

Point Loma Treatment Plant 1999

Itay Fischhendler

Department of Geography, The Hebrew University of

Jerusalem

Introduction

- Addressing transboundary hazards require dividing the cost of pollution prevention
- The solution often suggested is the “polluter pays principle” (PPP)
PPP means that the polluter should be the one to bear the cost of measures to prevent pollution.
- The PPP is endorsed by many international organizations and agreements

Among them:

Organization for Economic Cooperation and Development

The European Union

NAFTA

Rio de Janeiro Declaration

Agenda 21

World Summit on Sustainable Development

Introduction (Cont)

The rationale behind it:

- economic efficiency
- environmental effectiveness
- fairness

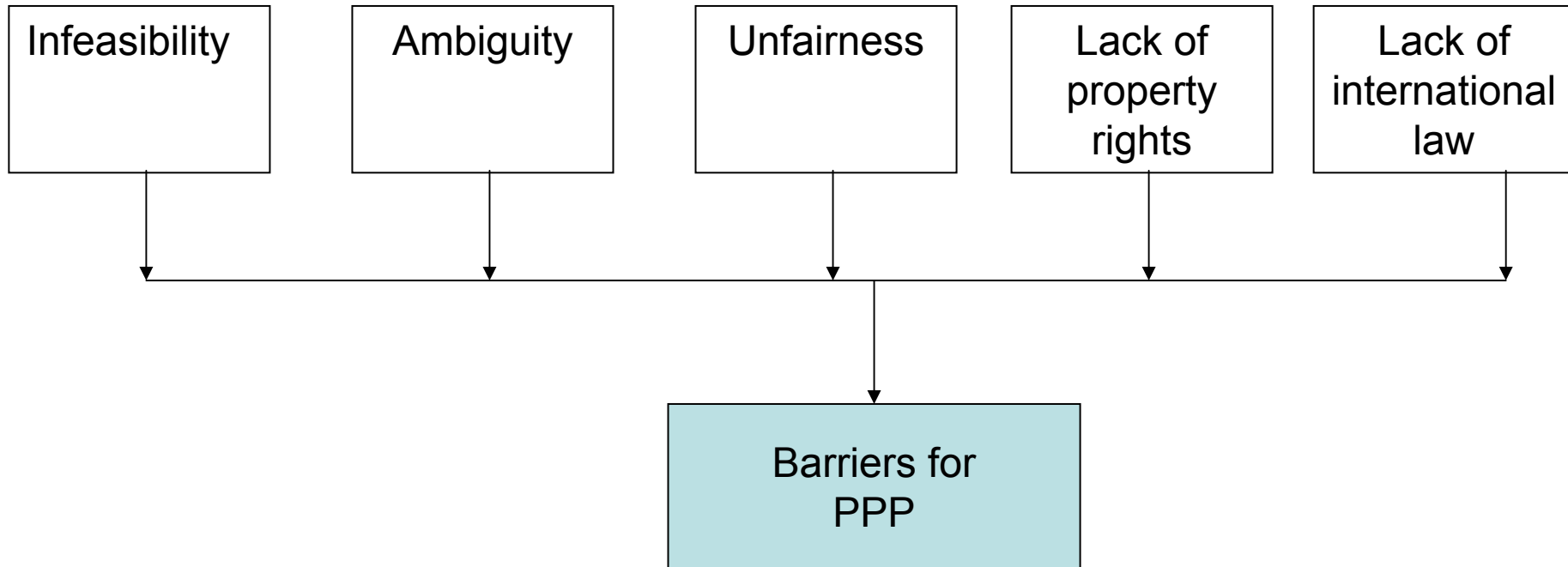
The problem:

cost-sharing arrangements other than PPP are often adopted instead

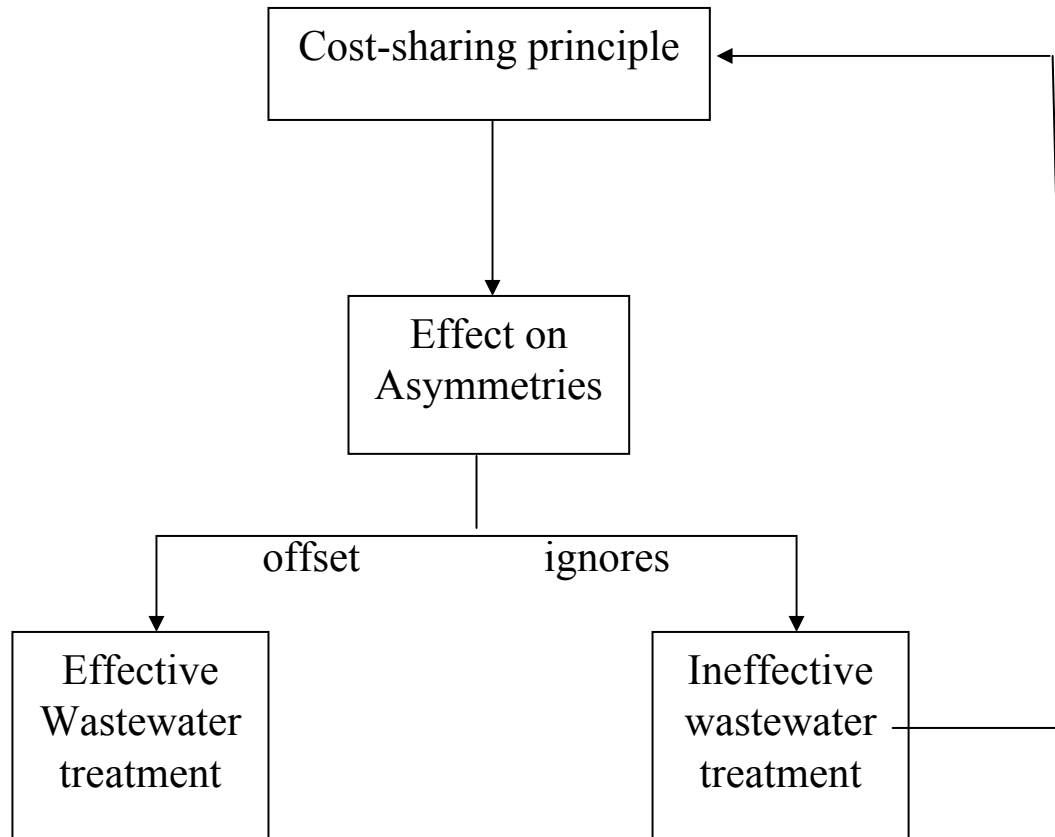
Research aim:

