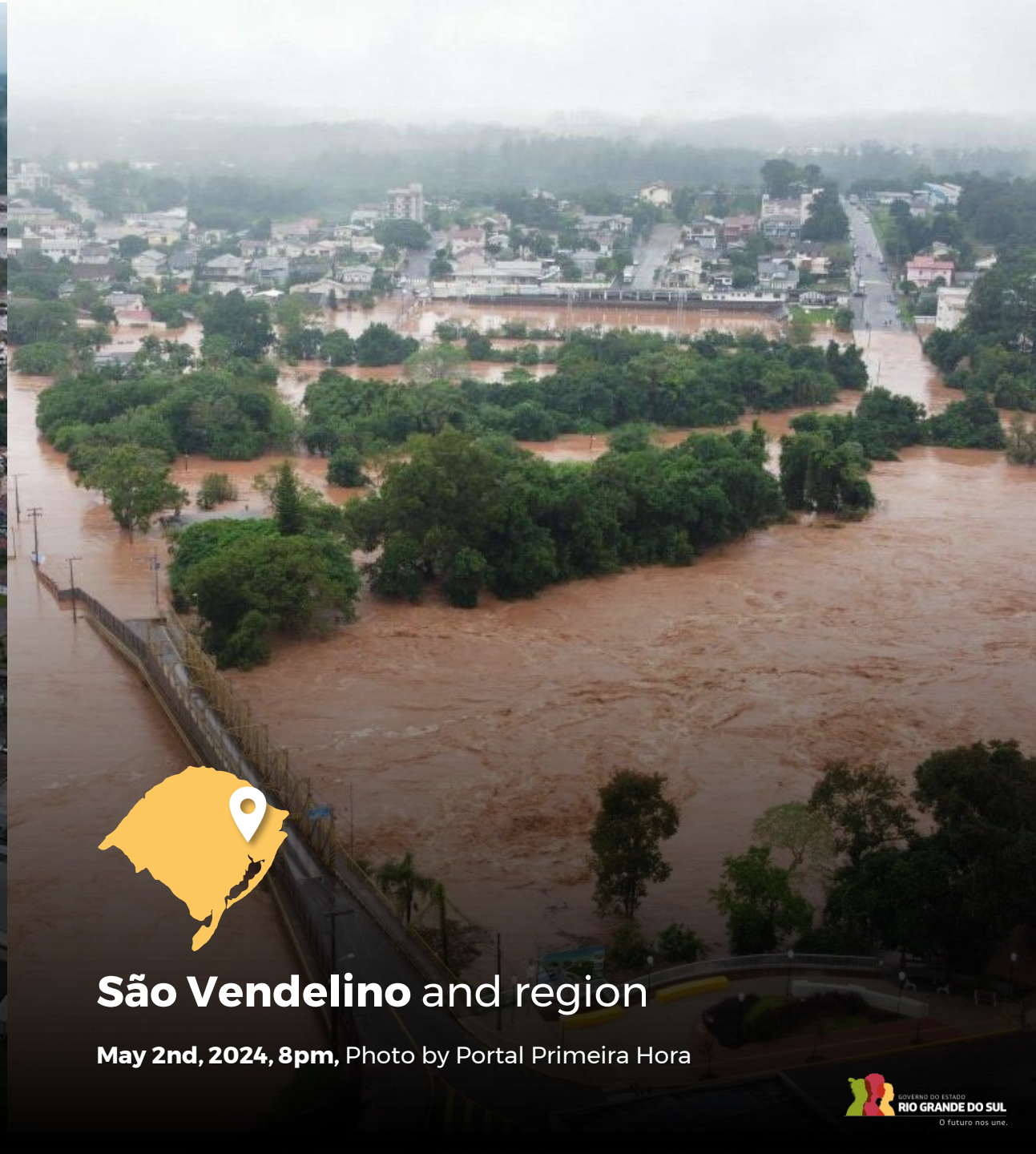
RIO GRANDE DO SUL
O futuro nos une.



Pareci Novo

May 3rd, 2024, 4pm, Photo by Carla+Igor Kunzler Fotografias



São Vendelino and region

May 2nd, 2024, 8pm, Photo by Portal Primeira Hora

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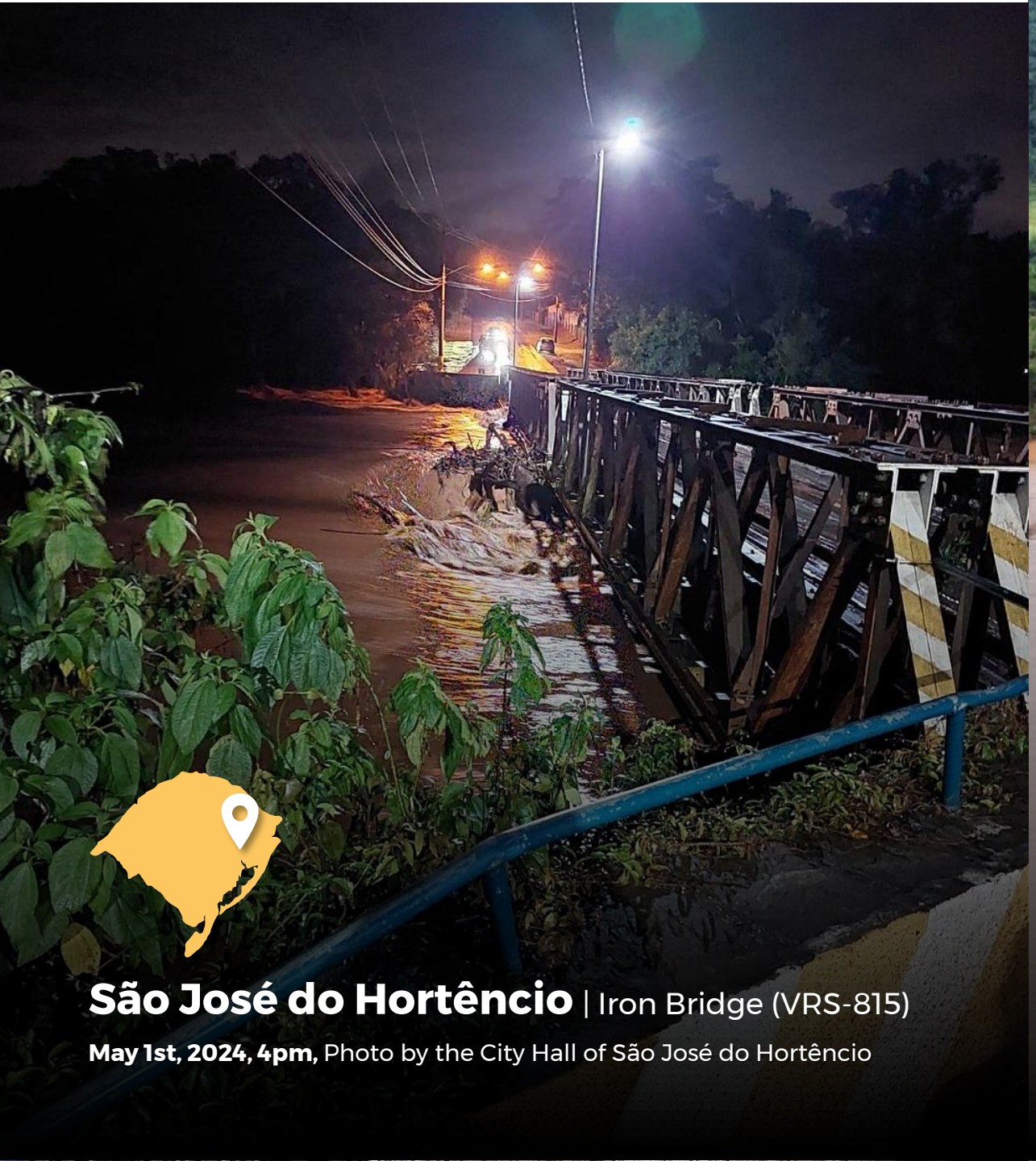
O futuro nos une.



