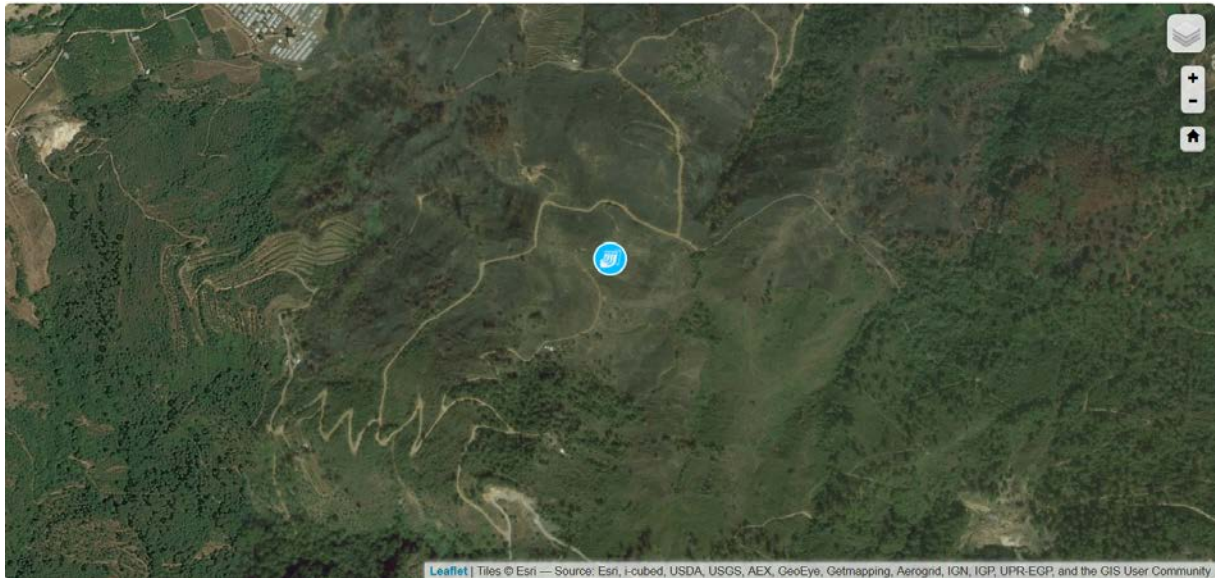


Bisri Dam, Lebanon



Basic Data

Name	Bisri Dam, Lebanon
Country	Lebanon
Province	South Governorate
Site	Bisri
Accuracy of Location	HIGH local level

Description

The Bisri Dam, currently in the phase of land expropriation, is being advertised as the solution to Beirut's water shortages, and as an economic and touristic boom to the region. However, scientists and activists claim that the dam will not actually store water due to the karstic nature of the land and the big volume of alluviums all along the valley and river. It will be extremely damaging to the environment, besides destroying fertile agricultural lands. Experts say that the project will impact the natural environment by interfering with the natural flow of the river at a site considered a natural protected area in Bisri (based on Article 131/1998). It will also destroy archeological, historic, and cultural heritage throughout the project area, demolishing Roman ruins, the Mar Mousa church, and nearly 75 other archeological sites within its premises. Not only are farmers on expropriated land losing their livelihoods, but also not being compensated fairly. They claim that the compensation received only covers one or two seasons of what they make off their lands. They are being paid 50 thousand L.L. per meter square of land, 750,000 per olive tree, and 400,000 L.L per lemon tree. Farmers from the region whose families have been inheriting these lands for generations proclaim that they are against the dam even if they will be paid millions of dollars. Meanwhile, Shafiq Boulos, the mayor of the town of Bisri, says that the dam will only steal their livelihoods [انقازرا ذخاي يياج دسل], and that they are not against providing water to those in need but not at the expense of losing their lands, especially since the region