To explain the gap between theory and reality

Theoretical background

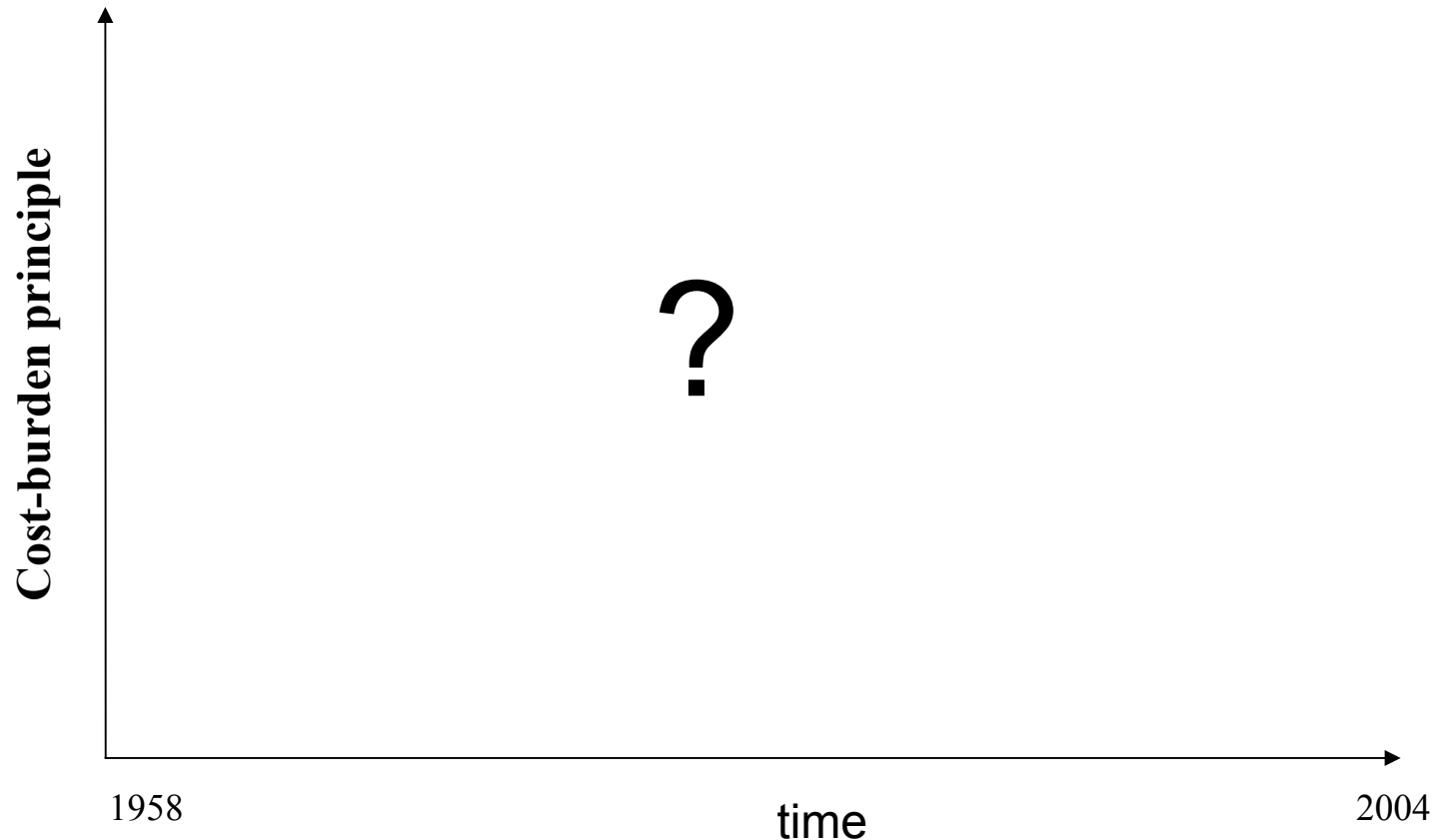


