

# 1. Assessing Effects of War on the Quality of Tuberculosis Care and Treatment Delivered in Public-Health Facilities: A Cross-Sectional Study, Ethiopia (Structure Quality - For TB Patient care providers)

Dear Participant, You are being invited to participate in a research study that aims to assess the impact of conflict on tuberculosis (TB) care and treatment in public health facilities. The purpose of this study is to understand the challenges faced by healthcare facilities during conflict and to identify coping mechanisms and lessons learned for improving TB service delivery in such situations. Participation is voluntary. By completing the questionnaire, you are agreeing to participate in the study. You may choose not to answer any questions that you feel uncomfortable with, and you may withdraw from the study at any time without penalty. Confidentiality: Your responses will remain confidential and will only be used for research purposes. The information you provide will not be shared with anyone outside the research team, and no identifying information will be collected. Potential Risks and Benefits: There are no known risks associated with participating in this study. Your participation may help improve TB care and treatment delivery in conflict or emergency situations, benefiting healthcare systems and patients in the future. If you have any questions about the study or your participation, please feel free to contact the researcher. By continuing with the questionnaire, you consent to participate in this study. Thank you for your time and valuable contribution.

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Are you willing to participate?

- ☐ Yes
- ☐ No

Region

- ☐ Tigray
- ☐ Amhara

Name of the Health Facility

- ☐ Ayder Comprehensive Specialized Hospital
- ☐ Mekelle General Hospital
- ☐ Abiy Adi Hospital
- ☐ Adwa Hospial
- ☐ Kidane Mihret Catholic General Hospital

Name of the Health Facility

- ☐ Gondar Comprehensive Specialized Hospital
- ☐ Hayk Hospital
- ☐ Lalibela General Hospital
- ☐ Tibebe-Ghion Specialized Hospital
- ☐ Woldia Comprehensive Specialized Hospital

**What is your Profession or role at the facility?**

- ☐ TB Focal Person
- ☐ General Practitioner
- ☐ Health Officer
- ☐ Nurse
- ☐ Laboratory Professional
- ☐ Pharmacist
- ☐ Facility Manager/Hospital Director

