

# energy

## (chapter 2 continued)

- energy efficiency
- resistance to fossil fuel extraction / environmental justice
- (The Story of Stuff)

# assignment 2

## homework received

- Rechdi
- Lynn M
- Lynn N
- Sa im
- Jana
- Mhmd
- Carol
- Ahmad
- Omar O
- Fairouz
- Maryam
- Hussein
- Rama
- Danielle
- Souleima
- Fatima
- Diala
- Zainab
- Nader
- Edwin
- Rami
- Houssam
- Alaa
- Tony
- Joey

## Not received:

Omar W  
Khaled  
Farah

# EC for exam

- Extension until tonight (midnight) :-)

# sacrificial lands

- Naomi Klein. Let them Drown: The violence of othering in a warming world
  - “the thing about fossil fuels is that they are so inherently dirty and toxic that they require sacrificial people and places: people whose lungs and bodies can be sacrificed to work in the coal mines, people whose lands and water can be sacrificed to open-pit mining and oil spills.
  - “Fossil fuels require sacrifice zones: they always have. And you can’t have a system built on sacrificial places and sacrificial people unless intellectual theories that justify their sacrifice exist and persist: from Manifest Destiny to Terra Nullius to Orientalism, from backward hillbillies to backward Indians.”

# Yes, I do want you to read the article by Klein

- <https://www.lrb.co.uk/v38/n11/naomi-klein/let-them-drown>
- (also available in audio)
- on the website

**how to resist?**

# Energy efficiency

- Jevons Paradox - **technological progress increases the efficiency with which a resource is used (reducing the amount necessary for any one use), but the rate of consumption of that resource rises because of increasing demand**
  - named after the 19th century English economist who noticed that as people began to use coal more efficiently, they began to use more coal, not less.
  - Even if our individual energy savings more than make up for our new consumption of energy, greater energy efficiency may lead to faster economic growth, which in turn will lead to a greater demand for energy.

# cradle to cradle

A phrase invented by Walter R. Stahel in the 1970s and popularized by William McDonough and Michael Braungart in their 2002 book of the same name.

This framework seeks to create production techniques that are not just efficient but are essentially waste free.

In cradle-to-cradle production, all material inputs and outputs are seen either as technical or biological nutrients. Technical (i.e. synthetic) nutrients can be recycled or reused with no loss of quality and biological nutrients composted or consumed.

By contrast, cradle-to-grave refers to a company taking responsibility for the disposal of goods it has produced, but not necessarily putting products' constituent components back into service.



# examples...from toilets

- composting toilets ... treat human excrement using biological processes, turning it into organic **compost** material that can be **used** to fertilise the soil. They are small-scale, complete waste processing systems
  - “A dry composting toilet uses **no water**, so there is **no plumbing** involved, **no chemicals** needed, **no flushing**, it’s completely **natural and organic**. The toilet is like a mini ecosystem that **separates the liquids** (the pee) and **the solids** (the poo) so the solids can convert into humus” - <http://www.gonewiththewynns.com/composting-toilet>
  - why? - **Toilets** can use between 2 to 7 gallons of **water** with every flush (we use more water in the bathroom than anywhere else in the house)



# .... to homes....



Located in Issaquah Highlands, Washington, [zHome](#) is a 10-unit housing development with the mission to "prove that homes that use zero net energy and 60% less water, emit net zero carbon emissions, have clean indoor air and use only low-toxicity materials are possible and scalable to mainstream home production."



Designed by [Farr Associates](#) and built by [Goldberg General Contracting](#), the [Yannell residence](#) is a single-family, 2,675-square-foot home located in Chicago, Illinois, and owned by Michael Yannell.

The home was completed in 2009 and cost about \$1.6 million to build. It produces 40% more energy than it consumes, [scoring higher than any other LEED-certified project in history](#).

**how to resist?**

# Two Bay Area counties sue 37 fossil fuel companies over sea-rise

By RICHARD HALSTEAD | MediaNews

PUBLISHED: July 17, 2017 at 6:41 pm | UPDATED: July 18, 2017 at 4:02 pm



Rich Pedroncelli/Associated Press

File photo: The complaint alleges that oil companies since the 1970s concealed the harm of fossil fuels to the atmosphere and fought regulation.

By RICHARD HALSTEAD | MediaNews

PUBLISHED: July 17, 2017 at 6:41 pm | UPDATED: July 18, 2017 at 4:02 pm

Two Bay Area counties sued 37 oil, gas and coal companies Monday asserting the companies knew their fossil fuel products would cause sea level rise and coastal flooding but failed to reduce their greenhouse gas pollution.

The lawsuit was part of a coordinated litigation attack by Marin, San Mateo County and the city of Imperial Beach.

The lawsuit, filed in Marin County Superior Court, alleges that "major corporate members of the fossil fuel industry, have known for nearly a half century that unrestricted production and use of their fossil fuel products create greenhouse gas pollution that warms the planet and changes our climate."

# Bay Area cities sue big oil companies over climate change, rising seas



Chevron Oil, operator of this Richmond refinery above, and four other big oil companies have been sued by San Francisco and Oakland over climate change and the costs of preventing flooding from rising sea levels. Contra Costa Times/Mark DuFrenoy

By DENIS CUFF | dcuff@bayareanewsgroup.com | Bay Area News Group  
PUBLISHED: September 20, 2017 at 10:26 am | UPDATED: September 21, 2017 at 5:59 am

UPDATED: September 21, 2017 at 5:59 am

**SAN FRANCISCO** — Comparing climate change to tobacco as a major threat to humanity, San Francisco and Oakland have sued the world's biggest oil companies in an attempt to defend against rising sea levels.

In seeking huge but unspecified sums to pay for sea walls and other shoreline defenses, the cities argue that oil companies concealed for decades that they knew fossil fuel use was dooming the Earth to global warming and rising sea levels.

The oil companies, city officials said Wednesday in announcing the lawsuit, acted much as tobacco companies did in the 1980s and 1990s when they downplayed the heavy health toll from smoking.