São José do Hortêncio | Iron Bridge (VRS-815)

May 1st, 2024, 4pm, Photo by the City Hall of São José do Hortêncio

Vale Real

May 3rd, 2024, 1pm, Photo by Portal Primeira Hora

GOVERNO DO ESTADO
RIO GRANDE DO SUL
O futuro nos une.

São Sebastião do Caí

May 3rd, 2024, 2pm, Photo by Jornal Ibiá

Montenegro

May 3rd, 2024, 9am, Photo by Correio do Povo

GOVERNO DO ESTADO
RIO GRANDE DO SUL
O futuro nos une.

Metropolitan

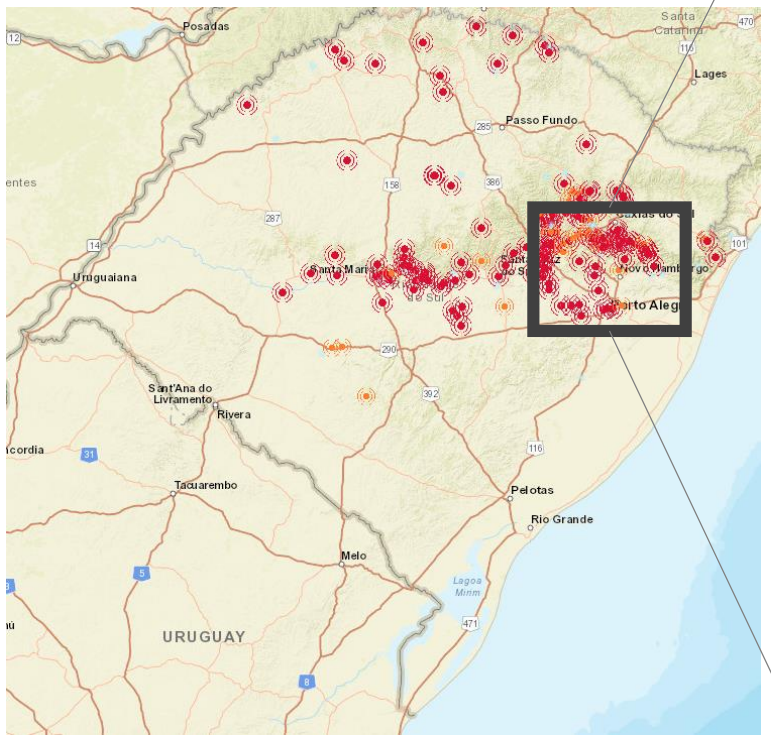
Region

Hydrographic basin:

- Baixo Jacuí
- Camaquã River
- Gravataí River
- Sinos River
- Guaíba Lake
- Litoral Médio (Middle Coast)
- Caí River
- Taquari-Antas River

Metropolitan

Road blocks



Source: RS Civil Defense, PRF and DAER-RS, May 4th, 6pm

Porto Alegre

May 4th, 2024, 5pm, Photo by Swissinfo

GOVERNO DO ESTADO
RIO GRANDE DO SUL
O futuro nos une.

Porto Alegre | Conceição Avenue (center and entrance to the State capital) and Municipal Public Market

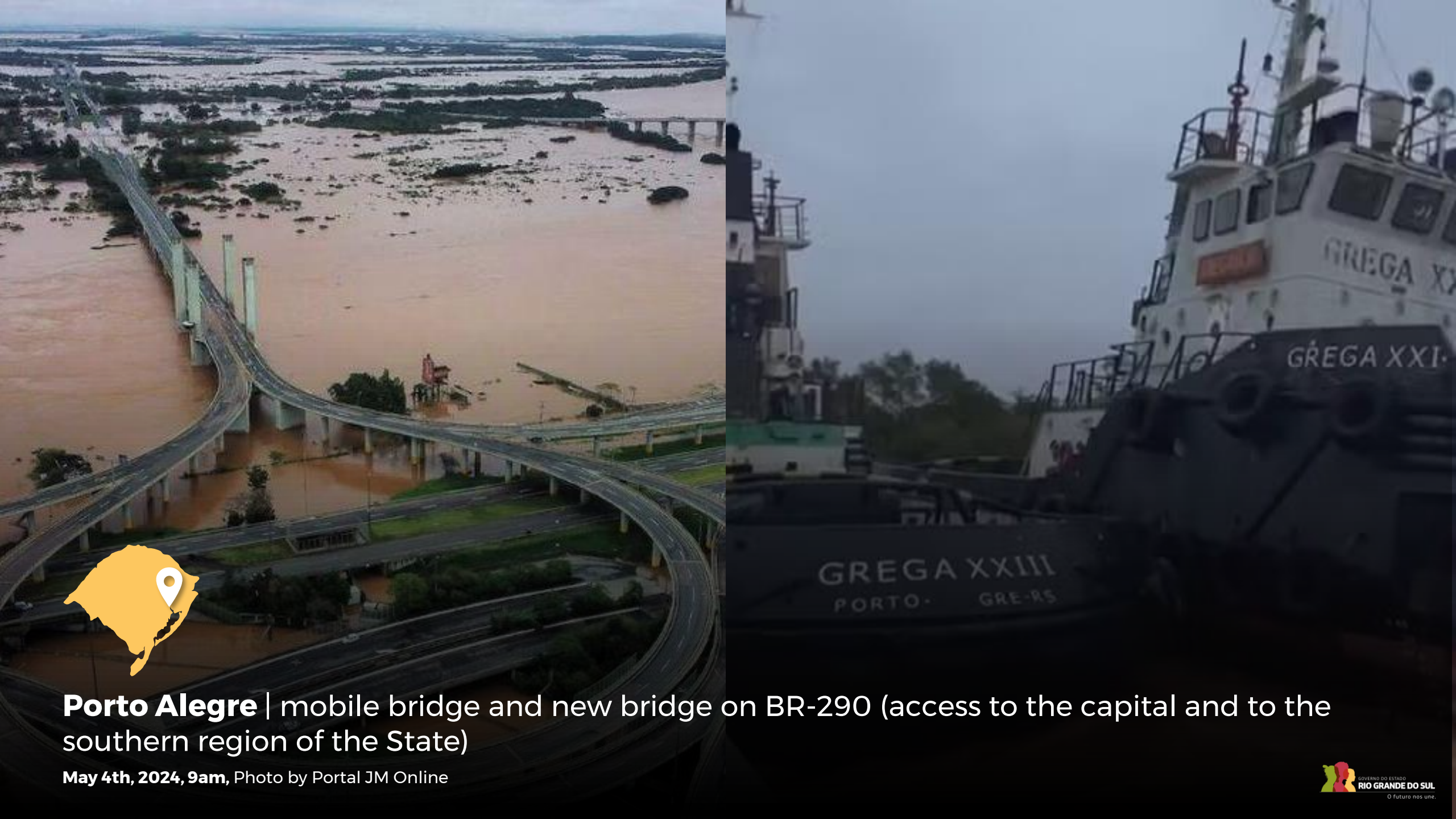
May 3rd, 2024, 9am, Photo by G1 RS and Jornal de Mato Grosso/CNN Brasil

GOVERNO DO ESTADO
RIO GRANDE DO SUL
O futuro nos une.

