

KAFUE GORGE LOWER PROJECT

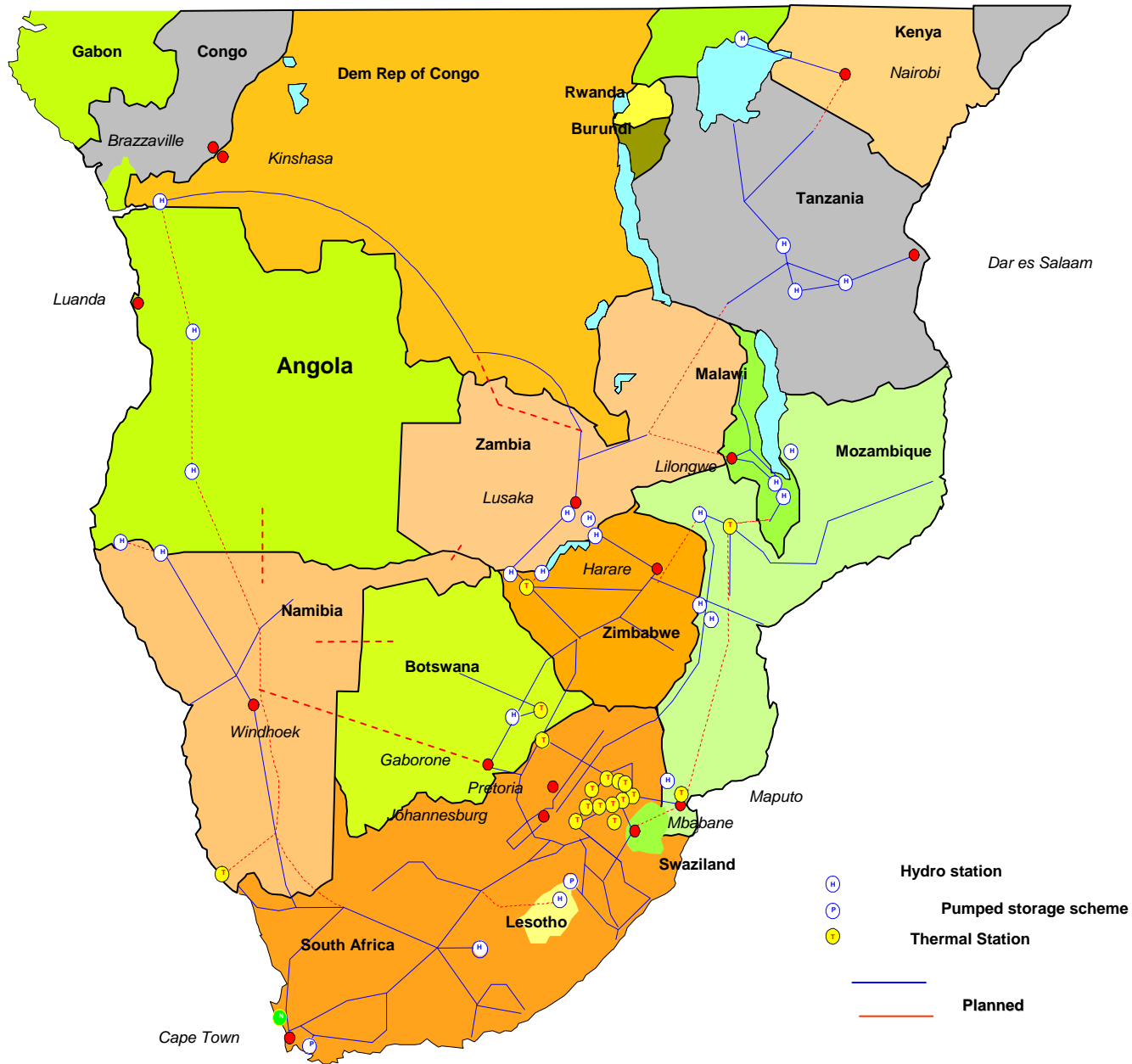
HYDROPOWER SUSTAINABILITY ASSESSMENT FORUM

SANTA ROSA 11-13 July 2008

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OUTLINE OF PRESENTATION

- BRIEF BACKGROUND OF THE PROJECT
 - Location
 - Kafue River Profile
 - Some Aspects