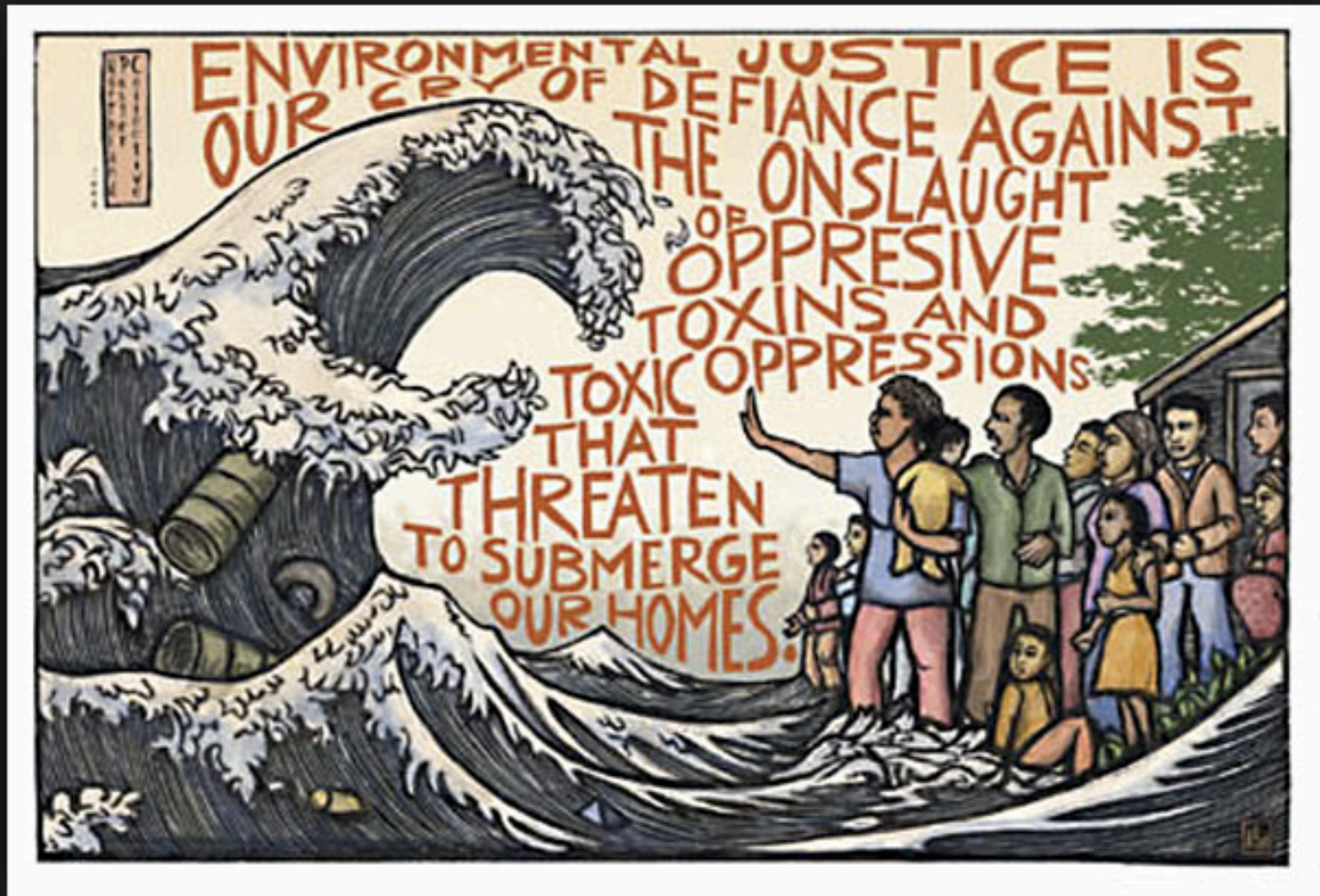
"These fossil fuel companies profited handsomely for decades while knowing they were putting the fate of our cities at risk," San Francisco City Attorney Dennis Herrera said. "Instead of owning up to it, they copied a page from the Big Tobacco playbook. They launched a multimillion-dollar disinformation campaign to deny and discredit what was clear even to their own scientists: Global warming is real, and their product is a huge part of the problem."

The lawsuits filed in Alameda and San Francisco county superior courts name Chevron, Exxon, Royal Dutch Shell, BP and Conoco Phillips.

# fracking banned by law

- Ireland, Netherlands, Germany, France, Bulgaria, Australia
- 4 out of 10 provinces in Canada

# environmental justice



# EJ - EQUITY, EQUALITY, AND AUTONOMY

EJ usually refers to the belief that all citizens, regardless of ethnicity or socioeconomic class, should equally share in the benefits of environmental amenities and the burdens of environmental health hazards. ....

“Environmental Justice (EJ)...refers to those cultural norms and values, rules, regulations, behaviors, policies, and decisions to support sustainable communities where people can interact with confidence that the environment is safe, nurturing, and productive. Environmental justice is served when people can realize their highest potential...where both cultural and biological diversity are respected and highly revered and where distributed justice prevails.” Book: *Environmental Justice: Issues, Policies, and Solutions*

- equal distribution of harm and benefit
- accountability and political representation in decision-making

**WE, THE PEOPLE OF COLOR**, gathered together at this multinational People of Color Environmental Leadership Summit, to begin to build a national and international movement of all peoples of color to fight the destruction and taking of our lands and communities, do hereby re-establish our spiritual interdependence to the sacredness of our Mother Earth; to respect and celebrate each of our cultures, languages and beliefs about the natural world and our roles in healing ourselves; to ensure environmental justice; to promote economic alternatives which would contribute to the development of environmentally safe livelihoods; and, to secure our political, economic and cultural liberation that has been denied for over 500 years of colonization and oppression, resulting in the poisoning of our communities and land and the genocide of our peoples, do affirm and adopt these Principles of Environmental Justice ...

\* People of Color Int'l Conference - Principles of EJ - <http://www.ejnet.org/ej/principles.html>



# what is justice

**Distributional Justice** refers to spatial fairness of the physical distribution of environmental benefits and burdens.

- Unequal siting of landfills
- Unequal siting of polluting industries
- Unequal extraction of natural resources
- Disparate access to recreational space
- Disparate exposure to toxicants on the job
- Unequal arrangement of public infrastructure, such as high ways, public transportation, garbage collection, etc.

**Procedural Justice** refers to providing equal protection from environmental hazards regarding rulemaking and enforcement.