**Does the facility have a dedicated TB clinic/room?**

- ☐ Yes
- ☐ No

**2. Is there a functional laboratory equipped with diagnostic equipment including microscope (HIV and AFB testing)?**

- ☐ Yes
- ☐ No

**Are the recommended anti-TB drugs available?**

*Select all available drugs.*

- ☐ Rifampicin
- ☐ Isoniazid
- ☐ Pyrazinamide
- ☐ Ethambutol
- ☐ Streptomycin

**Is there reliable electricity and backup power (e.g., generators) for lab equipment and drug storage?**

- ☐ Yes
- ☐ No

**Are sanitation facilities (toilets, hand washing stations) available and functional?**

- ☐ Yes
- ☐ No

**Are there any posted TB related posters in a local language available?**

- ☐ Yes
- ☐ No

**Is there any supervisory support in the previous 6 months?**

- ☐ Yes
- ☐ No

**Are TB diagnostic and treatment services provided free of charge to all patients?**

- ☐ Yes
- ☐ No

**Is the facility located near to the patients (within 5Km)?**

- ☐ Yes
- ☐ No

**Are TB clinic hours extended to evenings/weekends to accommodate all patients?**

- ☐ Yes
- ☐ No

**Is transportation support (e.g., ambulances) available for patients from remote areas?**

- ☐ Yes
- ☐ No

**Are TB services integrated with HIV testing and treatment programs?**

- ☐ Yes
- ☐ No

**Are there outreach programs for TB screening in high-risk populations (e.g., prisons, homeless shelters)?**

- ☐ Yes
- ☐ No

**Are there appointment systems to reduce patient wait times?**

- ☐ Yes
- ☐ No

**Are emergency TB services (e.g., for critically ill patients) available 24/7?**

- ☐ Yes
- ☐ No

**Is there a designated TB focal person or team responsible for coordinating care?**

- ☐ Yes
- ☐ No

**Are clinical staff trained in national TB guidelines (e.g., diagnosis, drug-resistant TB management)?**

- ☐ Yes
- ☐ No

**Is the patient-to-staff ratio adequate for Directly Observed Therapy (DOT) supervision?**

☐ Yes

☐ No

**Are staff trained in infection prevention and control (IPC) measures for TB?**

☐ Yes

☐ No

**Are there written protocols for TB case management and referral systems?**

☐ Yes

☐ No

**Is there a digital system for recording and reporting TB cases (e.g., electronic medical records)?**

☐ Yes

☐ No

**Are there regular staff meetings to review TB treatment outcomes and challenges?**

☐ Yes

☐ No

**Is there a functional supply chain management system for TB drugs and diagnostics?**

☐ Yes

☐ No

**Are performance evaluations conducted for TB program staff?**

☐ Yes

☐ No

**Are community health workers or volunteers involved in TB care (e.g., adherence support)?**

☐ Yes

☐ No

**Are first-line TB drugs (e.g., rifampicin, isoniazid) consistently available in stock?**

☐ Yes

☐ No

**Are second-line drugs for drug-resistant TB accessible when needed?**

☐ Yes

☐ No

**Are laboratory reagents needed for TB regularly restocked/available?**

- ☐ Yes
- ☐ No

**Are there protocols to prevent stockouts of TB medications?**

- ☐ Yes
- ☐ No

**Are expired drugs promptly removed and replaced?**

- ☐ Yes
- ☐ No

**Are waiting areas well-ventilated and spaced to minimize TB transmission risk?**

- ☐ Yes
- ☐ No

**Are masks provided to coughing patients and staff in TB clinics?**

- ☐ Yes
- ☐ No

**Are patient consultation rooms private and confidential?**

- ☐ Yes
- ☐ No

**Are hand hygiene stations (soap, water, sanitizer) available at facility entrances and TB wards?**

- ☐ Yes
- ☐ No

**Are clear signage and directions provided for TB services within the facility?**

- ☐ Yes
- ☐ No

**Are there feedback boxes or systems for patients to report concerns about care quality?**

- ☐ Yes
- ☐ No

**What do you think is the primary cause of TB?**

- ☐ Bacteria (Mycobacterium tuberculosis)
- ☐ Cold air
- ☐ Cigarette smoking
- ☐ Dust

**How is TB most commonly transmitted?**

- ☐ Through contaminated water
- ☐ Airborne droplets (coughing/sneezing)
- ☐ Skin contact
- ☐ Mosquito bites

**Which of the following is a cardinal symptom of pulmonary TB?**

- ☐ Sudden hair loss
- ☐ Cough lasting  $\geq 2$  weeks
- ☐ Skin rash
- ☐ Joint pain

**What is the standard first-line treatment regimen for drug-sensitive TB?**

- ☐ 2 months of rifampicin + isoniazid
- ☐ 6 months of rifampicin, isoniazid, pyrazinamide, and ethambutol
- ☐ 12 months of streptomycin
- ☐ Traditional herbal remedies

**A patient develops orange-colored urine during TB treatment. Which drug is likely responsible?**

- ☐ Isoniazid
- ☐ Rifampicin
- ☐ Ethambutol
- ☐ Pyrazinamide

**What is the purpose of Directly Observed Therapy (DOT)?**

- ☐ To reduce treatment costs
- ☐ To ensure patient adherence and prevent drug resistance
- ☐ To replace clinical consultations
- ☐ To diagnose TB faster

**A patient reports severe nausea and jaundice during TB treatment. What is your first action?**

- ☐ Advise them to stop all medications
- ☐ Continue treatment and monitor
- ☐ Refer for liver function tests and clinical evaluation
- ☐ Prescribe anti-nausea drugs

**Which intervention is most effective for preventing TB transmission in healthcare facilities?**

- ☐ Handwashing alone
- ☐ Use of masks and proper ventilation
- ☐ Isolating all patients in closed rooms
- ☐ Administering antibiotics to all staff

**The Impact of War on TB Care Delivery**

*What are the impacts of war on TB care delivery at your institution.*

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**Was your TB facility functional during the conflict period?**

- ☐ Fully Functional
- ☐ Partially Functional
- ☐ Not Functional or it was closed

**If not fully functional or closed, what were the main reasons?**

- ☐ Staff shortages
- ☐ Damage to infrastructure
- ☐ Limited access to medications/supplies
- ☐ Security concerns
- ☐ Limited patient access (transportation issues)
- ☐ Lack of resources or funding

**Were TB patients able to collect their medications regularly during the war?**

- ☐ Always
- ☐ Sometimes
- ☐ Rarely
- ☐ Not at all

**Was there any damage to infrastructure or loss of equipment due to the conflict?**

- ☐ Yes
- ☐ No

**Did the war affect the availability of diagnostic services like sputum microscopy?**

- ☐ Yes
- ☐ No

**Did the war affect the availability of anti-TB drugs?**

- ☐ Yes
- ☐ No

**Were staff reassigned, displaced, or absent due to insecurity or logistics during the conflict?**

☐ Yes

☐ No

**What coping mechanisms were used to maintain TB service delivery during staff shortages?**

☐ Task shifting (assigning tasks to lower-level health workers)