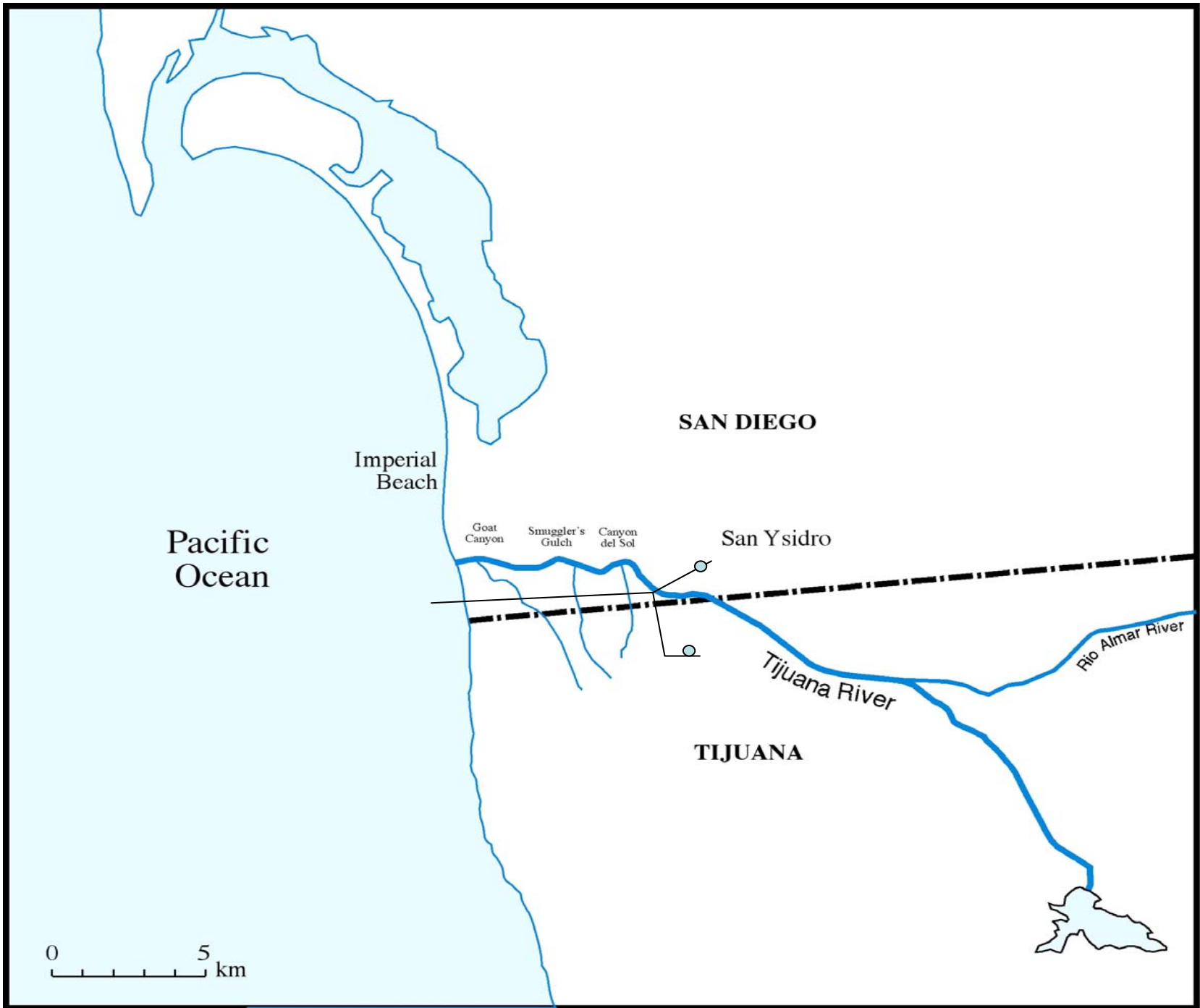
Research hypothesis

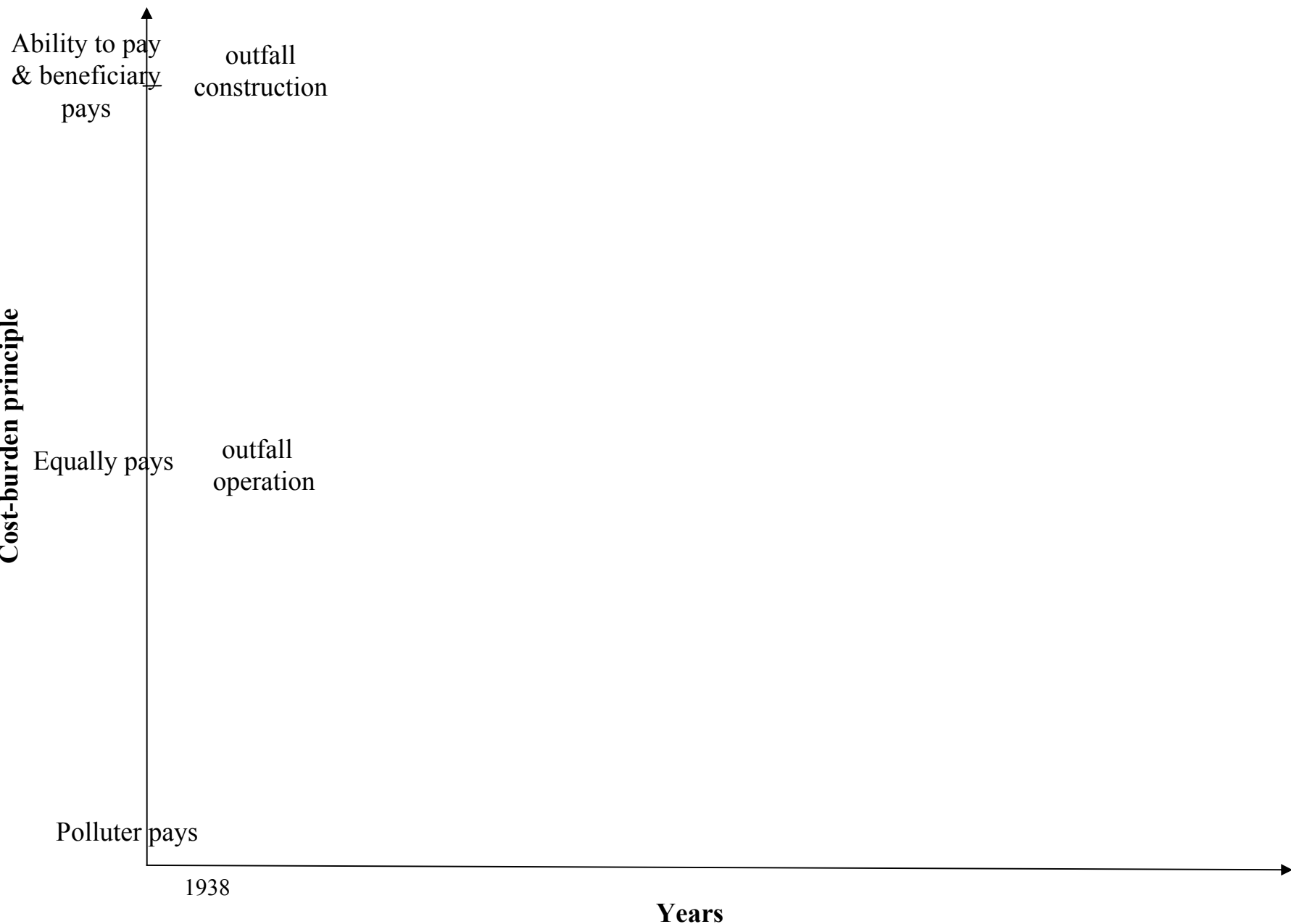


Research Method

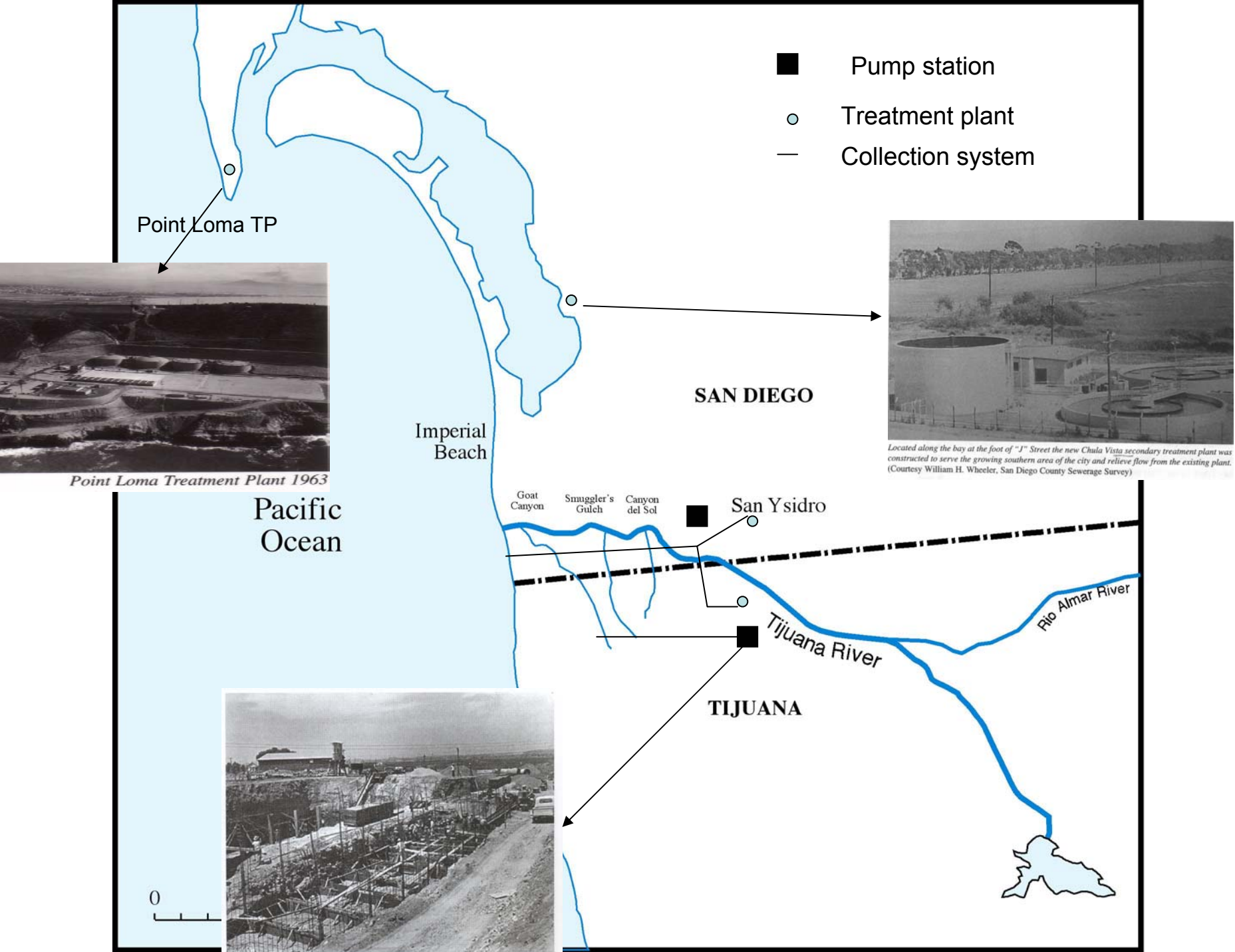
The evolution of cost-sharing, and its underlying reasons, of the pollution abatement regime along Tijuana and San Diego