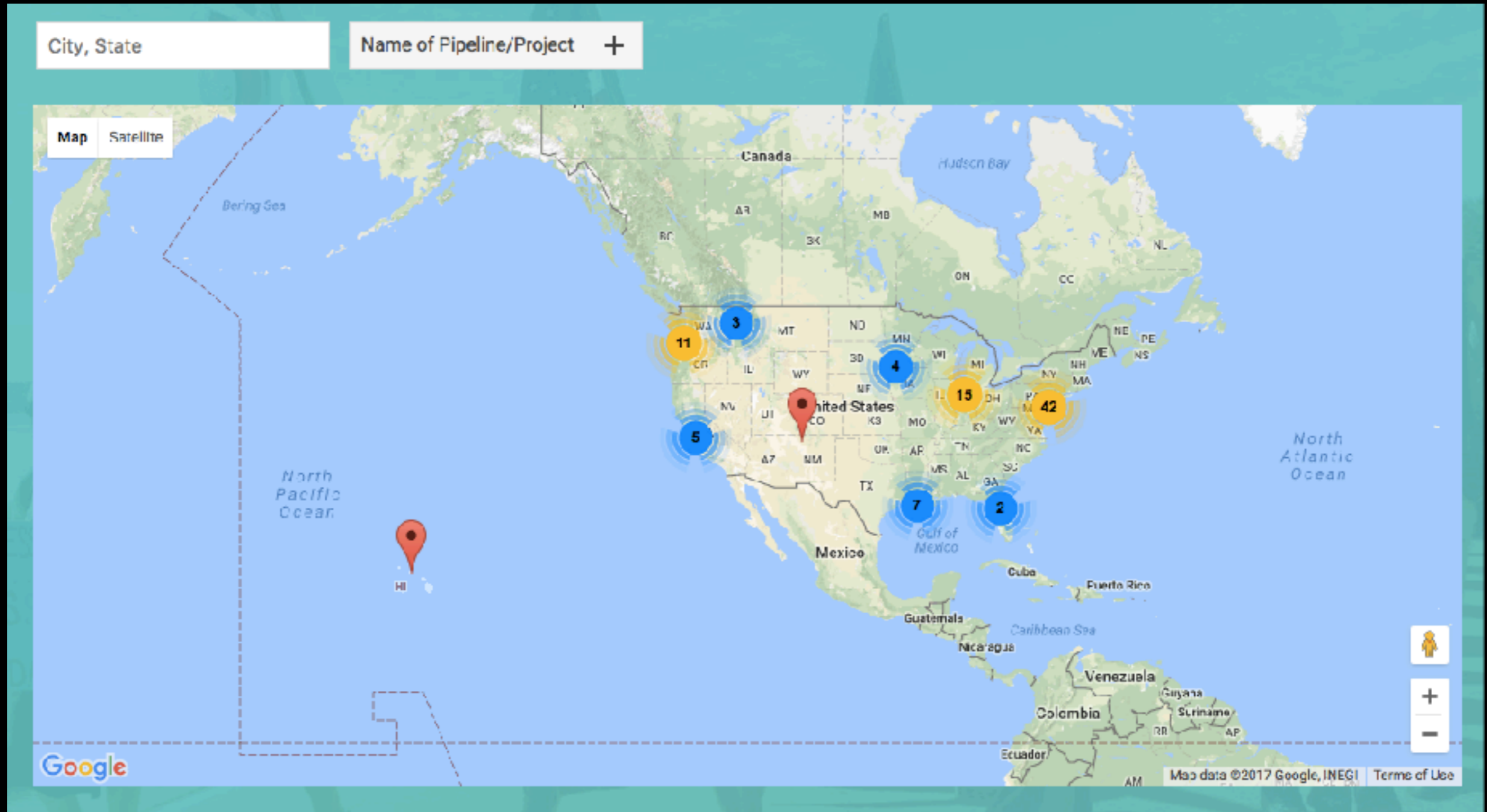
- Unequal protection in cleaning up environmental hazards
- Unequal enforcement in environmental quality control
- Disparate risks in safe food consumption standards
- Disparate impact of cumulative assessment of environmental quality control (i.e. a city may meet air quality standards, but certain neighborhoods within the city may exceed air quality standards)

**Process Justice** refers to providing opportunities for *meaningful* citizen involvement in decisions that affect environmental health, including access to information and adequate authority for local knowledge (Pena, 2005).

- Disparate access to information on exposure to toxicants
- Disparate access to regulatory agencies during review on rules, and regulations
- Disparate access to the scientific community on research priorities, and design
- Unequal study subject participation in clinical trials

...back to energy :-)

- Mapping Fossil Fuel Resistance - <https://fossilfuelresistance.org/>



FOR IMMEDIATE RELEASE

September 21, 2017

Contact: Dani Heffernan, [dani@350.org](mailto:dani@350.org), +1 (305) 992-1544

## **Groups Launch Map Showing Groundswell of Resistance to New Fossil Fuel Projects**

*The Fossil Fuel Resistance Mapping Project geographically displays the movement that will stop new fossil fuel projects*

**Washington, DC** — Today, a network of communities and groups working to stop new fossil fuel projects launched an [interactive online mapping project highlighting](#) these efforts in the U.S. The Fossil Fuel Resistance Mapping Project displays the scale of locally-led efforts against proposed pipelines, fracking wells, and other projects being proposed and constructed by the fossil fuel industry. The project is launching at the end of a summer filled with disastrous weather events made worse by climate change, and as the climate-denying Trump Administration continues putting the interests of fossil fuel billionaires ahead of action to address this global crisis and protect our communities.

From the Gulf Coast where people are recovering from Hurricanes Harvey and Irma, to the Pacific Northwest where wildfires are raging, many communities are leading fights against fossil fuel projects amidst life-altering climate impacts. These fights are not isolated events, but rather a groundswell of steadfast and widespread local resistance to fossil fuel projects across the continent in the absence of federal climate action. Grassroots leaders in these efforts are pushing back on the fossil fuel industry's injustices, from environmental racism to violating Indigenous sovereignty. Well known projects, like the Keystone XL pipeline, are facing resistance from communities across state and international lines.



## [350 Triangle – Atlantic Coast Pipeline](#)

**Raleigh, NC**

**Description:**

The proposed Atlantic Coast Pipeline begins in West Virginia, goes through western Virginia, and ends in eastern NC, running 205 miles paralleling the I-95 corridor through the poorest and most racially diverse region of NC. 350 Triangle is working with Frack Free NC, APFPL, and other groups to help educate the public about the pipeline. Currently we are encouraging people to attend upcoming public hearings and actions. This past spring we help plan and encouraged folks to join the walk along the proposed pipeline route.