Porto Alegre | Bus Station and Castelo Branco Avenue (main access route to the capital)

May 3rd and 4th, 2024, 9am, Photo by G1 RS

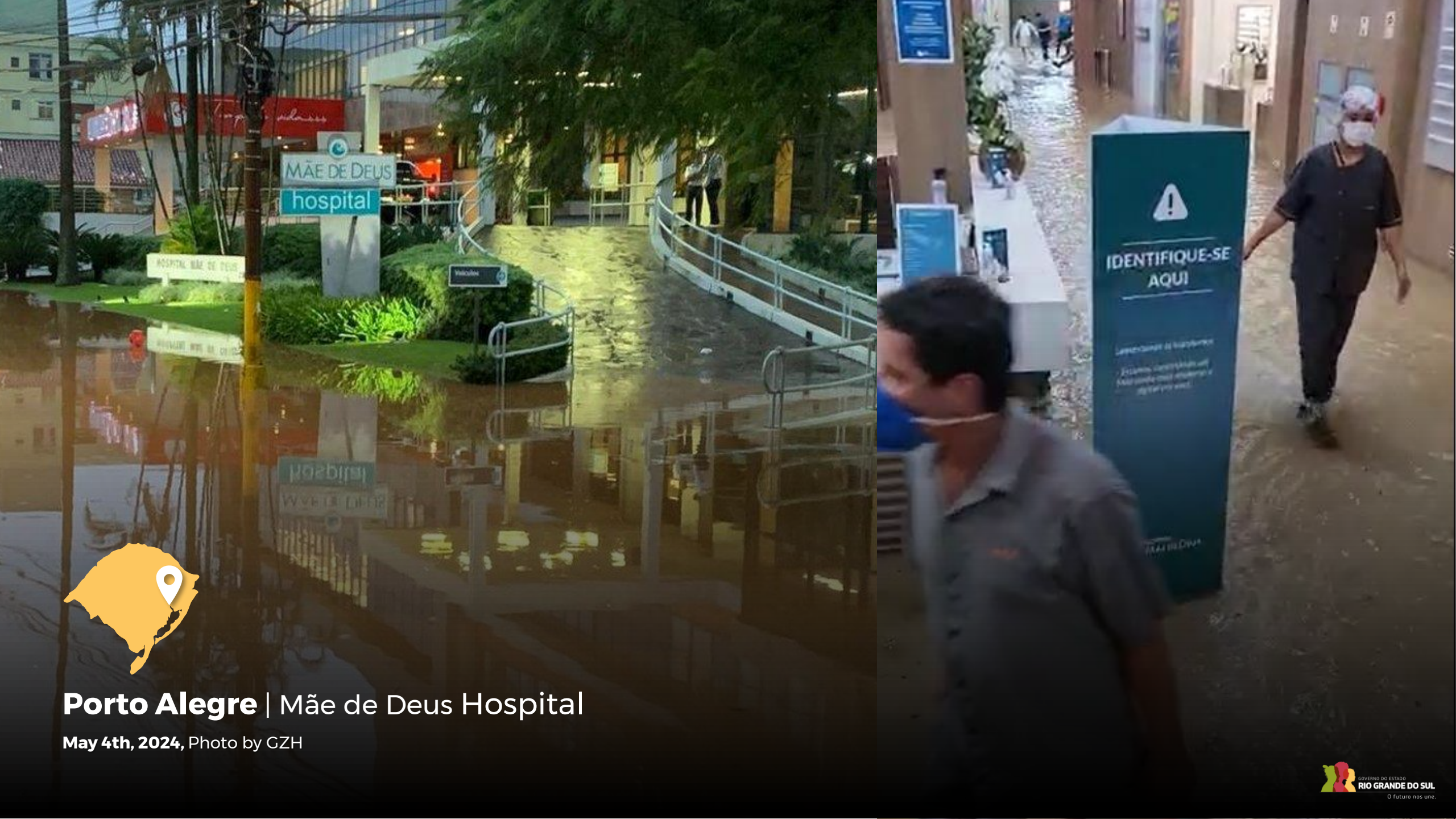
GOVERNO DO ESTADO
RIO GRANDE DO SUL
O futuro nos une.



Porto Alegre | mobile bridge and new bridge on BR-290 (access to the capital and to the southern region of the State)

May 4th, 2024, 9am, Photo by Portal JM Online

GOVERNO DO ESTADO
RIO GRANDE DO SUL
O futuro nos une.



Porto Alegre | Mãe de Deus Hospital

May 4th, 2024, Photo by GZH

GOVERNO DO ESTADO
RIO GRANDE DO SUL
O futuro nos une.

Canoas

May 3rd, 2024, Photo by Folha de SP

GOVERNO DO ESTADO
RIO GRANDE DO SUL
O futuro nos une.

Canoas (Mathias Velho district)

May 4th, 2024, Photo by Seguinte e Lédio Legal

GOVERNO DO ESTADO
RIO GRANDE DO SUL
O futuro nos une.

Charqueadas | BR-290

May 1st, 2024, 12noon, Photo by Portal Metrópoles

Guaíba

May 4th, 2024, 10am, Photo by Correio do Povo

GOVERNO DO ESTADO
RIO GRANDE DO SUL
O futuro nos une.

Guaíba

May 4th, 2024, 5pm, Photo by G1

GOVERNO DO ESTADO
RIO GRANDE DO SUL
O futuro nos une.

Eldorado do Sul

May 5th, 2024, 17 pm, Photo by No Ataque

May 4th, 2024, 12noon, Photo by Portal Comunicação e Notícia

GOVERNO DO ESTADO
RIO GRANDE DO SUL
O futuro nos une.