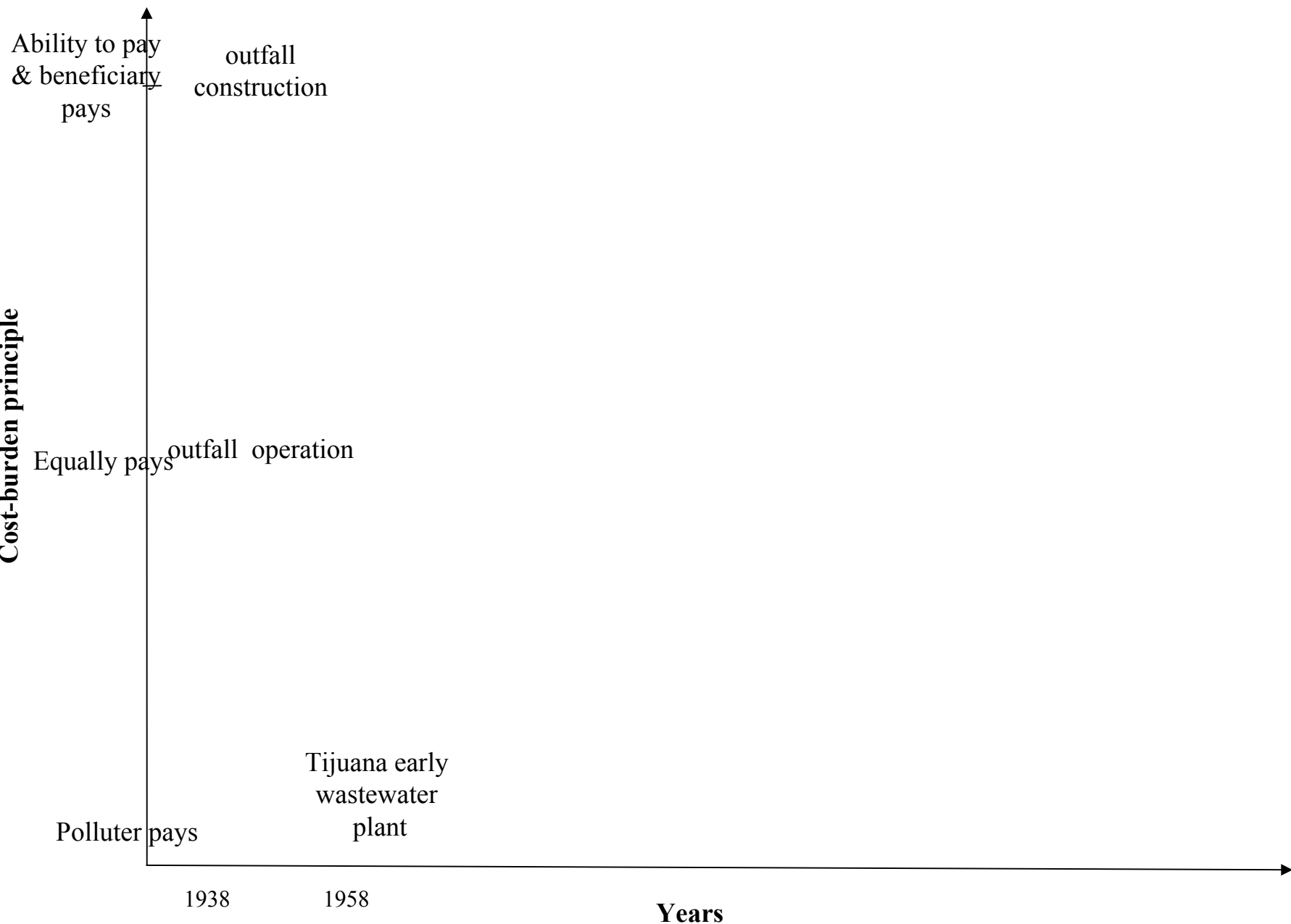




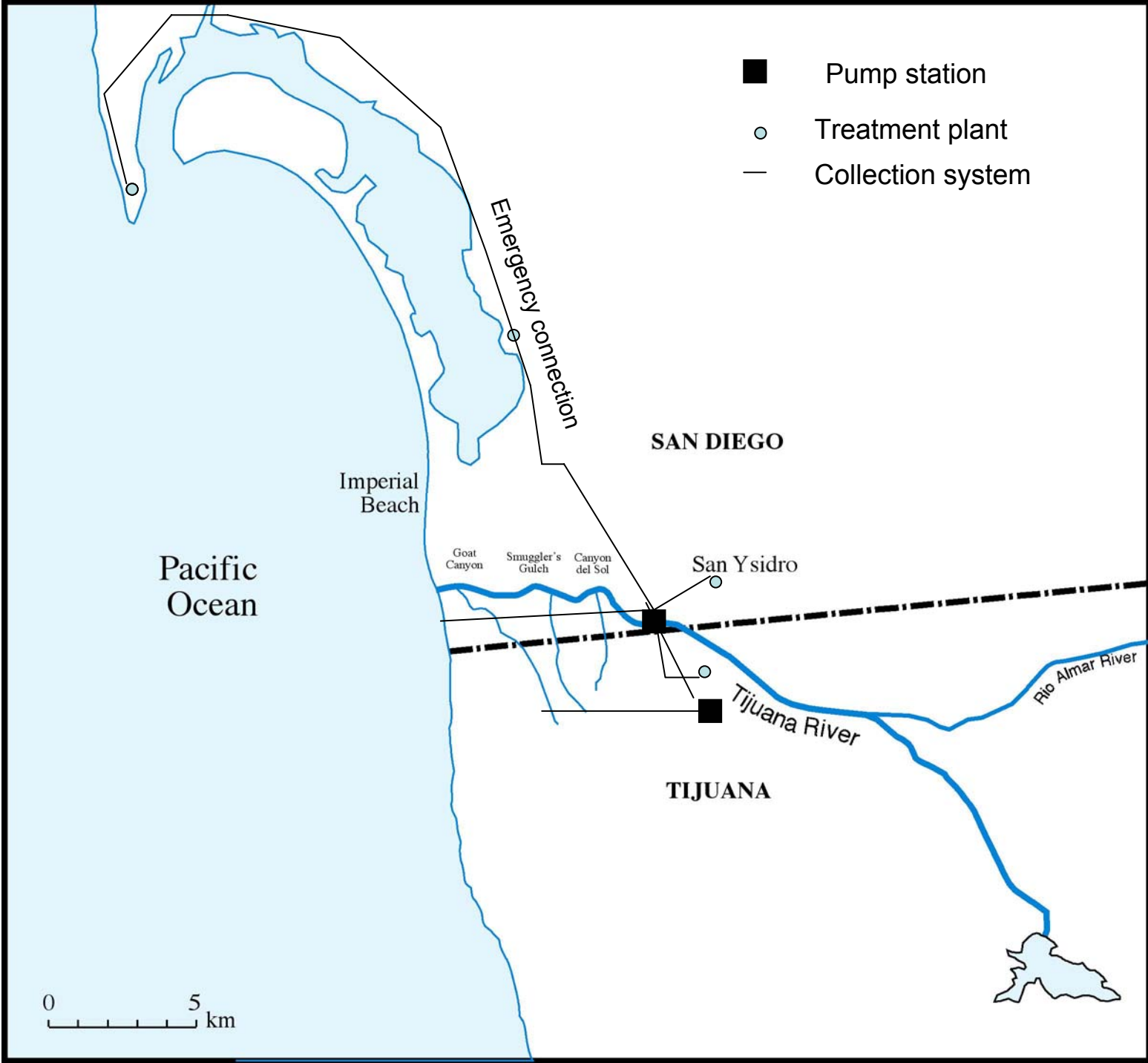


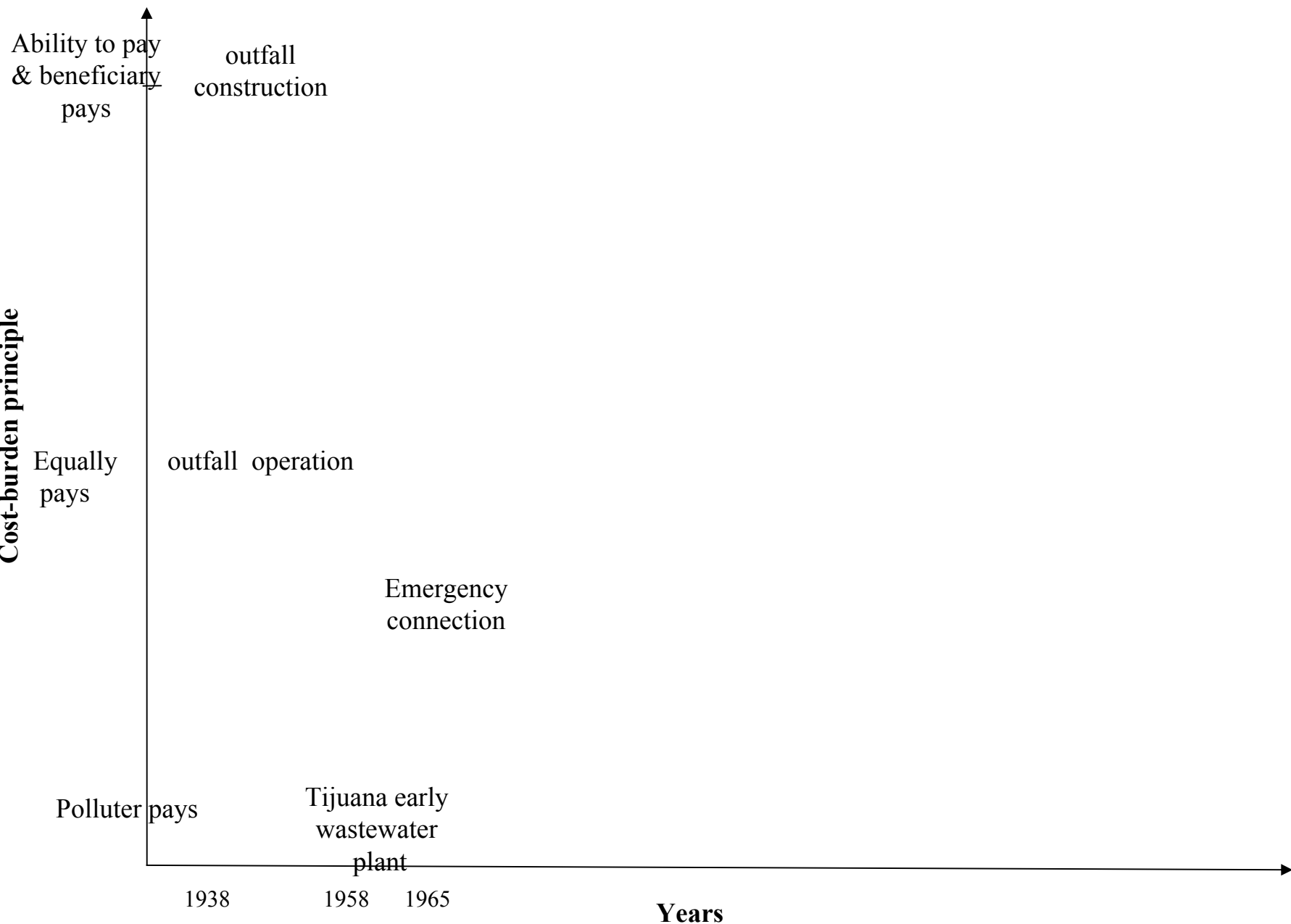
Cost burden evolution of wastewater infrastructure along the San Diego/Tijuana border