**Get Involved:**

- [Follow this fight on Facebook](#)
- [Sign up to get email updates](#)

**Media Contact:** [chickadeebirders@earthlink.net](mailto:chickadeebirders@earthlink.net)



# EJ Atlas - [ejatlas.org](http://ejatlas.org)

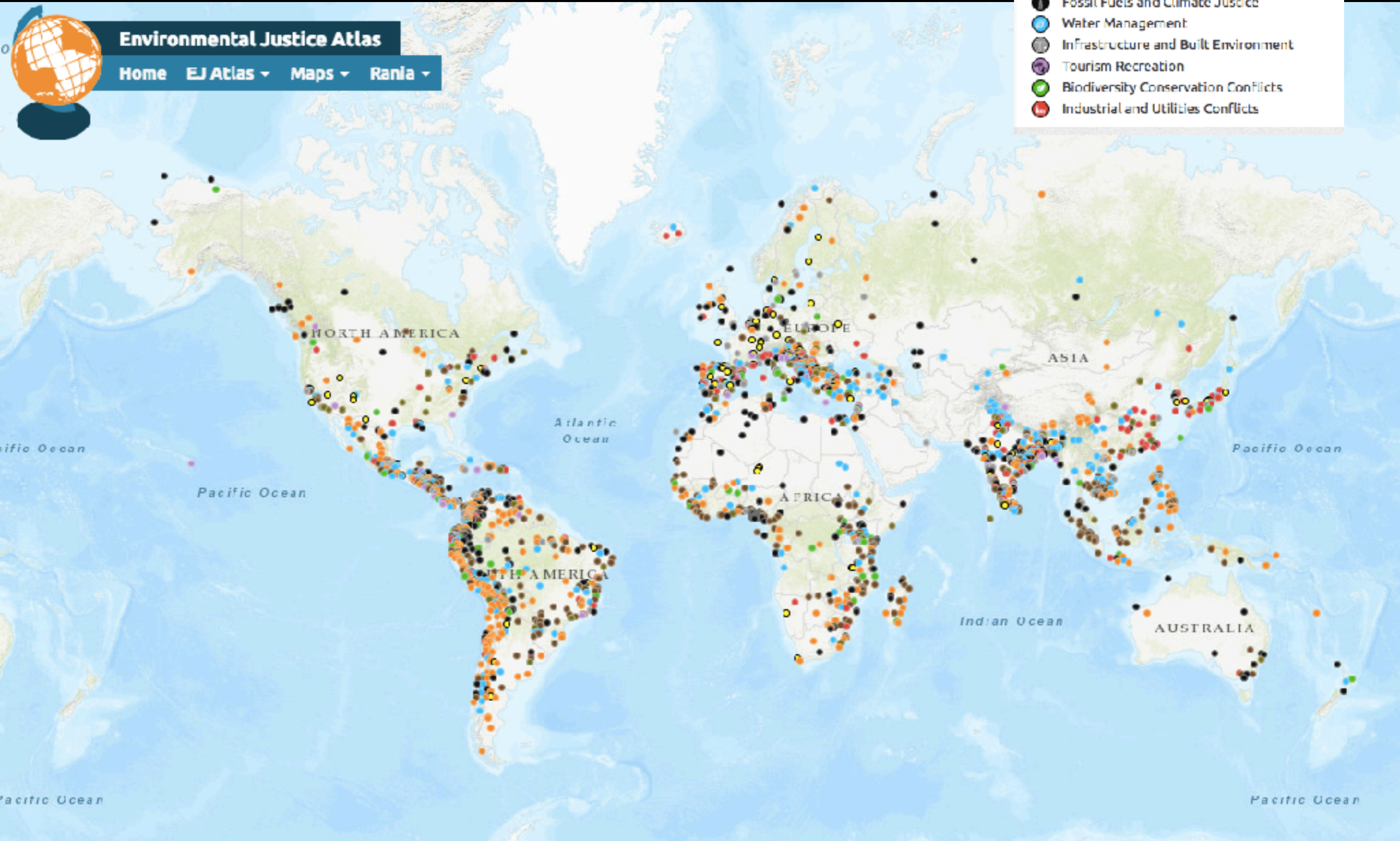


Environmental Justice Atlas

Home EJ Atlas Maps Rankia

## Legend

- Nuclear
- Mineral Ores and Building Extractions
- Waste Management
- Biomass and Land Conflicts
- Fossil Fuels and Climate Justice
- Water Management
- Infrastructure and Built Environment
- Tourism Recreation
- Biodiversity Conservation Conflicts
- Industrial and Utilities Conflicts