☐ Utilizing community health workers to support TB care

☐ Collaboration with non-governmental organizations (NGOs) or international health agencies

☐ Redeployment of staff from other health areas to TB services

☐ Training and upskilling existing staff for multiple roles

☐ Use of digital health tools for patient monitoring and reporting

☐ Temporary hiring or volunteers to fill staffing gaps

**Were refresher trainings or updates disrupted due to the conflict?**

☐ Yes

☐ No

**Did patients report fear or safety concerns when coming for follow-up or treatment?**

☐ Yes

☐ No

**Were alternative means (e.g., mobile health, community outreach) used to reach patients during the war?**

☐ Yes

☐ No

**Do you think the overall quality of TB care delivery declined during the war?**

☐ Yes

☐ No

**If yes, what were the most affected areas of TB care (diagnosis, treatment, follow-up, recording)?**

☐ Diagnosis

☐ Treatment

☐ Follow-up

☐ Recording and Reporting

☐ Patient Access to Care

☐ Medication Availability

☐ Health Worker Availability

☐ Infrastructure and Facilities

**What lessons did your facility learn for future preparedness in conflict or emergency situations?**

- ☐ Strengthening supply chain management for TB medications
- ☐ Improved training for health workers in emergency settings
- ☐ Improving patient tracking and follow-up systems
- ☐ Enhancing communication with local and international health organizations
- ☐ Establishing backup infrastructure for health services
- ☐ Development of contingency plans for conflict zones

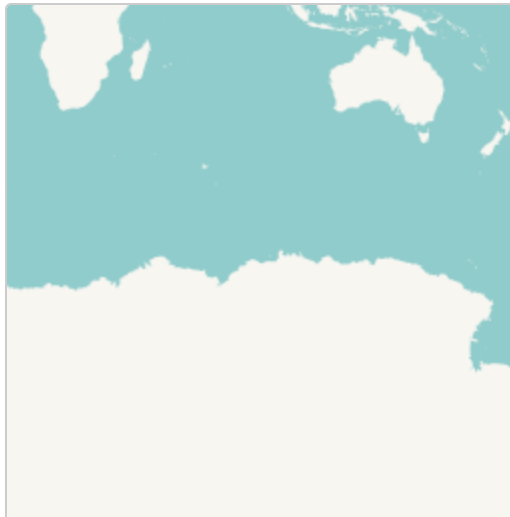
**Locate the Geographical area**

latitude (x.y °)

longitude (x.y °)

altitude (m)

accuracy (m)



Thank you for your time!

## 2. Assessing Effects of War on the Quality of Tuberculosis Care and Treatment Delivered in Public-Health Facilities: A Cross-Sectional Study, Ethiopia (Process Quality - For TB Patients interview)

Dear Participant, You are being invited to participate in a research study that aims to assess the impact of conflict on tuberculosis (TB) care and treatment in public health facilities. The purpose of this study is to understand the challenges faced by healthcare facilities during conflict and to identify coping mechanisms and lessons learned for improving TB service delivery in such situations. Participation is voluntary. By completing the questionnaire, you are agreeing to participate in the study. You may choose not to answer any questions that you feel uncomfortable with, and you may withdraw from the study at any time without penalty. Confidentiality: Your responses will remain confidential and will only be used for research purposes. The information you provide will not be shared with anyone outside the research team, and no identifying information will be collected. Potential Risks and Benefits: There are no known risks associated with participating in this study. Your participation may help improve TB care and treatment delivery in conflict or emergency situations, benefiting healthcare systems and patients in the future. If you have any questions about the study or your participation, please feel free to contact the researcher. By continuing with the questionnaire, you consent to participate in this study. Thank you for your time and valuable contribution.

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Name of the Health Facility

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- ☐ Woldia Comprehensive Specialized Hospital

**Sex**

- ☐ Male
- ☐ Female

**Age (in years)**

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**Residence**

- ☐ Urban
- ☐ Rural
- ☐ Displaced/Refugee camp

**Occupation**

- ☐ Unemployed
- ☐ Farmer
- ☐ Self-employed
- ☐ Employed (Government)
- ☐ Student
- ☐ Retired
- ☐ Other

**If selected Other, please specify.**

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**Educational status**

- ☐ No formal education
- ☐ Primary (Grades 1–8)
- ☐ Secondary (Grades 9–12)
- ☐ College/University

**Household Monthly Income**

- ☐ Less than 1,000
- ☐ 1,000–5,000
- ☐ 5,001–10,000
- ☐ Above 10,000
- ☐ Prefer not to answer