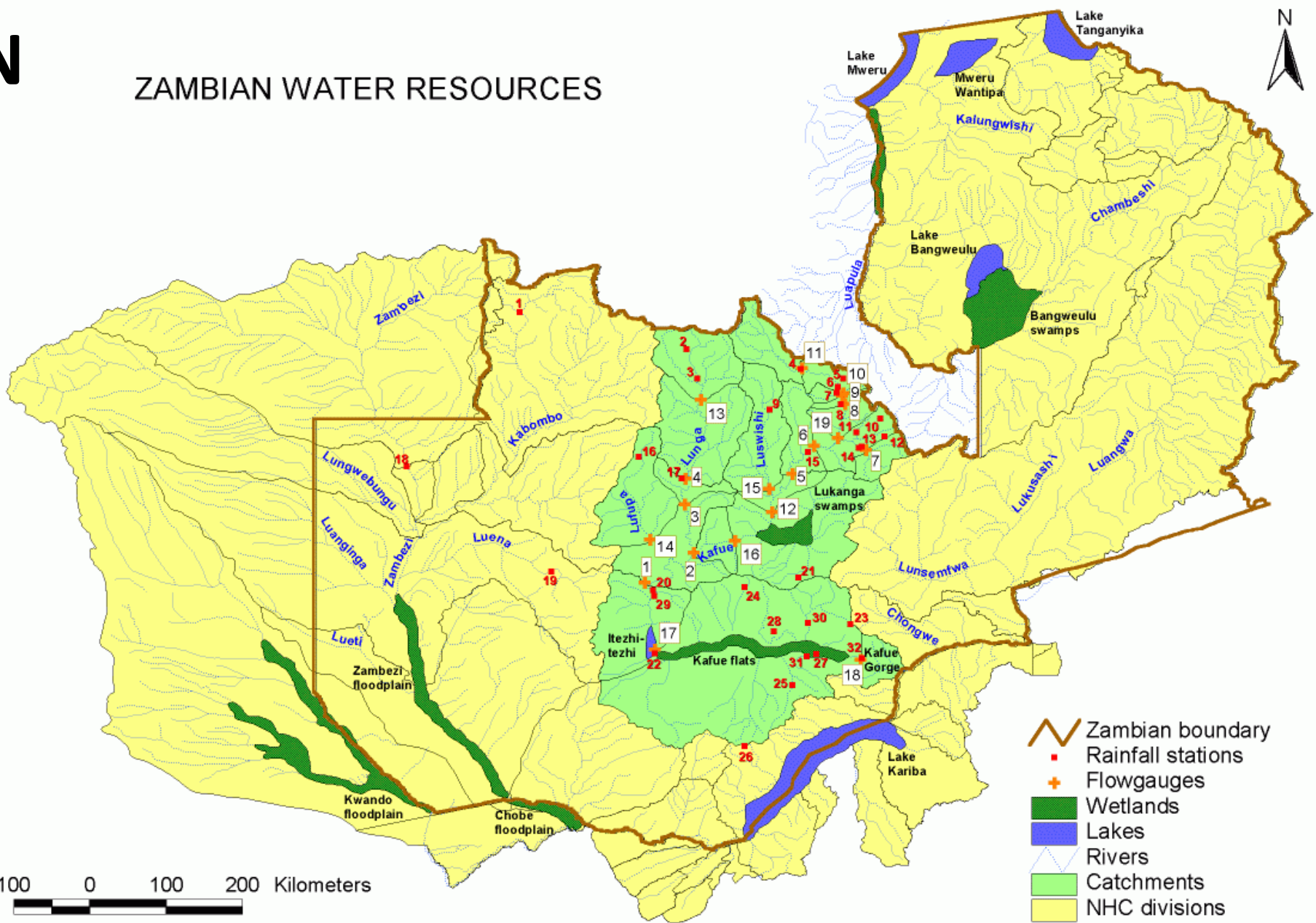


(Source: SAPP CC, 2004)