Vale do Rio do Sinos

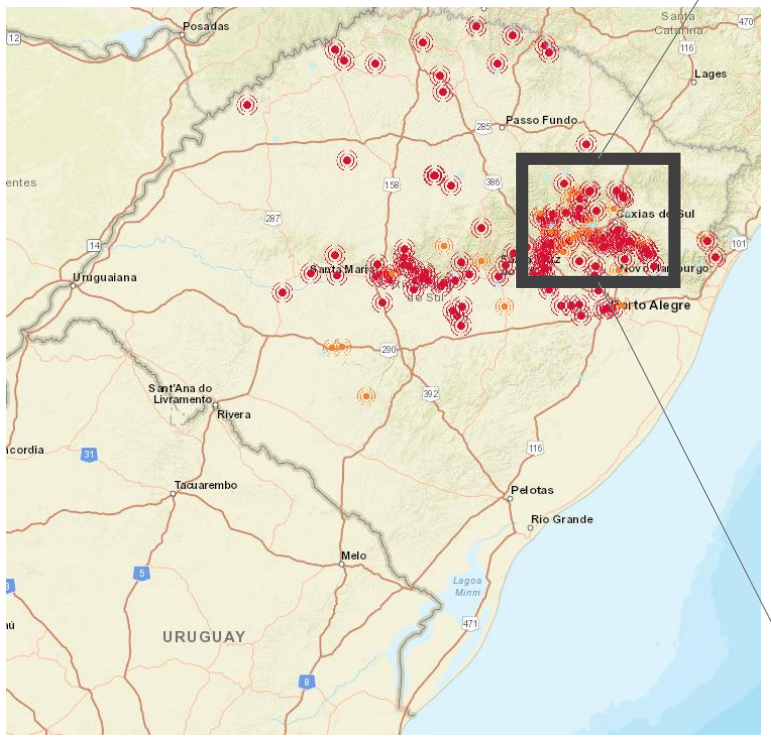
Region

Hydrographic basin:

- Sinos River
- Caí River
- Gravataí River
- Guaíba Lake

Vale do Rio do Sinos

Road blocks



Source: RS Civil Defense, PRF and DAER-RS, May 4th, 6pm

São Leopoldo

May 4th, 2024, 10am, Photo by Terra

Novo Hamburgo

May, 4th, 2024, 8pm, Photo by ABC+

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RIO GRANDE DO SUL
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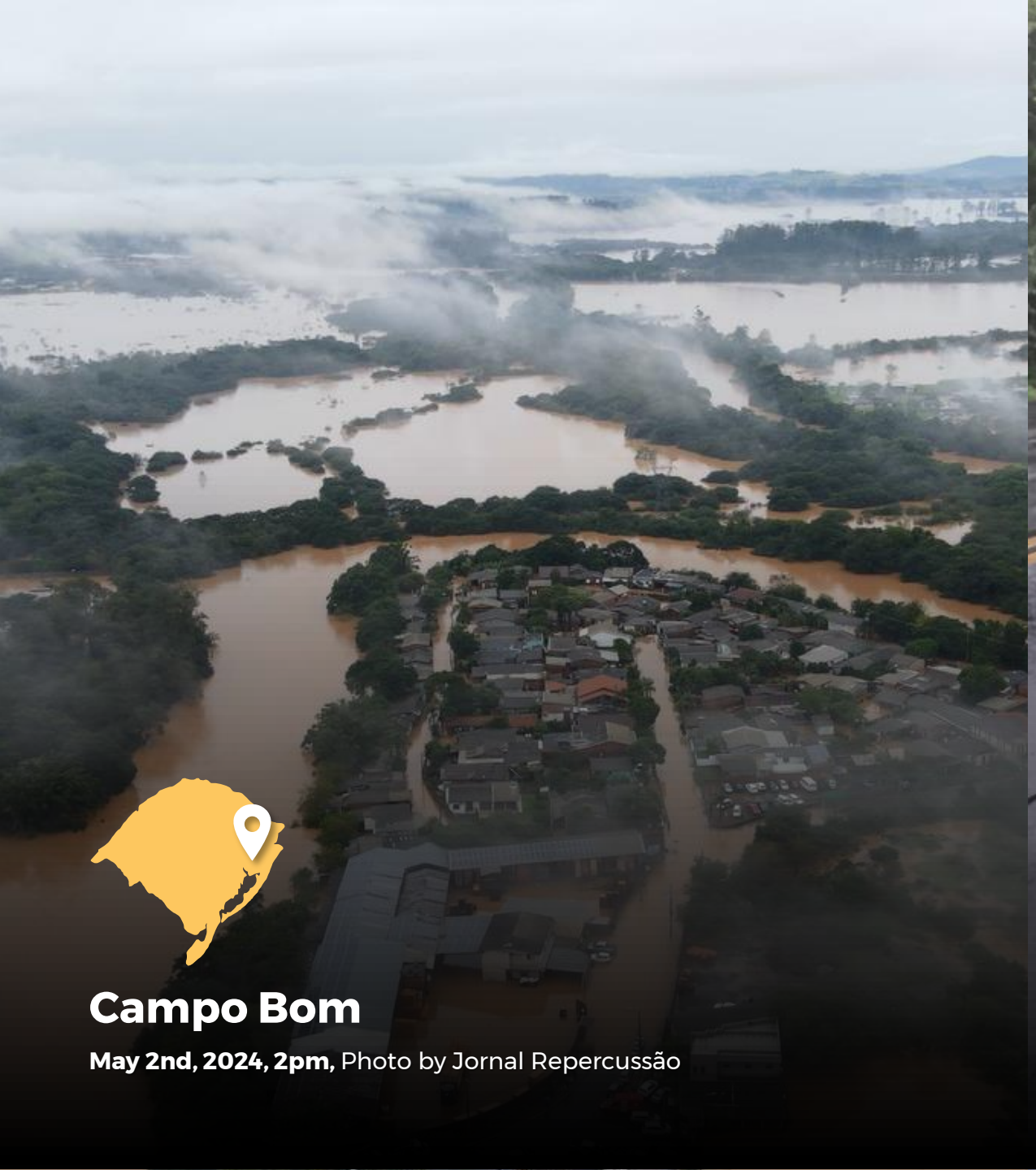
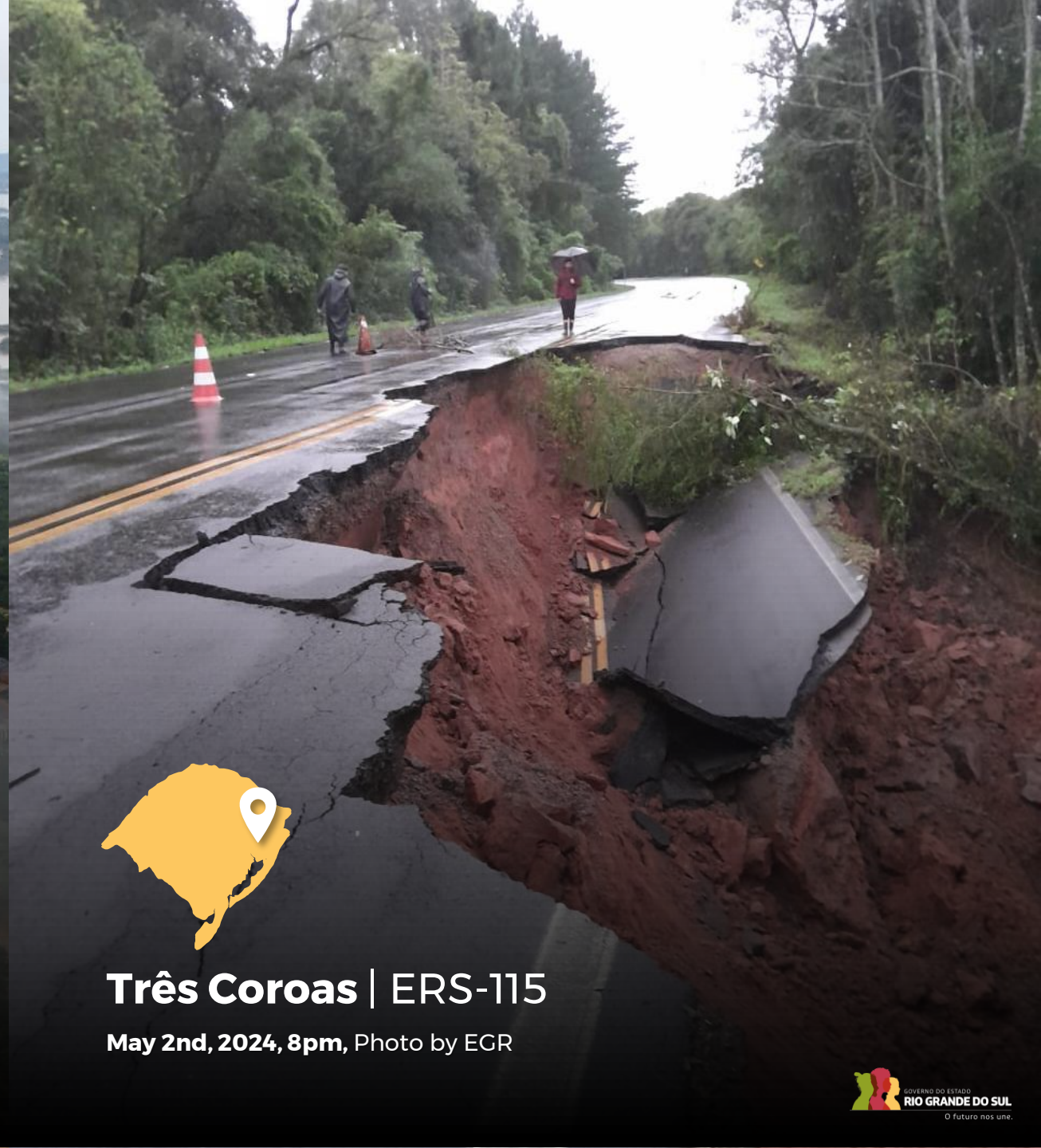