**Marital Status**

- ☐ Single
- ☐ Married
- ☐ Divorced/Separated
- ☐ Widowed

**What is the current Treatment phase patient is on?**

- ☐ Intensive phase (first 2 months)
- ☐ Continuation phase (months 3–6)

**Do you receive Directly Observed Therapy (DOT)?**

- ☐ Yes
- ☐ No

**What do you think causes TB?**

- ☐ Cursing from God
- ☐ Bacteria
- ☐ Virus
- ☐ Do not know

**Which one is the signs and symptoms of TB?**

- ☐ Cough
- ☐ Blood stained sputum
- ☐ Fever
- ☐ Weakness (easily fatigability)
- ☐ Night sweating
- ☐ Enlargement of lymph nodes
- ☐ Do not know

**Is TB transmitted from person to person?**

- ☐ Yes
- ☐ No

**Mode of transmission (How do you think is TB transmitted)?**

- ☐ Sneezing
- ☐ Coughing
- ☐ Kissing
- ☐ Talking
- ☐ Using the same utensils
- ☐ Sleeping together
- ☐ Drinking raw milk

**Do you think TB can be cured completely if patients take all medicines as prescribed.**

- ☐ Yes
- ☐ No

**What will happen if you don't take TB treatment?**

- ☐ I can lead normal life
- ☐ I will be cured by the help of God
- ☐ I may die
- ☐ I can transmit the disease to others

**For how long TB treatment is given?**

- ☐ 2 months
- ☐ 4 months
- ☐ 6 months
- ☐ Do not know

**Do TB drugs have side effects?**

- ☐ Yes
- ☐ No

**Do you think TB as preventable?**

- ☐ Yes
- ☐ No

**How do you think TB can be prevented?**

- ☐ Vaccination
- ☐ Using separate utensils
- ☐ Avoid direct coughing and breathing
- ☐ Drinking boiled milk
- ☐ Avoid kissing

**Do you think that getting early treatment is beneficial for people who are sick?**

☐ Yes

☐ No

**Would you return again to seek advice or treatment from this care provider?**

☐ Yes

☐ No

**Have you visited traditional/local healers' prior to health care unit?**

☐ Yes

☐ No

**Do you encountered a problem when seeking care?**

☐ Yes

☐ No

**Is there any variation in the provision of care to TB patients?**

☐ Yes

☐ No

| Patient Satisfaction Level                                                                                                                           | Highly<br>dissatisfied | Somewhat<br>dissatisfied | Neutral               | Moderately<br>satisfied | Highly<br>satisfied   |
|------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|--------------------------|-----------------------|-------------------------|-----------------------|
| How satisfied are you with the respect offered by the provider during your visit?                                                                    | <input type="radio"/>  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>   | <input type="radio"/> |
| How satisfied are you with care and concern shown by provider?                                                                                       | <input type="radio"/>  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>   | <input type="radio"/> |
| During your service visits, how satisfied are you with the invite/opportunity given you to say everything that you think is important?               | <input type="radio"/>  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>   | <input type="radio"/> |
| How satisfied are you with the time the health worker spent with you during your visit?                                                              | <input type="radio"/>  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>   | <input type="radio"/> |
| How satisfied are you with measures taken to assure confidentiality/privacy.                                                                         | <input type="radio"/>  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>   | <input type="radio"/> |
| How satisfied are you with completeness of the information health provider give you about your disease condition, medicationsand treatment procedure | <input type="radio"/>  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>   | <input type="radio"/> |
| How satisfied are you with the ways health providers explained things/ in understandable way / to you?                                               | <input type="radio"/>  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>   | <input type="radio"/> |

|                                                                                                                               |                       |                       |                       |                       |                       |
|-------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| How satisfied are you with the accessibility of DOTS facility/to the health center/?                                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| How satisfied are you with availability of laboratory services for sputum examination?                                        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| How satisfied are you with the adequacy & appropriateness of the working hours of the TB clinic?                              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| After arriving at the TB clinic, how satisfied are you with the time spent waiting to receive your treatment?                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| How satisfied are you with the overall comfort/enough comfortable benches/ of the waiting area?                               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| How satisfied are you with the over cleanliness of the examination room/place where you received service?                     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| How satisfied are you with the cleanliness of any instrument or equipment used by the health workers to treat or examine you? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I am totally satisfied with the visit                                                                                         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Overall satisfaction Level                                                                                                    | Strongly disagree     | Disagree              | Neutral               | Agree                 | Strongly agree        |
| I am totally satisfied with the visit.                                                                                        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| If you had other options, you would prefer                                                                                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| to complete your TB treatment in this same center                                                                             |                       |                       |                       |                       |                       |
| I will advise my friends or relatives to see this provider.                                                                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Locate the Geographical area

