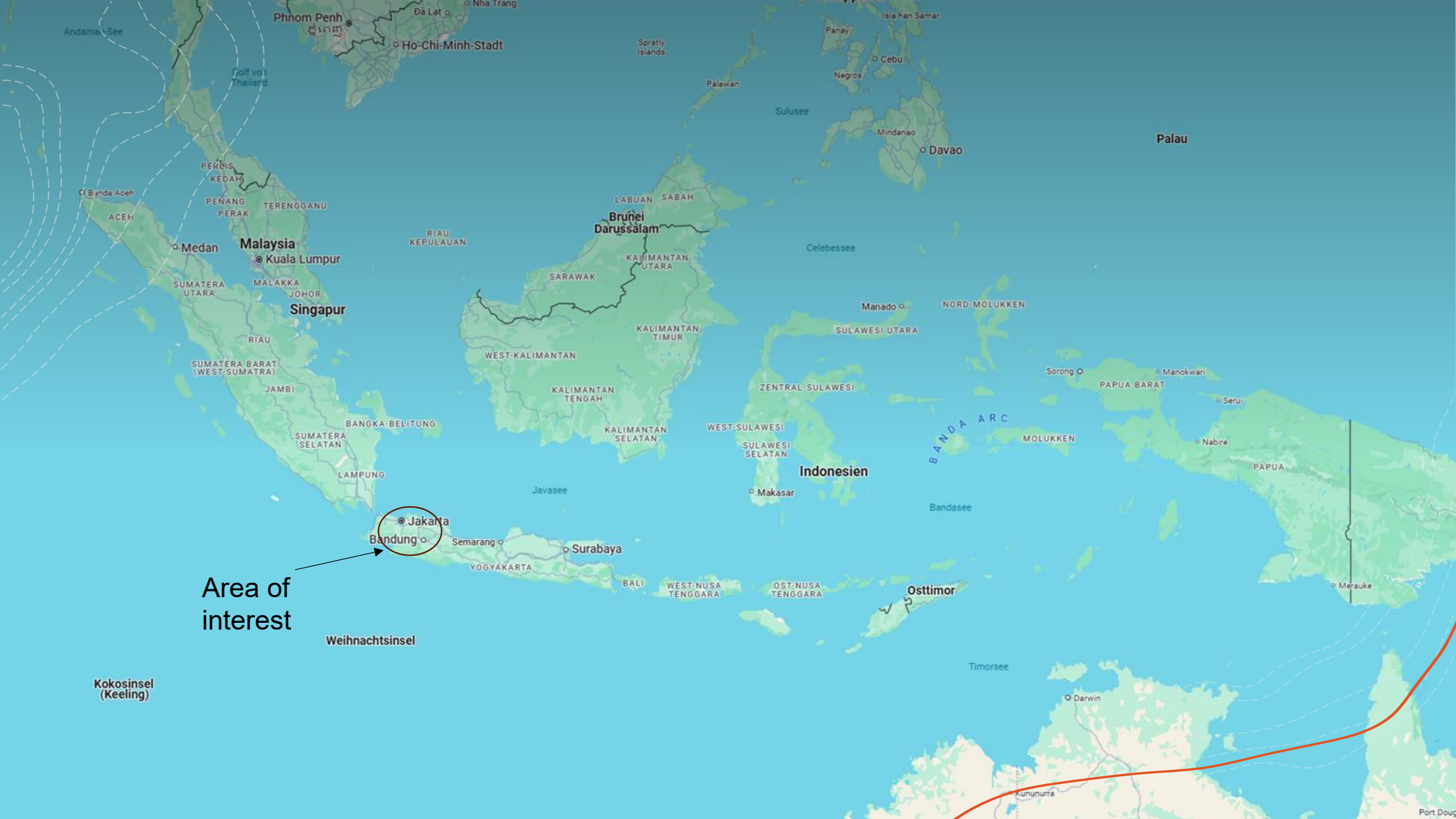




Indonesia

An excursion into the realm of
water



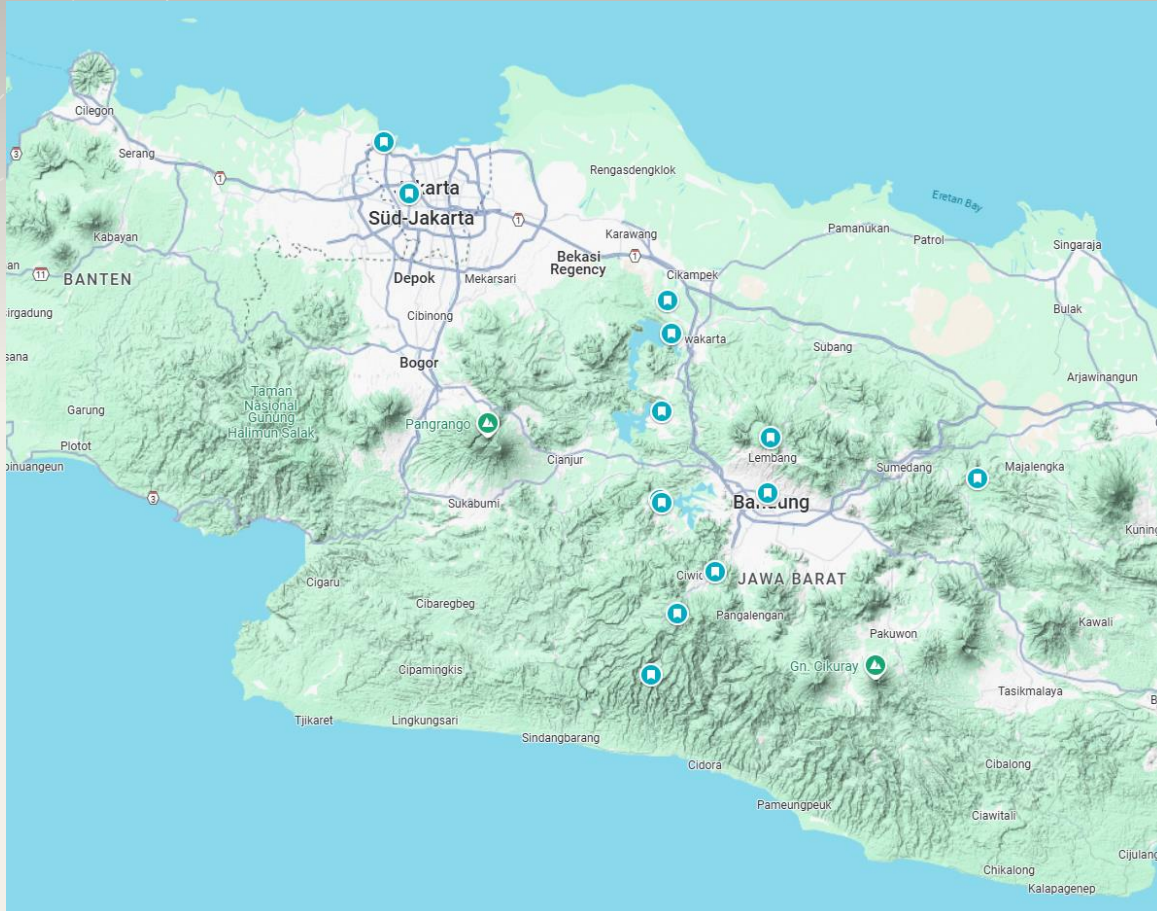


Area of
interest

Weihnachtsinsel

Kokosinsel
(Keeling)

First possible sights



First base camp – Jakarta:

- University of Indonesia
- Jakarta sinking problem
- Sewage and water supply

Travel to Bandung:

- Irrigation systems

Second base camp – Bandung:

- Institute of Technology Bandung
- Multiple dams and reservoirs
- Visiting Citarum river – plastic pollution
- Volcanoes
- Hydrogeomorphology (waterfalls, terraces, gorges)