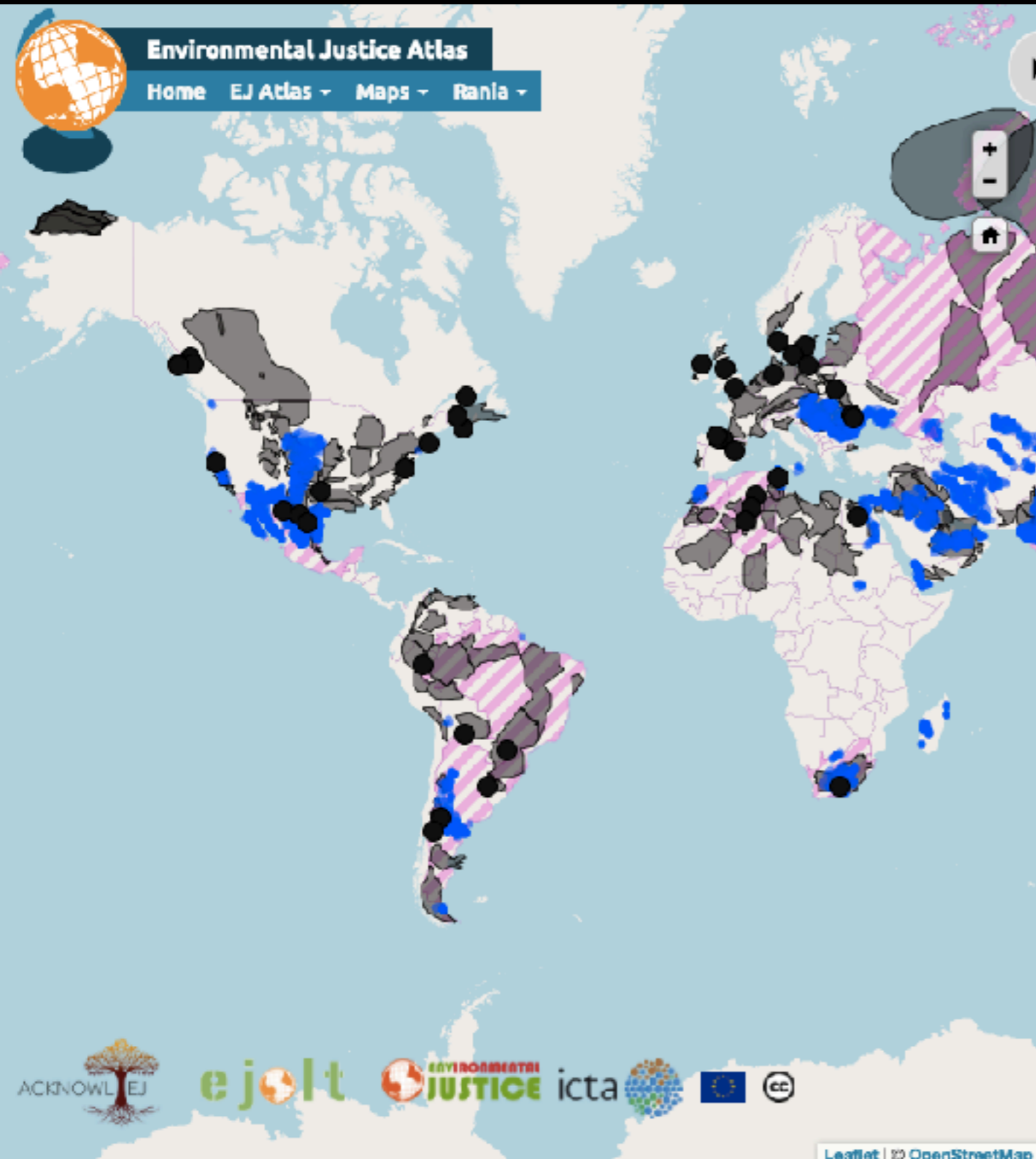




# Environmental Justice Atlas

Home EJ Atlas Maps Rank





**Environmental Justice Atlas**

Home EJ Atlas Maps Rania

▼ Description

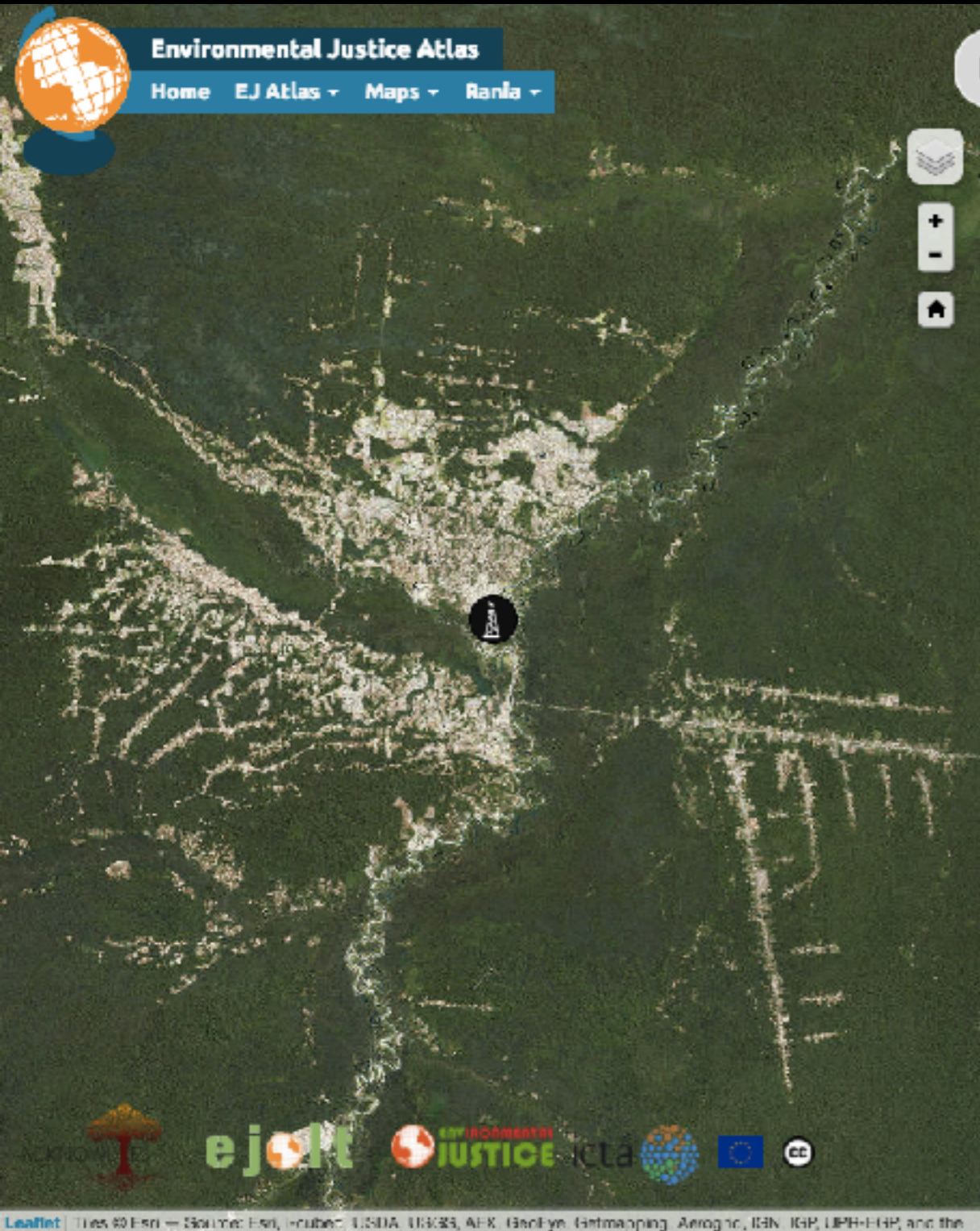
As the production of conventional oil and gas is quickly depleting, the fossil fuel industry is now developing globally unconventional energy sources such as shale gas, shale oil, tight gas and coal-bed methane. Its extraction process, which includes the technique of high-volume horizontal hydraulic fracturing or "fracking", generates serious and large-scale environmental and human health concerns, such as threats to surface and ground water quality, pressure on drinking water reserves, worries over fracking's impacts on air quality, the stimulation of earthquakes and its important impact on climate change.