Campo Bom

May 2nd, 2024, 2pm, Photo by Jornal Repercussão



Três Coroas | ERS-115

May 2nd, 2024, 8pm, Photo by EGR

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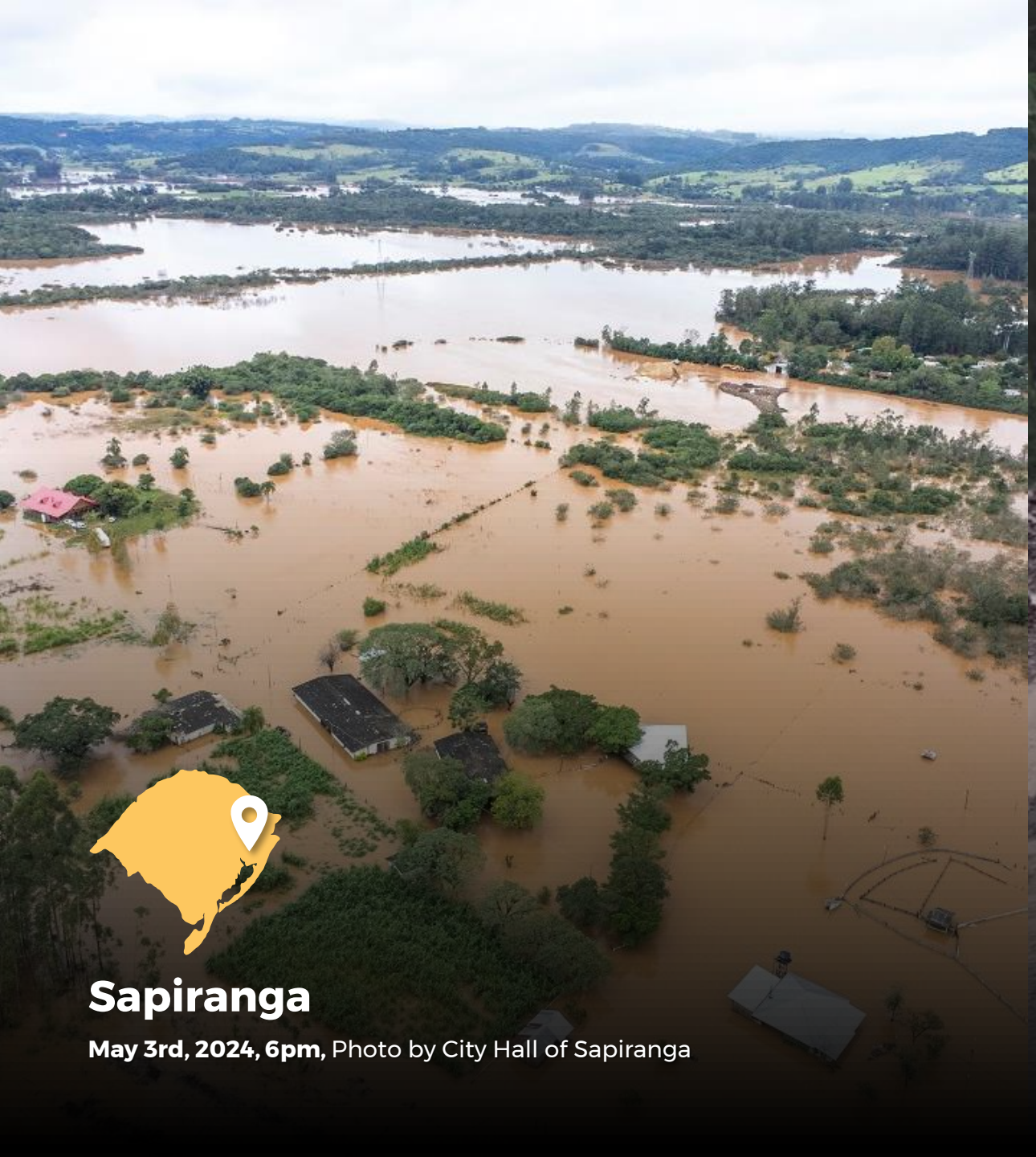
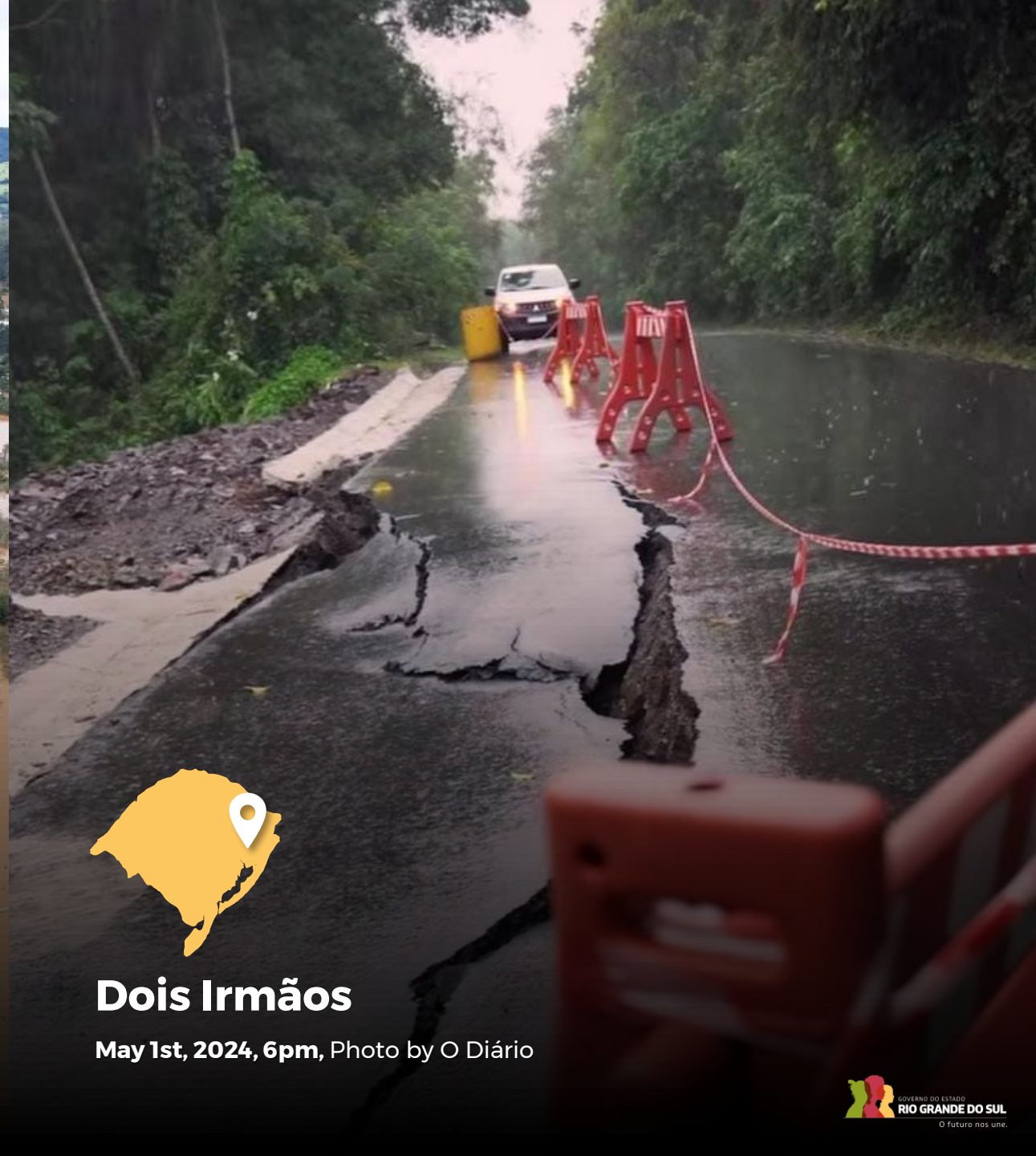