University of Jakarta



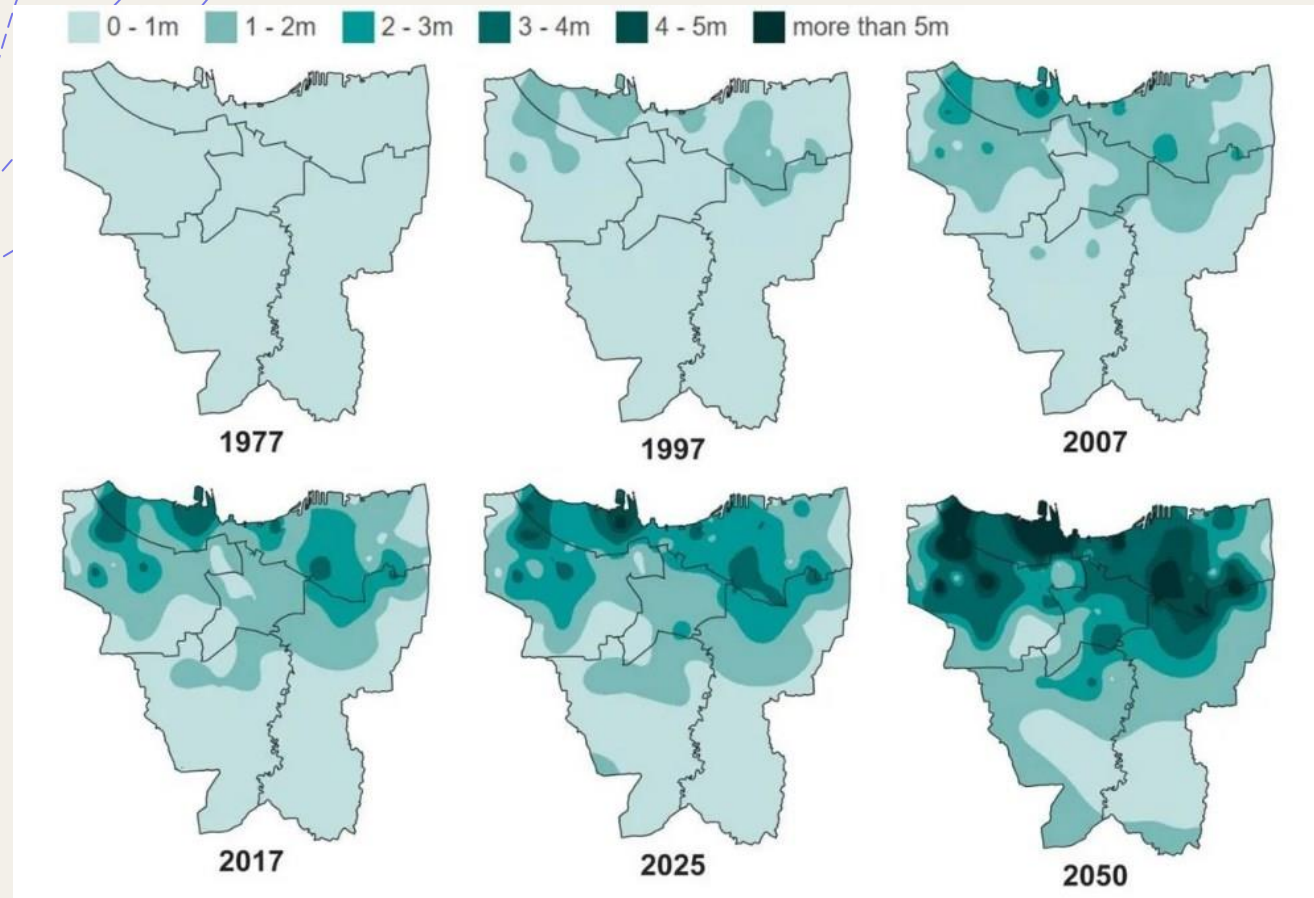
First base camp – Jakarta:

- Small hydraulic lab
- Many students in hydraulic engineering

Jakarta Sinking Problem



Jakarta is sinking due to groundwater depletion, coastal location
There are multiple mitigation measures that are unique due to its large scale.



<https://www.re-thinkingthefuture.com/architectural-community/a9786-why-is-jakarta-sinking/>