will not benefit from the project in any way. In addition, the location of the proposed dam is on a highly seismic area, which puts the village of Kherbet Bisri, Bisri, Mazraat El Mathaneh, Aalmane, and Quastani at risk of flooding if the dam breaks. The mayor of the town Kherbet Bisri has complained that although studies confirm this risk, the responsible authorities have taken no precaution in case of a disaster, particularly since the Lebanese government is not prepared for an emergency response in such situations, which means the town will live in perpetual fear after the establishment of the dam. Dr. Zaatiti, a hydro-geologist, warns against the project in its specified location, since it is located near a highly seismic area and the geology of the region is highly karstic, making it nearly impossible to store water. He also questions why other alternatives are not being taken into account, and stresses that Lebanon is rich in water resources and the construction of dams is unnecessary. He recommends making use of underground water resources, which would be less costly and more environmentally friendly, unlike the current water policies of the country mainly focused on dam building for the next 30 years, which will only serve to drown the country in debt to the World Bank. CDR reports, however, that other no-dam alternatives have been proposed, such as desalination, ground-water and rainwater harvesting, wastewater re-use, and reduction in “unaccounted for water”, which did not turn out to be realistic solutions. Besides environmental experts, geologists, and hydrologists, the municipality of Midane is the only municipality in the region that categorically rejected the project, even after pressure from the Interior Minister, and filed a lawsuit to the Shura Council, along with the heritage association APLH and some local residents. The three lawsuits are still pending a decision. The municipality highlighted, among other concerns, that the nearby villages will not benefit from the promised water or electricity, and that the sewage network in nearby villages will pollute the water collected in the dam creating a public health issue. However, other municipalities in Shouf and Mount Lebanon are supportive of the project. Activists declare that science does not seem to be important when it comes to the current water policies of the country, and the biggest reason the project is getting implemented is for political reasons, allegedly to win election votes. The project is backed by Speaker of Parliament Nabih Berri, former prime minister Fouad Seniora, Walid Jumblatt, and CPL president minister Gebran Bassil, mainly the the reason why the project received the support of the South Lebanon electorate. The total amount forecast to be spent on the project is rumored to be up to 800 million dollars, but experts claim that it might go up to 1.2 billion dollars, which will be paid back with public money. The first 128 million were approved in February 2, 2017, and the project is projected to finish in 2023. In a conference organized by the Lebanon Eco Movement on World Water day (23 March 2017), it was ironically stated that Beirutis will die of water shortage by that time.

Source of Conflict

Type of Conflict (1st level)	Water Management
Type of Conflict (2nd level)	Deforestation Dams and water distribution conflicts Land acquisition conflicts
Specific Commodities	Water Land Electricity

Project Details and Actors

Project Details

The Bisri Dam was initially proposed in 1953 by the U.S. Bureau of Reclamation (USBR) and was followed up by the Litani Water Bureau in the framework of water and dam projects on the Litani and Awwali rivers (also known as the Bisri river in its upper section), with some preliminary studies done in 2000 by the CDR. It is located on the Bisri river between the Chouf and Jezzine areas, at 395m above sea level, and will forecast to have a storage capacity of 125 million cubic meters of water, the second largest after Qaraoun's 210 million cubic meters. It will supply water to Iklim el Kharoub, central Beirut, and South Beirut through the Hadath and Hazmiey reservoirs, as well as well as reservoirs in Ashrafieh and Tallet Al Khayyat. It will also provide 11.2 MW of hydroelectric power.

The project is integrated with a downstream water supply network already under construction. This includes constructing a conveyor tunnel, pipelines, a center reservoir and distribution networks for regional reservoirs, as reported by Elie Moussalli, Lead Project Engineer at CDR. The project also includes a water treatment plant in Wardaniyeh, all part of a prior loan by the World Bank worth \$370 million.

As for the dam itself, \$320 million is dedicated for construction, \$220 contractors' costs, \$66 million contingencies, \$10 million engineering, \$20 million construction of a transmission line, \$15 million construction of hydropower plant, and \$150 million for expropriation of properties around the project. Another \$4 million is allocated for overseeing and managing the project including environmental monitoring and impact assessment.

Around 570 HA of land will be expropriated and inundated, including 150 HA of agricultural land, 82 ha of pine woodland, and 131 hectares of natural vegetation. The coalition campaigning against the dam reports that around 150,000 woodland trees will be cut and that this number might go up to 500,000, besides agricultural orchards, labeling it an environmental genocide.