Sapiranga

May 3rd, 2024, 6pm, Photo by City Hall of Sapiranga



Dois Irmãos

May 1st, 2024, 6pm, Photo by O Diário

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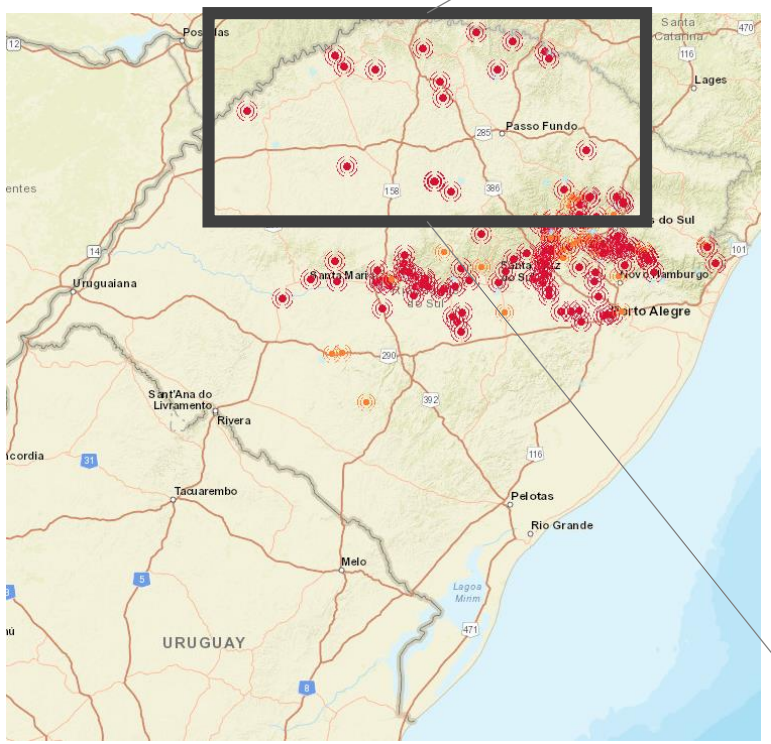
North and Northwest Regions