Travel to Bandung

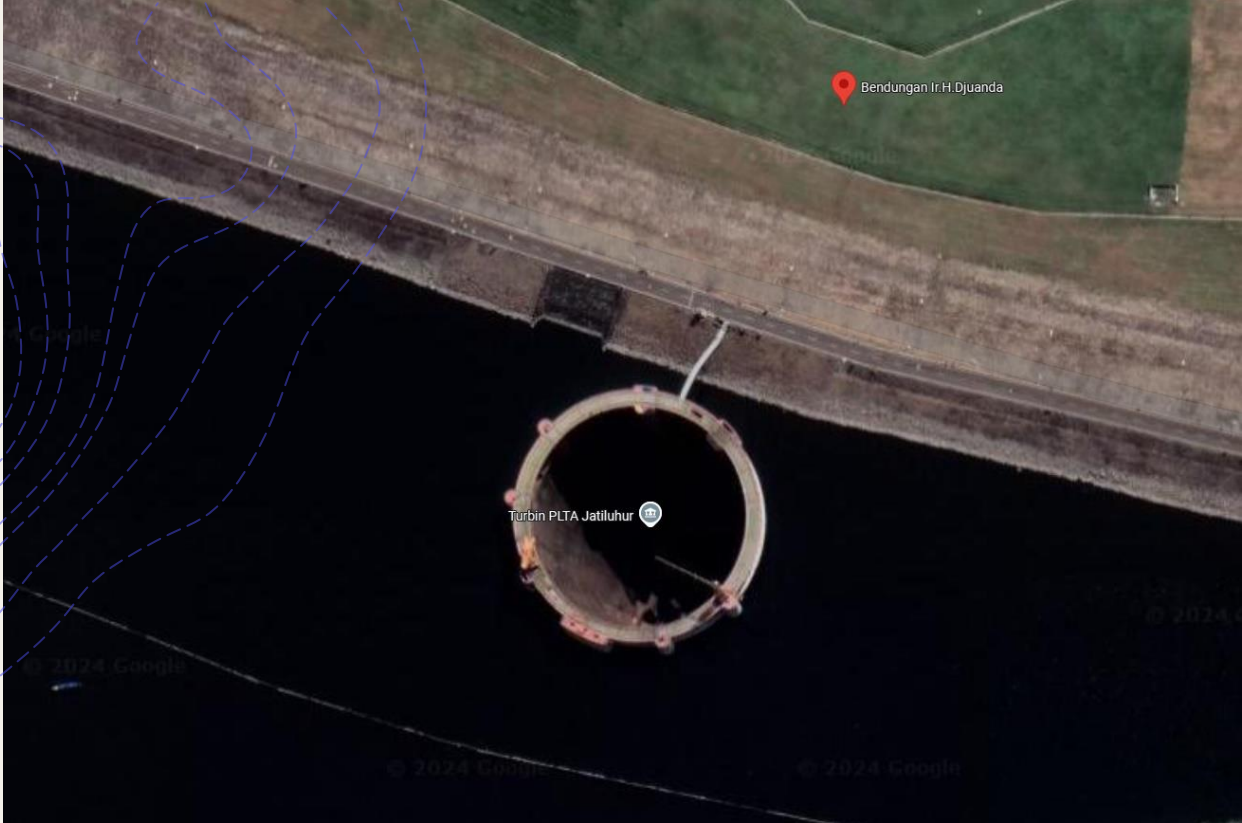


<https://news.mongabay.com/2022/08/java-communities-rally-as-clock-ticks-on-cleanup-of-worlds-dirtiest-river/>

Visit one reservoir

Visit world's dirtiest river





Reservoirs/Dams close to Bandung (1)

Jatiluhur Dam

- + 105 m height
- + 3000 mill. m³ capacity
- + 83 km² surface area
- + 3000 m³/s Spillway capacity
- + 6 x 32.3 MW Francis turbines



Reservoirs/Dams close to Bandung (2)

Cirata Dam

- + 125 m height
- + 2165 mill. m³ capacity
- + 62 km² surface area
- + 8 x 126 MW Francis turbines



Reservoirs/Dams close to Bandung (3)

Jatigede Dam

- + 110 m height
- + 980 mill. m³ capacity
- + 41 km² surface area
- + 2 x 55 MW Francis turbines