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latitude (x.y °)

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longitude (x.y °)

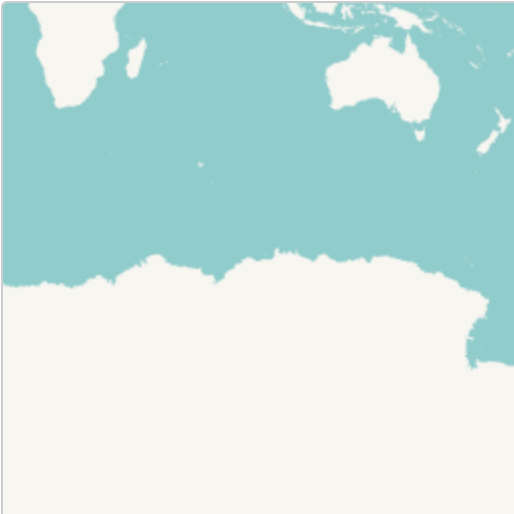
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Thank You For Your Time!

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# 4. Assessing Effects of War on the Quality of Tuberculosis Care and Treatment Delivered in Public-Health Facilities: A Cross-Sectional Study, Ethiopia (Outcome Quality - To be filled From TB LogBook)

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**Is the patient name recorded in the TB register?**

- ☐ Yes
- ☐ No

**Is the patient age recorded in the TB register?**

- ☐ Yes
- ☐ No

**If yes, what is the age of the patient (In years).**

*In years*

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**Is the patient sex recorded in the TB register?**

- ☐ Yes
- ☐ No

**If yes, what is the sex of the patient.**

- ☐ Male
- ☐ Female

**Is the patient weight recorded in the TB register?**

- ☐ Yes
- ☐ No

**Is the patient address recorded in the TB register?**

- ☐ Yes
- ☐ No

**Is the treatment start date documented in patient files/register?**

- ☐ Yes
- ☐ No

**Are sputum smear microscopy results recorded at baseline and during follow-up (e.g., months 2, 5, and 6)?**

- ☐ Yes
- ☐ No

**Is the category of treatment (e.g., new case, relapse) clearly documented?**

- ☐ Yes
- ☐ No

**If the category of treatment mentioned, what is the category?**

- ☐ New cases
- ☐ Relapse
- ☐ Failure
- ☐ Return after default
- ☐ Transfer

**Is the type of TB (pulmonary vs. extrapulmonary) accurately recorded?**

- ☐ Yes
- ☐ No

**If the type of TB is recorded, select the type of TB.**

- ☐ Pulmonary TB
- ☐ Extra-pulmonary TB
- ☐ Both

**Are drugs administered during the intensive phase (e.g., rifampicin, isoniazid, pyrazinamide, ethambutol) documented?**

- ☐ Yes
- ☐ No

**Are drugs administered during the continuation phase (e.g., rifampicin, isoniazid) recorded?**

- ☐ Yes
- ☐ No

**Is treatment outcomes (e.g., cured, treatment completed, died, lost to follow-up) documented for the patient?**

- ☐ Yes
- ☐ No

**If treatment outcome is mentioned, what is the treatment outcome.**

- ☐ Cured
- ☐ Treatment Completed
- ☐ Died
- ☐ Failed
- ☐ Lost to follow-up
- ☐ Transferred out

Locate the Geographical area

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latitude (x.y °)

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longitude (x.y °)

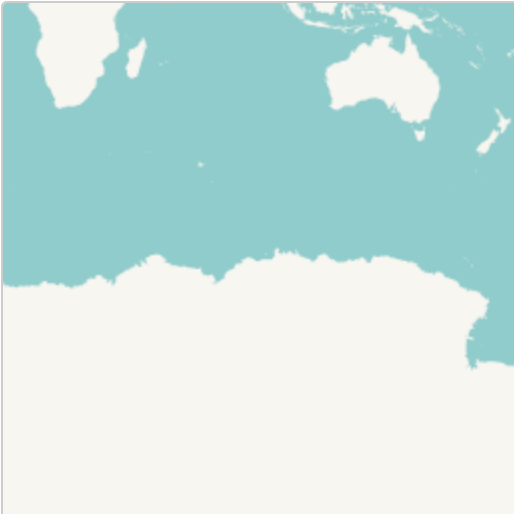
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Thank you for your time!

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