[See more...](#)

> Legend

▼ Cases

- Anti-fracking uprising in Ain Salah, Algeria
- Atlantic Coast Natural Gas Pipeline, Virginia, USA
- Ban on Onshore Fracking in Nova Scotia, Canada
- Belcoo Community Fracking Blockade, Northern Ireland, UK
- Urraca Fracking Project by BNK Petroleum en Burgos, Spain
- Fracking in California, USA
- Chevron Shale Gas, Romania
- Digby Island proposed Nexen Aurora LNG (fracked gas) export facility, BC, Canada
- Earthquakes & conflict linked to fracking, Nuevo Leon, Mexico
- Elsipogtog First Nation v. Fracking, NB, Canada
- Extracción de Gas y Petróleo en el Río Pilcomayo, Bolivia
- Exploratory fracking in Arquetu, Cantabria, Spain
- Exploratory fracking in Balcombe, UK
- Fracking Araba - ENARA, Spain
- Fracking en municipios del Maestrat y Els Ports en Castellón, Comunitat Valenciana, Spain
- Fracking in the Parana Basin, Brazil



Environmental Justice Atlas

Home EJ Atlas Maps Rank

Anti-fracking movement and Petrobras Shale Gas Exploration Field AC-T-8 – Vale do Juruá, Brazil



*A victory for the environmental justice in Brazil. Suspension of shale gas exploration by use of fracking at the Vale do Juruá (Amazonas and Acre), in a campaign by COESUS that reaches other states also.*

### Description

In 2013, Brazilian National Oil Agency – ANP (Agência Nacional de Petróleo) prepared its 12th Auction of Oil and Gas Exploration Areas. Among these, there were the “blocos” or areas located in the Vale do Juruá region – (Center-North part of the State of Acre and West of the state of Amazonas). It sits directly on top of the Aquifer Juruá: one of the Amazon’s most important aquifers. It is also located next to two indigenous territories, belonging to the Nukini and the Poyanawá. The concession area AC-T-8, according to ANP, could be destined for shale gas exploration through hydraulic fracking. This caused major consternation among social-environmental movements and civil society. The Brazilian Society for the Progress of Science (SBPC), CIMI (Indigenous Missionary Council) and anti-fracking movements such as COESUS (No-Fracking in Brazil Coalition) are among those agents that started the

launched its 13th Auction of Oil and Gas Exploration Areas. This was a time for more mobilization, including a stronger participation of civil society. This way, the Federal Public Office through its attorney in Cruzeiro do Sul - the State of Acre managed to secure a suspension of the auctioning and exploration of areas destined to hydraulic fracking. The Brazilian Procuradoria Office (general attorney) assumed an anti-fracking position. It is a partner to civil society in resisting against the activity. The claims made against fracking (accepted by Brazilian Federal Justice) are that the activity has most grave environmental and social risk of impacts. Scientists have shown the impacts in water contamination from fracking – generating thus more concern over this extractive activity. Such claims are finding resonance in Brazil among diverse groups and agents in society and as such,



## ▼ The Conflict and the Mobilization

### Intensity of Conflict (at highest level)

MEDIUM (street protests, visible mobilization)

### When did the mobilization begin

PREVENTIVE resistance (precautionary phase)

### Groups Mobilizing

Farmers  
Indigenous groups or traditional communities  
Local ejos  
Social movements  
Local scientists/professionals

### Forms of Mobilization

Development of a network/collective action  
Lawsuits, court cases, judicial activism  
Media based activism/alternative media  
Objections to the EIA  
Official complaint letters and petitions  
Public campaigns

### Project Status

Stopped

### Pathways for conflict outcome / response

Court decision (victory for environmental justice)  
Strengthening of participation  
Application of existing regulations

### Development of Alternatives

A Latin America alliance against shale gas fracking is developing, from Brasil to Argentina (Neuquén), born from the successes in Paraná, Piauí, Sao Paulo, Alagoas, Amazonas and Acre in Brazil.

### Do you consider this as a success?

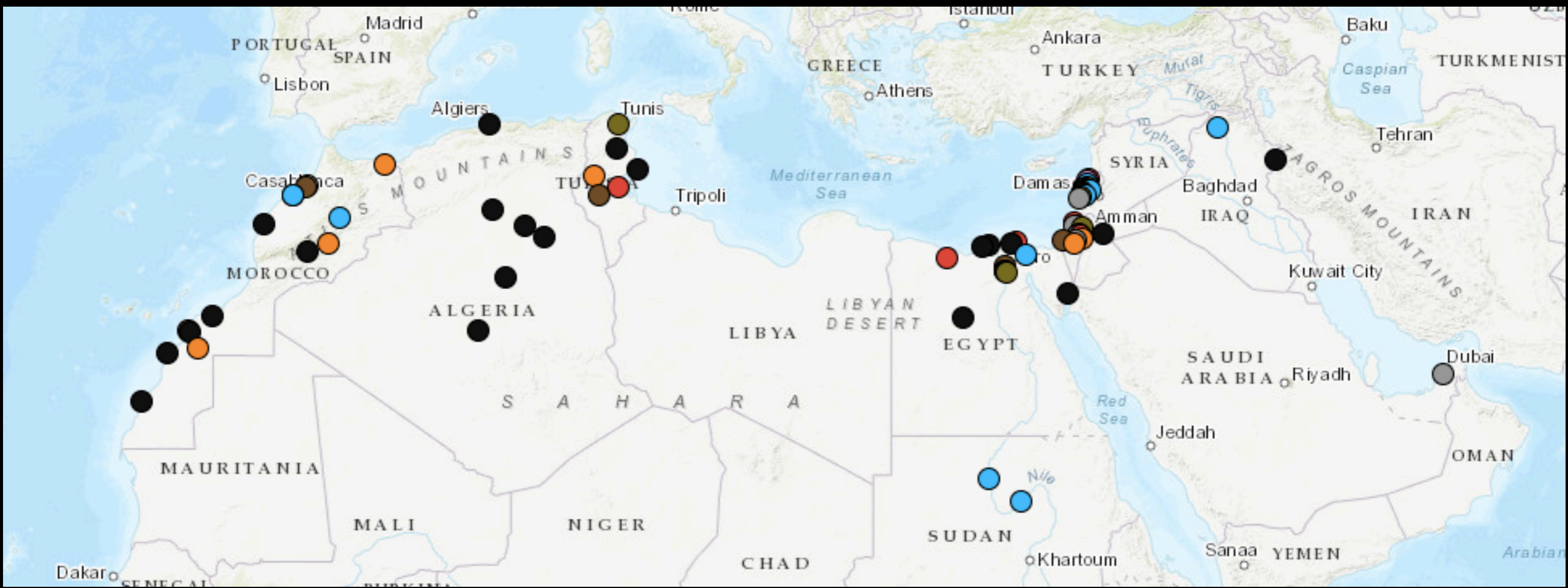
Yes

### Why? Explain briefly.

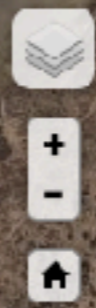
Up to now (mid-2017) and due to the strengthening of participation and the coalition against fracking in Brazil the Federal Court of Brazil has banned the use of fracking in the state of Alagoas, Piauí, Sao Paulo, Acre, and Paraná. This specific project was suspended by Judicial order from Brazilian Federal Courts in 2015.