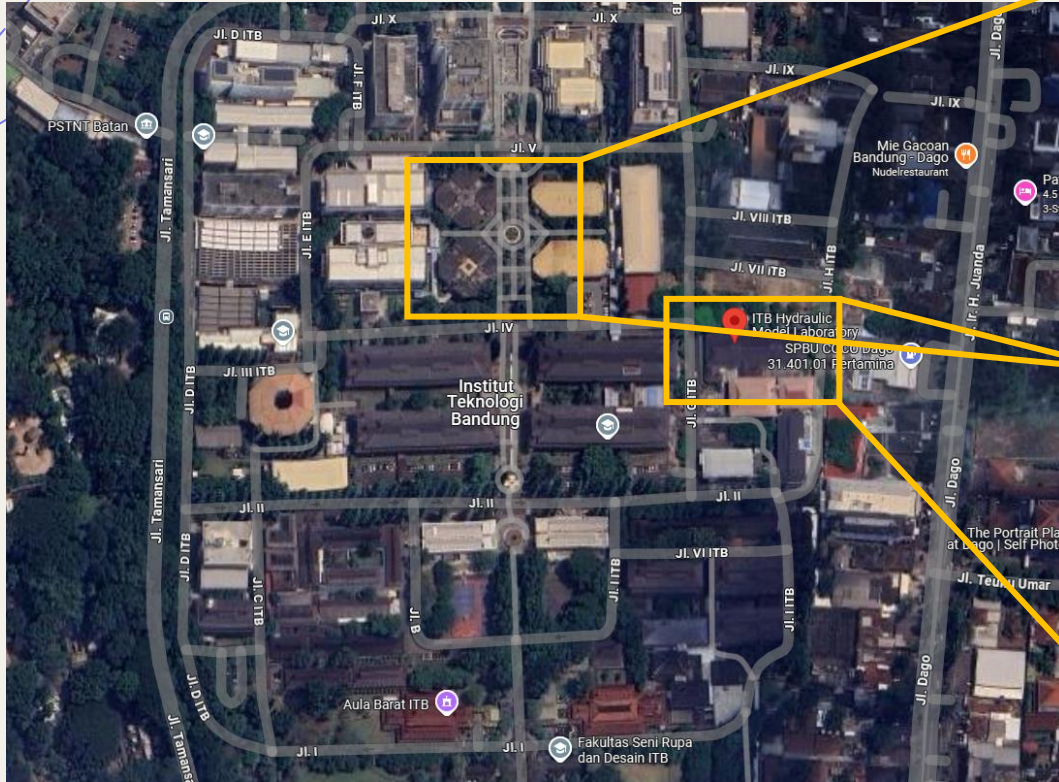


Reservoirs/Dams close to Bandung (4)

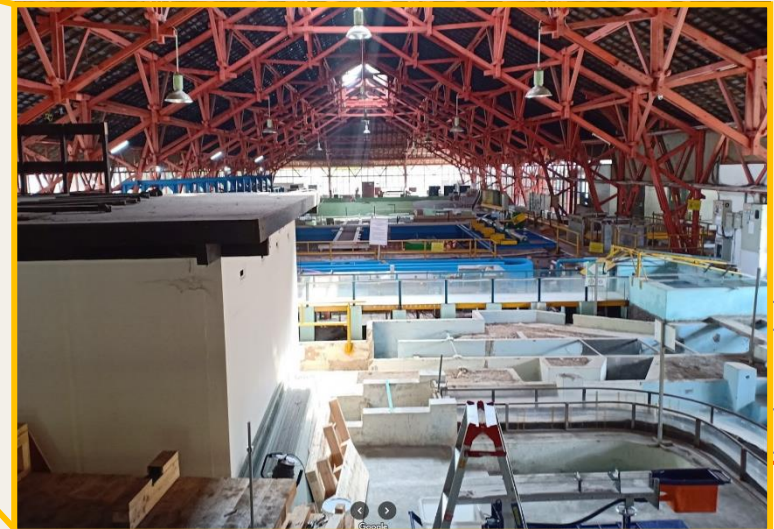
Saguling Dam

- + 110 m height
- + 980 mill. m³ capacity
- + 41 km² surface area
- + 2 x 55 MW Francis turbines
- + Narrow gorge downstream