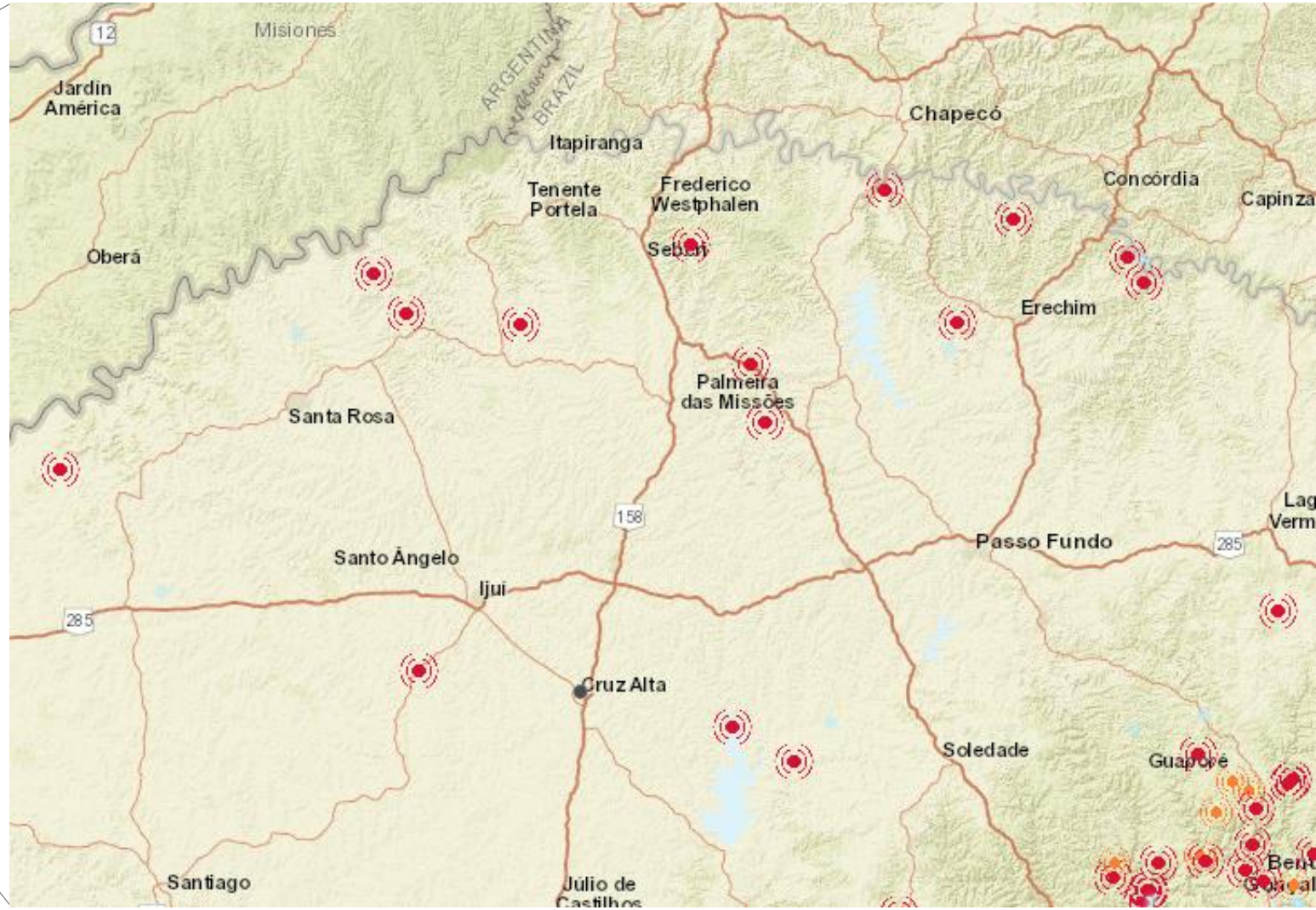
Hydrographic basin:

- Turvo – Santa Rosa – Santo Cristo Rivers
- Várzea River
- Passo Fundo River
- Ijuí River
- Piratinim River
- Apuaê – Inhandava River
- Taquari-Antas River
- Alto Jacuí

North and Northwest

Road blocks





Source: RS Civil Defense, PRF and DAER-RS, May 4th, 6pm

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Santa Rosa

May 4th, 2024, 2pm, Photo by Jornal Noroeste

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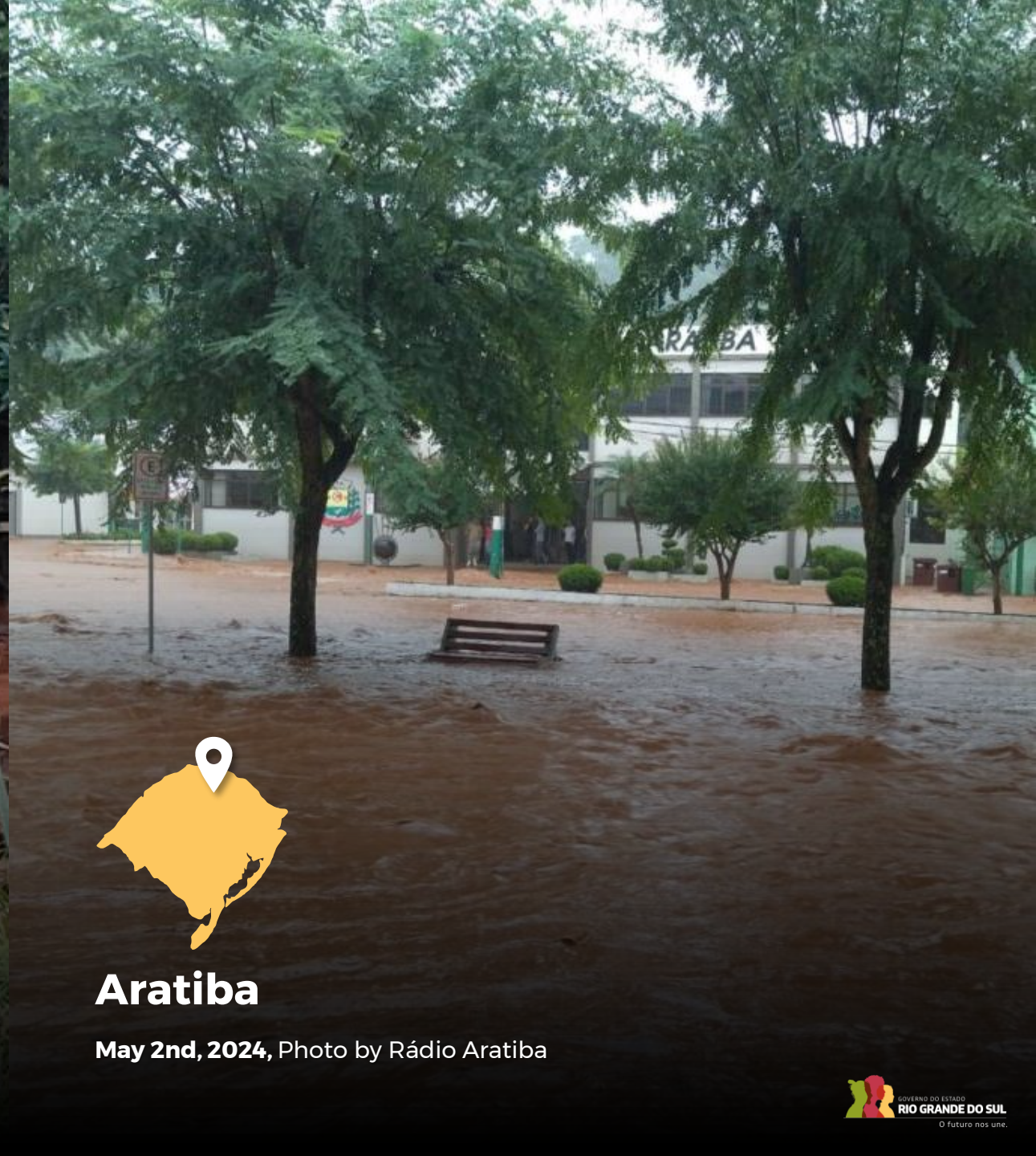
Coronel Bicaco