**Legend**

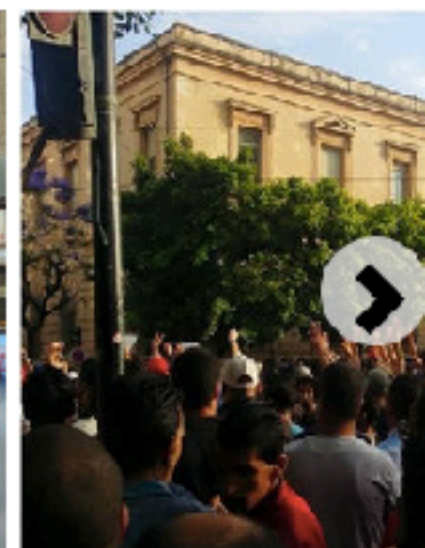
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### Kerkennah employment protests, Tunisia

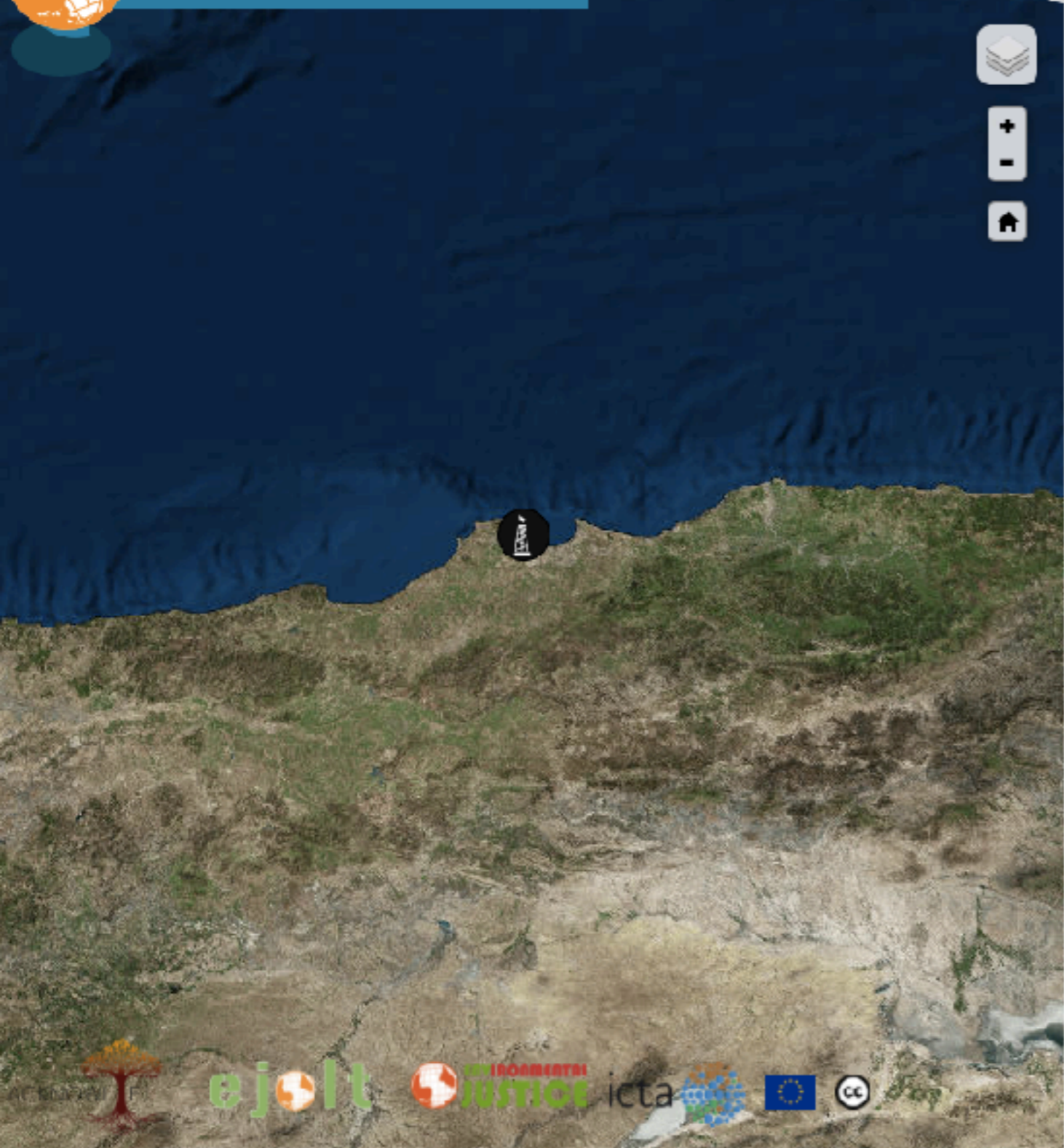


*The Island of Kerkennah has been the scene of increasing protests against British oil and gas company Petrofac in recent months. The protesters are demanding that Petrofac honour its engagements in local development and employment creation.*

#### Description

Kerkennah is an archipelago in the Gulf of Gabes around 20km from the city of Sfax. The islands are dependent on fishing and agriculture (1). In 2006, Petrofac, a British oil and gas company, acquired the Chergui gas concession (2), in a corrupt deal with then president Zine El- Abidine Ben Ali, testimony to the way in which land and resources in the Maghreb are repeatedly sold off for foreign exploitation. Petrofac opened for business in 2007 and first commercial gas began flowing on 8 August 2008. The 2010-2011 Revolution saw movements led by the youth, and in particular the unemployed youth challenge voice grievances at the deep rooted structural socio-economic challenges they faced. Kerkennah, like other resource rich sites across the Maghreb is plagued by foreign and crony exploitation while local populations are excluded from any benefits. In 2011, Petrofac agreed to an agreement aimed at getting unemployed graduates working following the revolution. Under the scheme, Petrofac promised 266 unemployed graduates payments of TND300-450 (\$131-196) per month to carry out environmental work and assist in public services. Yet, recipients were not