ITB Hydraulic Laboratory Bandung

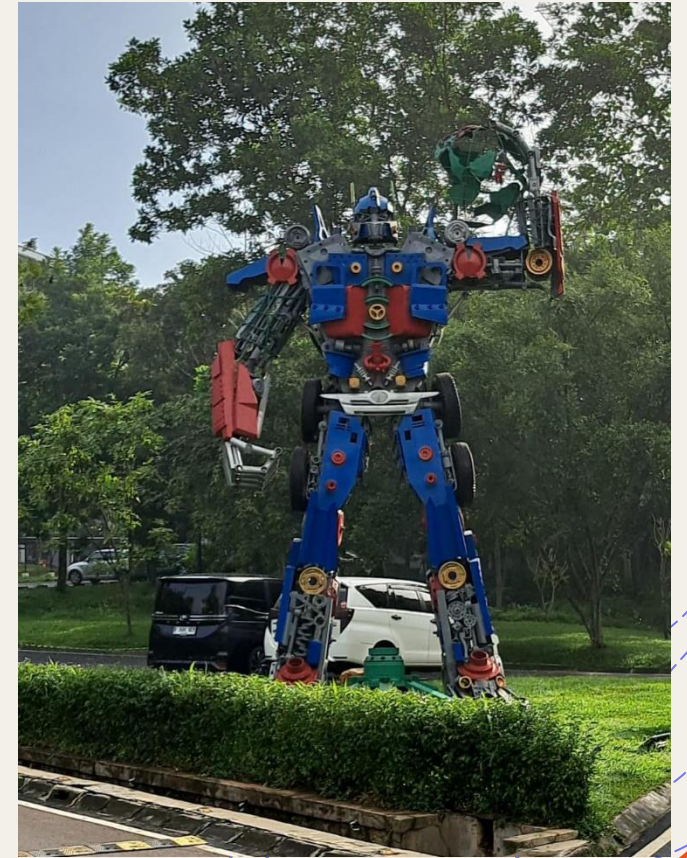


Institut Teknologi Bandung



ITB Hydraulic Model Laboratory

ITB Campus Jatinangor



Rivers close to Bandung (1)



- + Cisangkuy Floodway
- + Flood mitigation measure to divert excess water from the Cisangkuy River directly into the Citarum River



Rivers close to Bandung (2)

- + Trekking to Cikahuripan River
- + Green Canyon Cikahuripan
- + turquoise colored waters (natural phenomenon)
- + 10 meter high cliffs

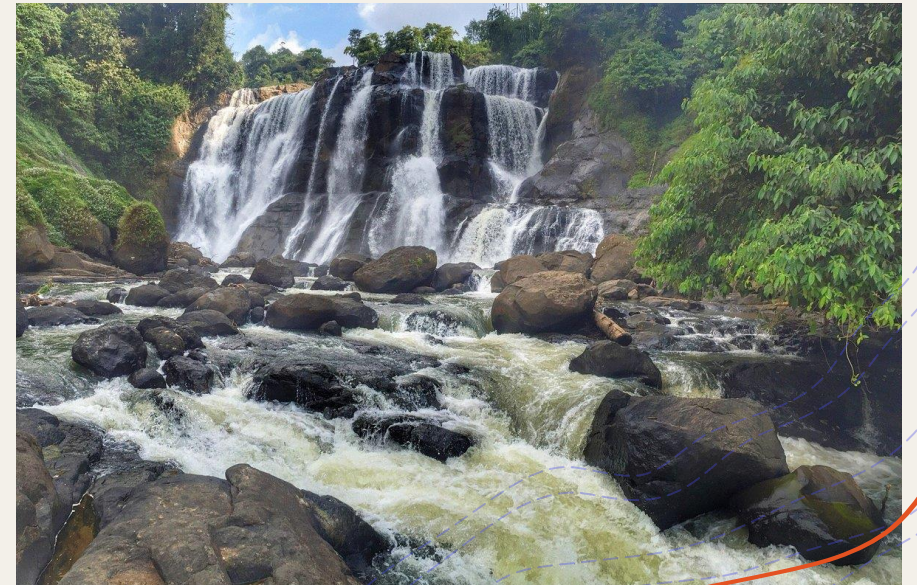
Rivers close to Bandung (3)

- + Pangalengan River Rafting
- + Ciwidey River Rafting



Waterfalls close to Bandung

- + Air Terjun Curug Penganten: ca. 50 m height
- + Malela Waterfall: 60-70 m height
- + Etc.