May 4th, 2024, 9am, Photo by Rádio Alto Uruguai



Aratiba

May 2nd, 2024, Photo by Rádio Aratiba

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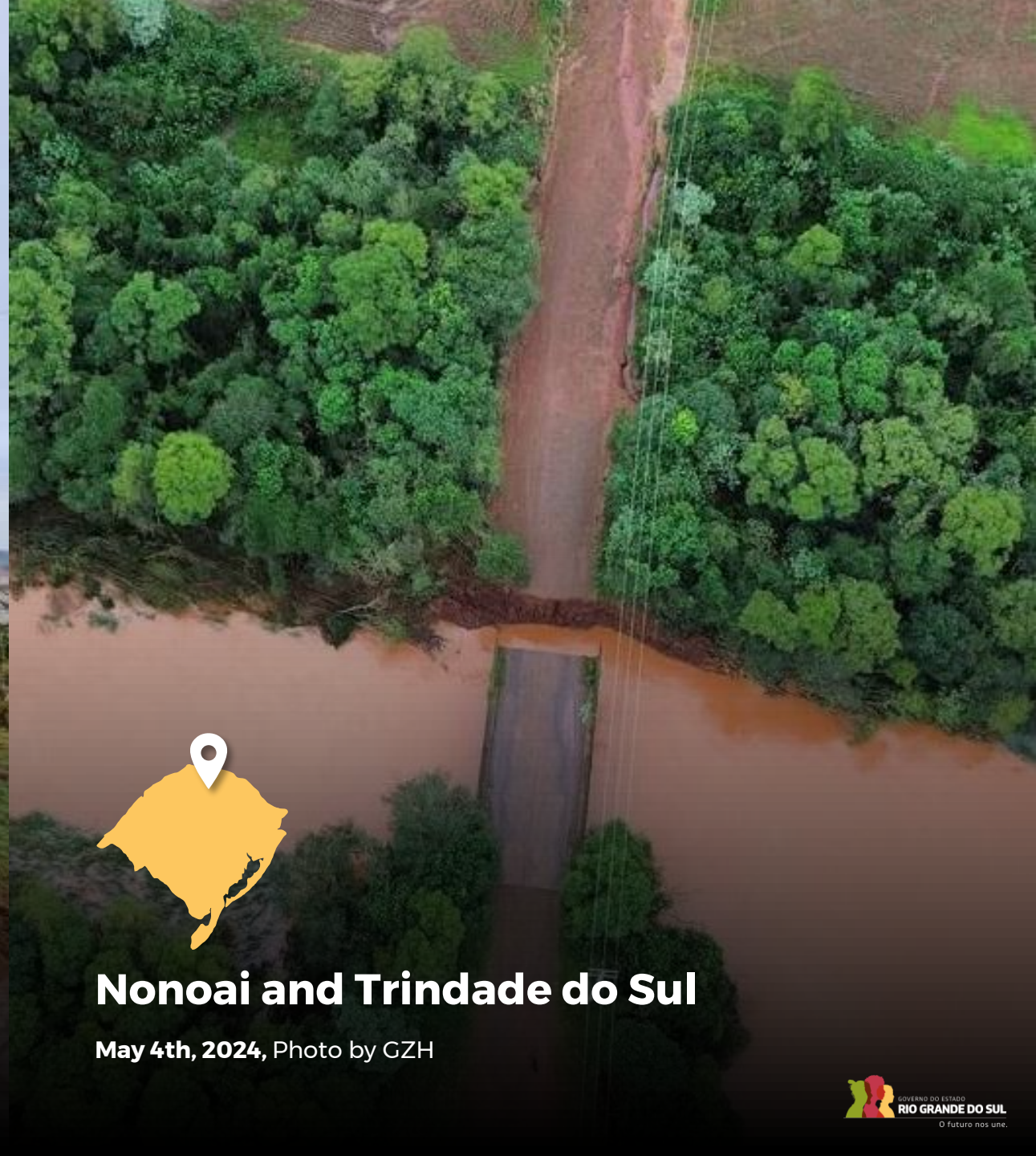
Barra do Rio Azul

May 3rd, 2024, Photo by O Nacional



Nonoai and Trindade do Sul

May 4th, 2024, Photo by GZH

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Erval Seco

May 2nd, 2024, Photo by GZH

Erechim

May 2nd, 2024, Photo by GZH

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Liberato Salzano

May 2nd, 2024, Photo by GZH

Getúlio Vargas

May 4th, 2024, Photo by Portal Tchê

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THE WORST CLIMATE CATASTROPHE OF RIO GRANDE DO SUL

URGENT ACTION PLAN

RECONSTRUCTION PLAN OF RIO GRANDE DO SUL

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STATE AUTHORITY FOR CLIMATE EMERGENCY

specialized and dedicated to dealing with the climate emergency and reconstruction

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RECONSTRUCTION PLAN OF RIO GRANDE DO SUL

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Assistance, Restoration and Reconstruction

- **Shelters**, halfway houses and social rent (provide for basic human needs)
- Extra cash transfer for people living in poverty and extreme poverty (***Volta por Cima***)
- Co-financing of **municipal social assistance** (Basic Care, Medium and High Complexity and Eventual Social Benefits) and other benefits (*e.g.* Rural Development)
- **Health costs** (psychosocial care, medicines, oxygen, primary care, health surveillance, etc.)

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Assistance, **Restoration** and Reconstruction

- **Clearing** roads and building **alternative accesses**
- **Restoring essential services** (water, electricity and communication)
- **Cleaning** houses and establishments
- **Removing rubble** and disposing of **solid urban waste** (debris) and animals
- **Dismantling** buildings and compromised structures

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Assistance, Restoration and **Reconstruction**

- Reconstruction of **highways**, **roads** and **bridges**
- Total or partial reconstruction of **affected public buildings and facilities** (schools, healthcare, social assistance, prisons, etc.)
- Restoration and reconstruction of **housing units**
- **Reurbanization** of affected areas and new urban allotments (lighting, sanitation, paving)
- Support for **local businesses and production** (credit lines, subsidized credit, extension of licenses, extension of tax payments, employment measures)
- Support for the reconstruction and re-establishment of **agricultural production** (soil recovery, subsidized credit for inputs, seeds, etc.)
- Environmental measures to recover **degraded ecosystems**

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Prevention and Climate Resilience

- ✔ State
- ✔ Municipalities
- ✔ Population

- ☐ **Prevention** plans
- ☐ **Contingency** plans
- ☐ **Resilience** plans
  - Technical studies and planning
  - Structuring works
  - Implementation and dissemination
- ☐ **Integrated Operations Center**
  - Data and analysis
  - Equipment and technologies
  - Alerts and communication
  - Training

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CHALLENGES FOR RECONSTRUCTION

CHALLENGES FOR RECONSTRUCTION

FINANCIAL RESTRICTIONS

FISCAL RULES

BUREAUCRACY

INSUFFICIENT TECHNICAL STAFF

Need for legal and constitutional changes to enable the reconstruction of the State

10 EXTREME WEATHER EVENTS
IN LESS THAN A YEAR

JUNE 15, 2023 Caraá e Maquiné	**JULY 13, 2023** Sede Nova	**SEPTEMBER 2-6, 2023** Vale do Taquari	**SEPTEMBER 23, 2023** Bagé	**SEPTEMBER 26-29, 2023** Rio Grande e Pelotas
OCTOBER 4, 2023 São Borja, Itaqui, Uruguaiana	**NOVEMBER 3, 2023** Barra do Rio Azul	**NOVEMBER 17, 2023** Vale do Taquari, do Caí e Serra	**JANUARY 17-18, 2024** Vales e RMPA	**APRIL 26 TO MAY 5, 2024** Centro, Vales, Serra e RMPA

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UNION AND RECONSTRUCTION

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THE WORST CLIMATE CATASTROPHE OF RIO GRANDE DO SUL

APRIL-MAY 2024

May 9th, 2024

STATE GOVERNMENT
RIO GRANDE DO SUL
BRAZIL