According to the CDR reports and press releases by Mousalli, the area is not heavily populated besides a few seasonal farm workers living in tents, "mostly non-Lebanese" with "no permanent structures obstructing the project". This, of course, is not true, and is the reasons why it has led activists to call the CDR the "council of lies".

The project is part of the Greater Beirut Water Supply Augmentation project, which according to CDR reports aims to provide "Economically efficient" solutions to the severe shortages in public supply of water in the Greater Beirut area.

The CDR claims that measures have been taken to preserve the archeological and cultural components, in collaboration with the Directorate of General Antiquities (DGA) and the Maronite Diocese of

	Saida. These measures will be funded by the project and are already included in the cost of dam construction. Such measures will primarily rely on the relocation of the Mar Mousa Church, St. Shopia's monastery, as well as some old ruined houses in the valley. Currently the CDR is looking for "storage areas" for excavated material until the DGA plans re-erection at an indeterminate time.
Project Area (in hectares)	570
Level of Investment (in USD)	612,000,000
Type of Population	Rural
Company Names or State Enterprises	Dar Al-Handasah (Shair and Partners) from Lebanon
Relevant government actors	<p>Council for Development and Reconstruction</p> <p>Ministry of Energy and Water</p> <p>Ministry of Environment</p> <p>Ministry of Agriculture</p> <p>Electricité du Liban (EDL)</p> <p>Ministry of Public Works and Transport</p> <p>Directorate of General Antiquities</p> <p>Concerned Municipalities</p> <p>Ministry of Social Affairs</p> <p>Beirut and Mount Lebanon Water Establishment</p>
International and Financial Institutions	<p>The World Bank</p> <p>Islamic Development Bank</p>
Environmental justice organisations and other supporters	<p>Municipality of Midane</p> <p>Lebanon Eco Movement</p> <p>The civil society coalition against Bisri Dam</p>

The Conflict and the Mobilization

Intensity of Conflict (at highest level)	LOW (some local organising)
When did the mobilization begin	PREVENTIVE resistance (precautionary phase)
Groups Mobilizing	<p>Farmers</p> <p>Informal workers</p> <p>Local government/political parties</p>

Forms of Mobilization	Development of alternative proposals Lawsuits, court cases, judicial activism Objections to the EIA Official complaint letters and petitions
-----------------------	---

Impacts

Environmental Impacts	Potential: Biodiversity loss (wildlife, agro-diversity), Loss of landscape/aesthetic degradation, Deforestation and loss of vegetation cover, Surface water pollution / Decreasing water (physico-chemical, biological) quality, Groundwater pollution or depletion, Large-scale disturbance of hydro and geological systems, Reduced ecological / hydrological connectivity, Soil erosion
Health Impacts	Potential: Exposure to unknown or uncertain complex risks (radiation, etc...)
Socio-economic Impacts	Visible: Increase in Corruption/Co-optation of different actors, Loss of livelihood, Loss of traditional knowledge/practices/cultures, Land dispossession, Loss of landscape/sense of place Potential: Displacement

Outcome

Project Status	Planned (decision to go ahead eg EIA undertaken, etc)
Pathways for conflict outcome / response	Corruption Court decision (undecided)
Development of Alternatives	<p>Dr. Samir Zaatiti recommends making more efficient use of underground water resources.</p> <p>Dr. Roland Riachi, a lecturer at the Faculty of Agricultural and Food Sciences at the American University of Beirut, proposes the construction of small to medium-sized urban collective storage ponds, filled by monitored springs and groundwater. According to Riachi, this would be a much more cost-effective and environmentally friendly solution than the construction of dams. This should be accompanied by increased regulation of groundwater resources, reform of government agencies responsible for the water sector, repair of infrastructure, and a reform of the water tariff system, and better wastewater management.</p> <p>The municipality of Midane and Fathi Chatila propose constructing a dam in Damour on the Damour river. The hydro-geologist authored a complaint signed by around 50 residents of Greater Beirut and submitted to the World Bank panel titled: "Presenting a Much Better Project: Damour Dam."</p>
Do you consider this as a success?	No
Why? Explain	The project has not been cancelled and construction works on the

briefly.

transmission network has started.