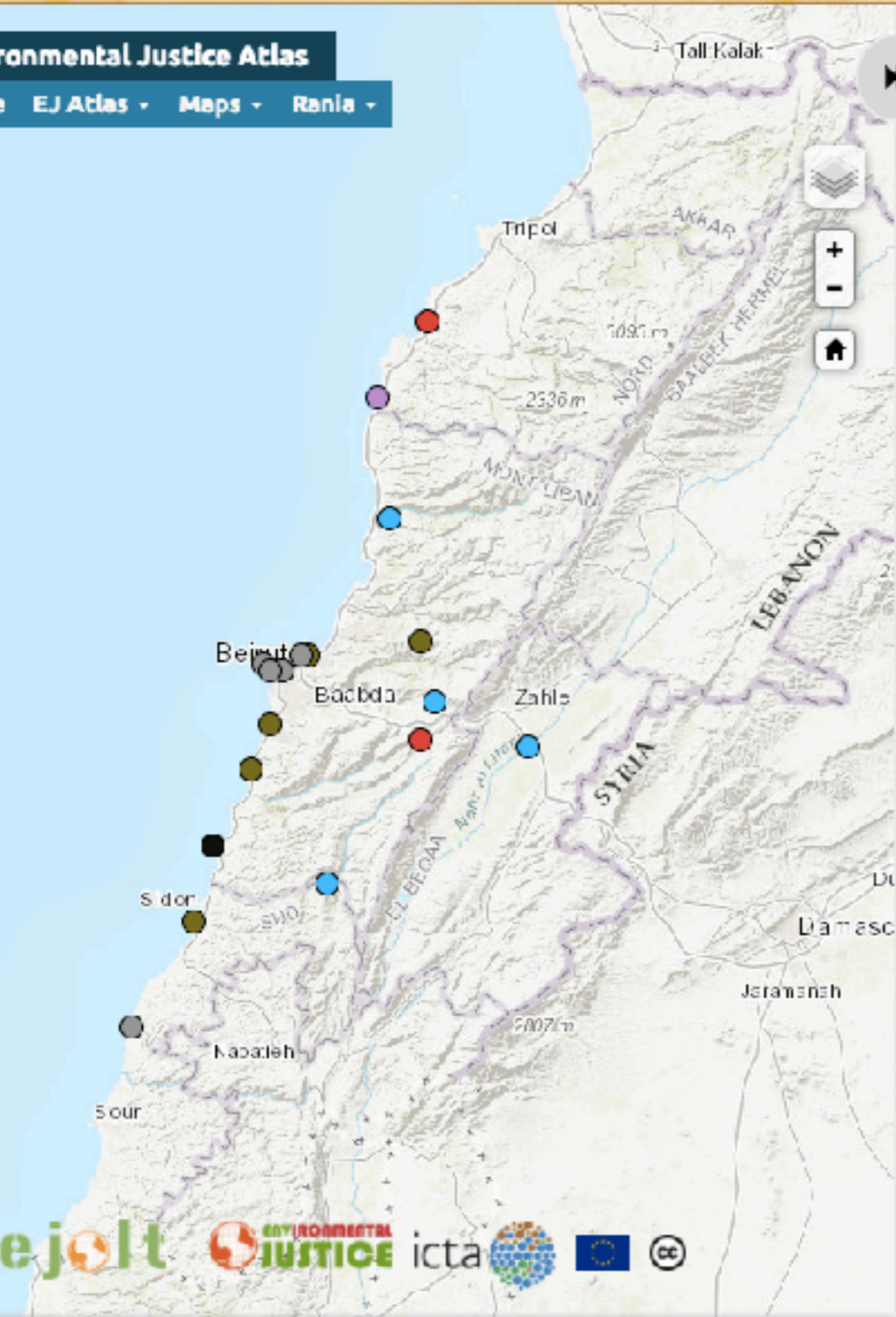
### Gas grabs, Algeria



*By pushing for long-term exports of gas in a context where the Algerian public is excluded from decision-making and benefits are largely reserved for the regime's elite, the EU is pursuing a gas grab.*

#### Description

Algeria is the sixth-largest gas exporter in the world, with more than 90% of its pipeline exports going to Spain (34%), Italy (27%), and other European countries. It is also the third-largest source of gas imports to the EU, accounting for 14% of gas imports and 10% of total consumption. Three pipelines currently link Algeria to Europe, and a fourth is being developed with Italy (1) With reserves of 4.5 trillion cubic meters of gas, Algeria is the eleventh-largest natural gas reserves in the world and the second-largest reserves in Africa, behind Nigeria. The country is also estimated to hold the third largest amount of shale gas resources in the world (1). An EU-Algeria Memorandum of Understanding for cooperation on oil and gas was signed in July 2013 between the European Commission's President José Manuel Barroso and Algerian Prime Minister Abdelmalek Sellal. Barroso stated that "Energy is a priority area of the Euro-Mediterranean partnership... Algeria is a key partner for the EU. Natural gas is a strategic issue for both parties: Algeria is a major supplier to Europe, while Europe is by far the largest customer of Algeria." (2) By pushing for long-term exports of



- Biomass and Land Conflicts
- Fossil Fuels and Climate Justice
- Water Management
- Infrastructure and Built Environment
- Tourism Recreation
- Biodiversity Conservation Conflicts
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Cases

Environmental Conflicts In Lebanon

- Ain Dara Cement Factory, Lebanon
- Bar Elias Litani Pollution, Lebanon
- Bisri Dam, Lebanon
- Bourj Hammoud Garbage Mountain, Lebanon
- Cimenterie Nationale Factory in Chekaa, Lebanon
- Costa Brava Landfill, Lebanon
- Destruction of Adloun Port, Lebanon
- Dhour Shweir Incinerator, Lebanon
- Fouad Boutros Highway, Lebanon
- Horsh Beirut urban park, Lebanon
- Israeli Bombing of the Jiyeh Power Plant and consequent Oil Spill, Lebanon
- Janna Dam, Lebanon
- Kfaraabida Beach Privatization, Lebanon
- Naameh Landfill, Lebanon
- Qaysamani Dam, Lebanon
- Ramlet el Bayda, Lebanon
- Saida Garbage Mountain, Lebanon
- The Dalieh of Raouche, Lebanon