Geology - Volcanos

Volcano Tangkuban Perahu

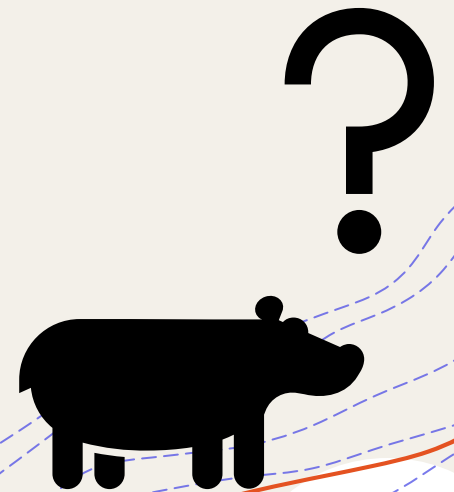
Sulphur lake Kawah Putih

The background is a light beige color. In the top-left corner, there is a white circle partially cut off by the edge, with several blue dashed wavy lines flowing downwards and to the right from it. In the bottom-right corner, there is another white circle partially cut off, with several blue dashed wavy lines flowing upwards and to the left from it. A solid orange line also flows from the bottom-right towards the center, following the general direction of the blue lines.

Organisational Stuff

Schedule Issues

- +TUM exam period until beginning / mid of March
- +Rahmadan until 15th of March
- +Holidays in Indonesia from 15th to 27th of March (comparable to the Christmas break in Germany)
- +5th of April is Easter
- +Summer semester lectures start on 13th of April



Preliminary Schedule

- + Start: Monday, 30th March in Jakarta
- + 2nd April transfer to Bandung
- + End: 11th or 12th April in Bandung
- Fast transfer to Jakarta possible



Finances



+ Will be covered by the chair:

- + Accommodation
- + Transportation IN Indonesia (bus rides, train rides)
- + Food within excursion time table
- + Entrance fees

+ Has to be covered by yourself:

- + Flight
 - + Visa
 - + Travel / Health insurance
 - + Snacks / Food outside excursion time table
 - + Private transportation (e.g. cab rides in the evening)
- approx. 1000€

Course Structure

+ Classes / attendance:

- + Introduction
- + Presentations (2x)
- + Travel information
- + 2 weeks excursion



6 ECTS
Module

+ Organisation:

- + 5-6 topics related to hydraulic engineering issues in Indonesia
- + Groups of 3-4 students
- + Presenting topics before the excursion
- + Written report after the excursion
- + Grading based on presentation and report

Application Procedure

- + Download the application sheet from our website:
<https://www.cee.ed.tum.de/wb/freunde/>
- + Deadline for applications is 31st of August
- + Send application form + transcript of records to:
frederik.de-vos@tum.de
- + Participants (15-20) will be selected based on their activities
and courses related to the chair
- + Ranked waiting list

Important Dates & Deadlines

- +Application deadline: 31st August
- +Notification about attendance: 30th September
- +Report topic and group selection: 31st October
- +Student presentations: February 2026
- +Excursion: April 2026
- +Report submission: April 2026

Cultural Aspects



Language

- +Indonesia is a culturally diverse country, but still quite isolated
- +Outside of Bali, there are only few international tourists
- +English is spoken by students or academic staff, but not common for most people
- +Indonesians are very happy, when foreigners can speak some words in Indonesian

Bahasa Indonesia

- +Has the Latin alphabet
- +Very similar pronunciation rules to German (except for c, j and h)
- +Influence from Dutch and other colonial powers, examples:
 - +Lampu
 - +Asbak
 - +Mobil
- +A few lessons of Duolingo will embellish the experience!

Religion

- +Java is mainly muslim
- +This carries a lot of influence in everyday life
- +Religious practices should be respected
- +Clothes should not be too showing

Weather & Climate

- +Tropical
- +Jakarta is very hot and humid (~30°C and 90%)
- +Bandung is higher elevated (800 m.a.s.l.) and therefore cooler
- +It can always rain
- +The sun is very strong, so bring protection

Traffic

- +Bad
- +Can seem chaotic
- +We will sit in the bus/cars for extended times



Food & Drinks

- + Food is diverse, spicy, light, but mainly meat-based
- + Snacking is very common
- + As a muslim country, there is no pork
- + Be aware of uncooked and raw food
- + Don't drink tap water
- + Alcoholic beverages only in a few special places



Prices and Costs

- + One Euro is currently around 18,000 to 19,000 Indonesian Rupiah
- + Streetfood is around 1 €, food in malls and restaurants around 3-4 €, also fancy restaurants will rarely go above 10 €
- + Cab rides are cheap with apps (Gojek, Grab)

Questions