LOCATIO

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ZAMBIAN WATER RESOURCES

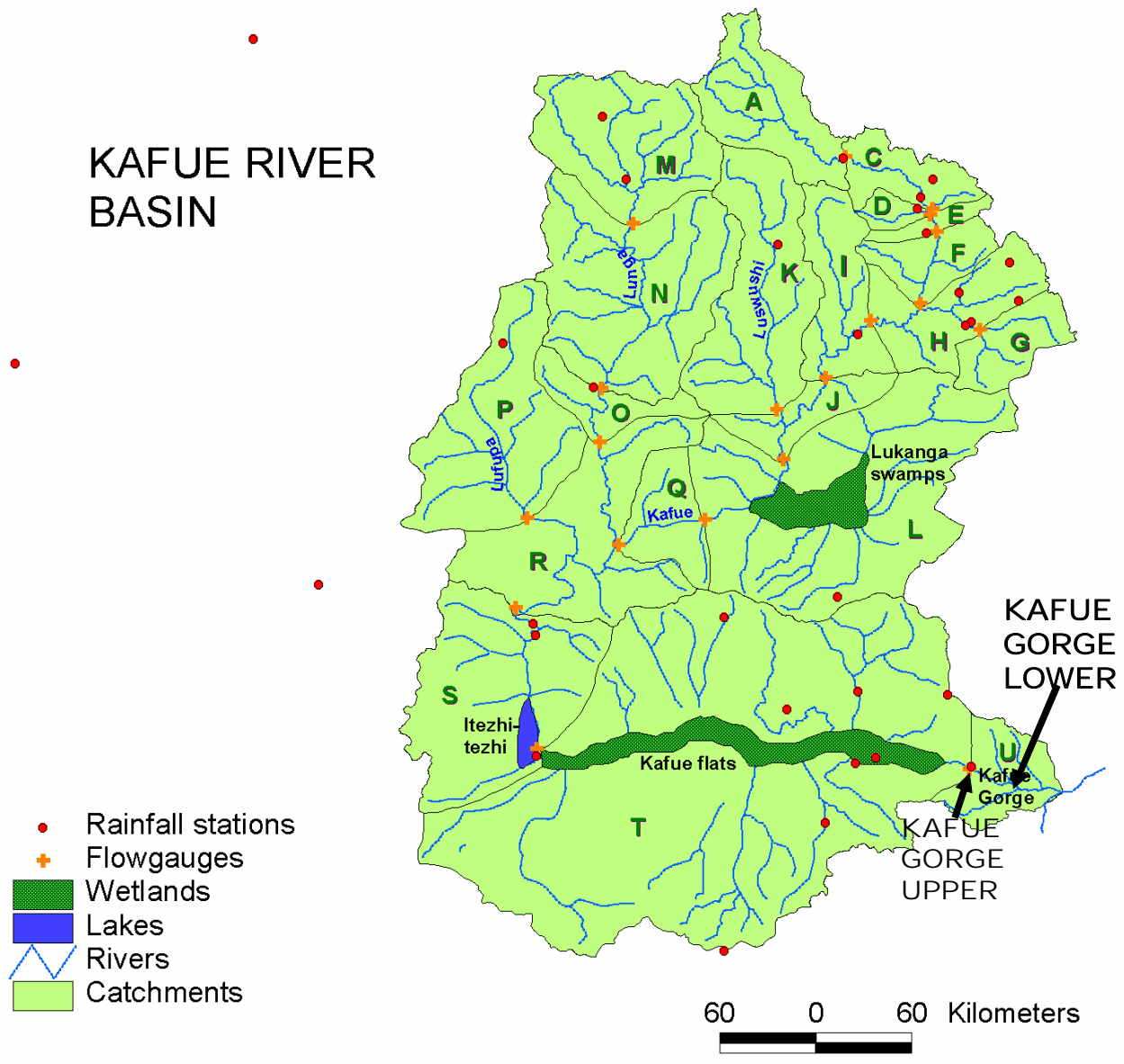


100 0 100 200 Kilometers

LOCATION



KAFUE RIVER BASIN

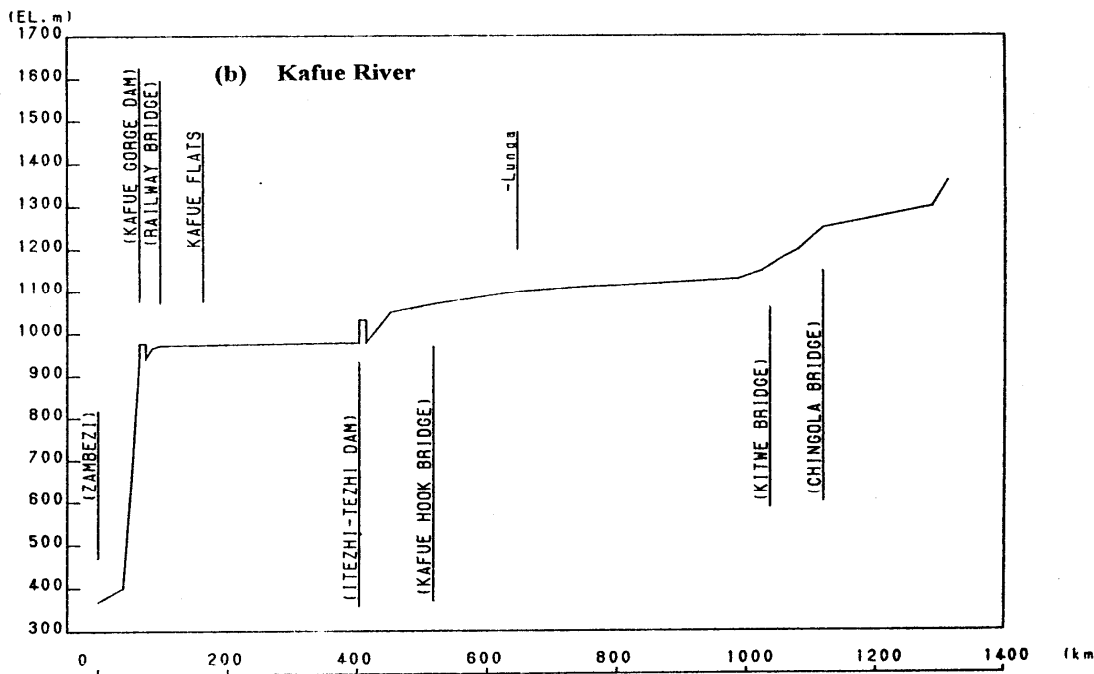
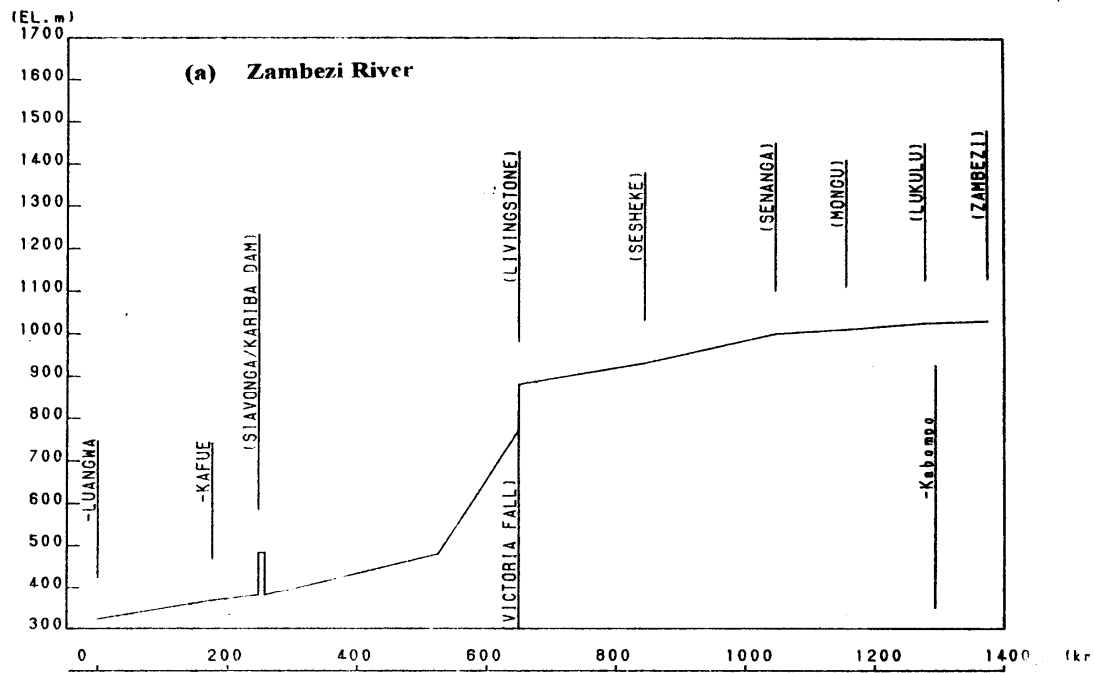


LOCATION CONT.

- The proposed project, designated as the Kafue Gorge Lower Hydroelectric Project (KGL), is located in the Kafue Gorge, about 65 kilometers (km) upstream from the confluence of the Kafue River with the Zambezi River and about 6-8 km downstream from the existing KGU.
- Flow into KGU is regulated by the Itezhi-tezhi dam with a 6013 million cubic meter (mcm) reservoir located on the Kafue River about 230 km (or 400 river km) upstream and west of the KGU Project

PROFILE OF THE RIVER

- **Unique river profile in Kafue Gorge**
 - The length of the main river is about 1,550 km and the drop over the entire length is about 1,000 meter.
 - Of this drop 600 meters is within the Kafue Gorge.(over 28 km)
 - The existing KGU has utilised 400m and the remaining 200m will be used at KGL
 - Two sets of wetlands



Unique Kafue river profile in Kafue Gorge

The Proposed Project

- Prefeasibility 1975 (450 MW base load)
- Feasibility studies 1994-5.
- The KGL project is a proposed development, with potential capacity of 450-900MW.
- Planned to have a reservoir and 3 possible sites studied : Site 3 (3.8MCM); Site 3A (8.2MCM) and Site 5 (54.4MCM) to be confined within the gorge.
- Site selection driven by ESIA
- Underground power station

STUDIES TO DATE

- Conjunctive dam operation for the Zambezi river basin (Power)
- Power Generation Optimisation (kafue river system)
- Effects of diurnal releases d/s of ITT and KGU
- Site selection studies
- State of the Environment Report
- Strategic Environmental Impact Assessment (irrigation, power generation, environment)
- Environmental and Social Impact Assessment (site 5)
- etc,.

AERIAL VIEW OF NEW SITE



**THANK YOU FOR YOUR
ATTENTION**