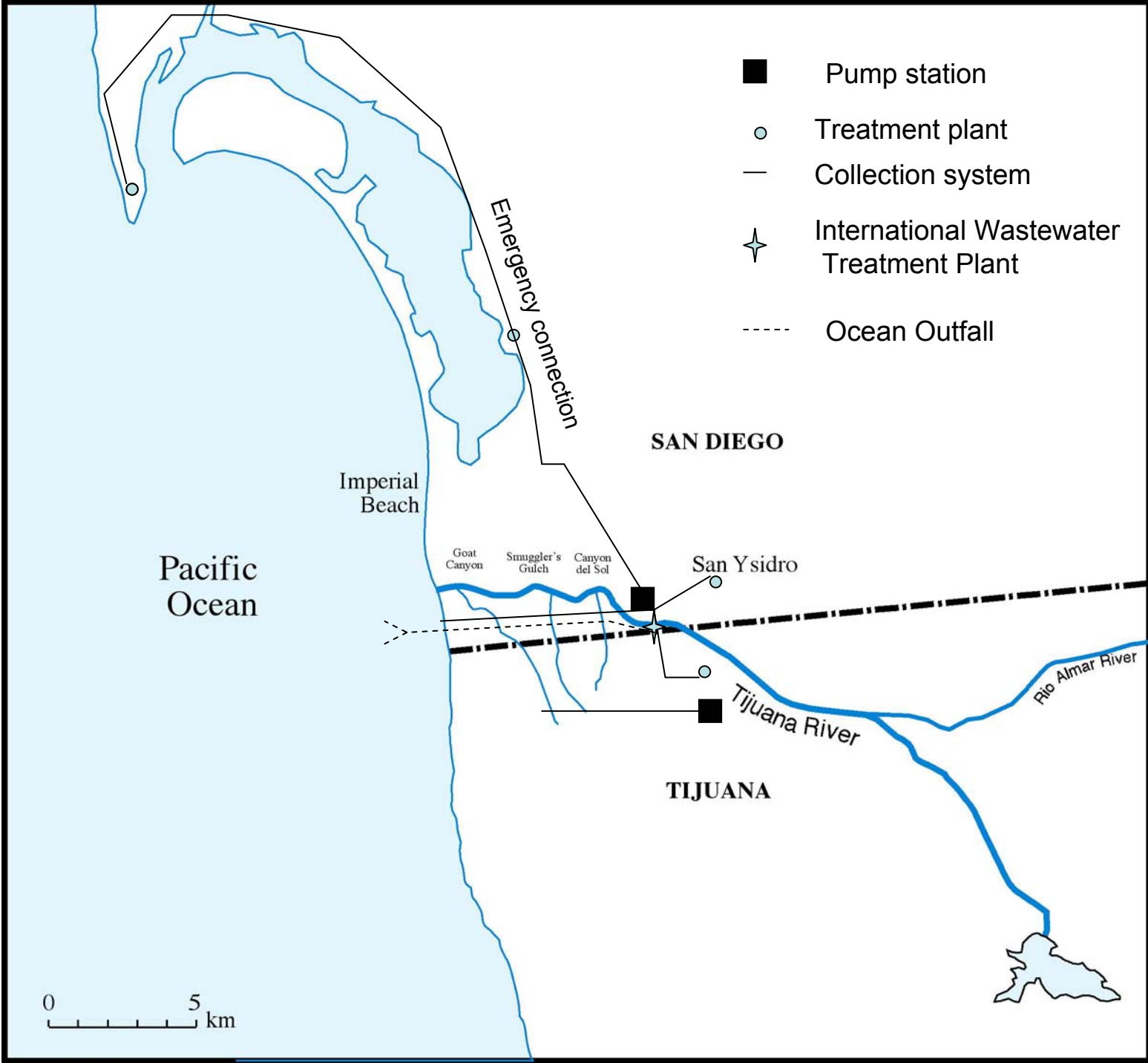


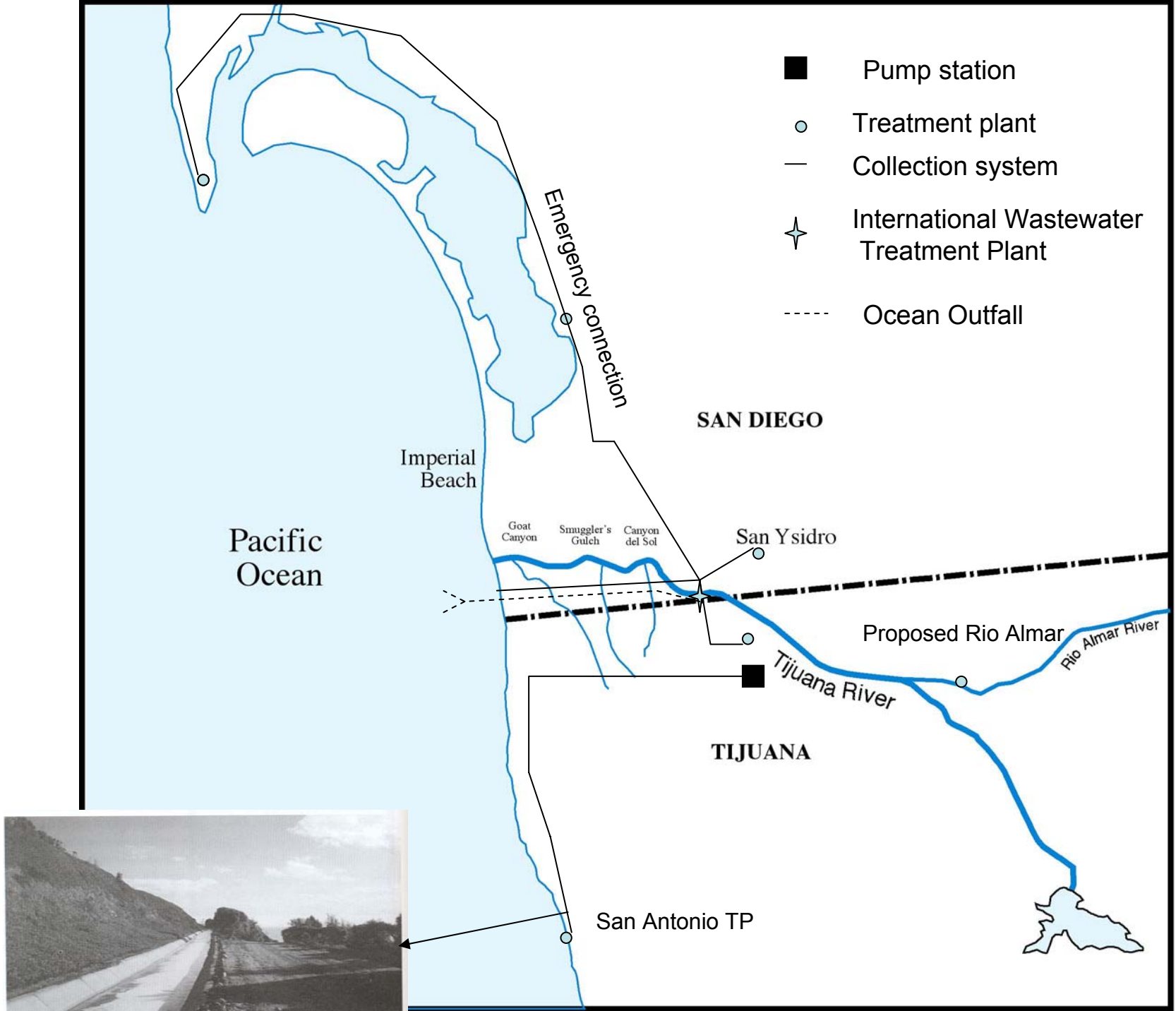
Cost burden evolution of wastewater infrastructure along the San Diego/Tijuana border

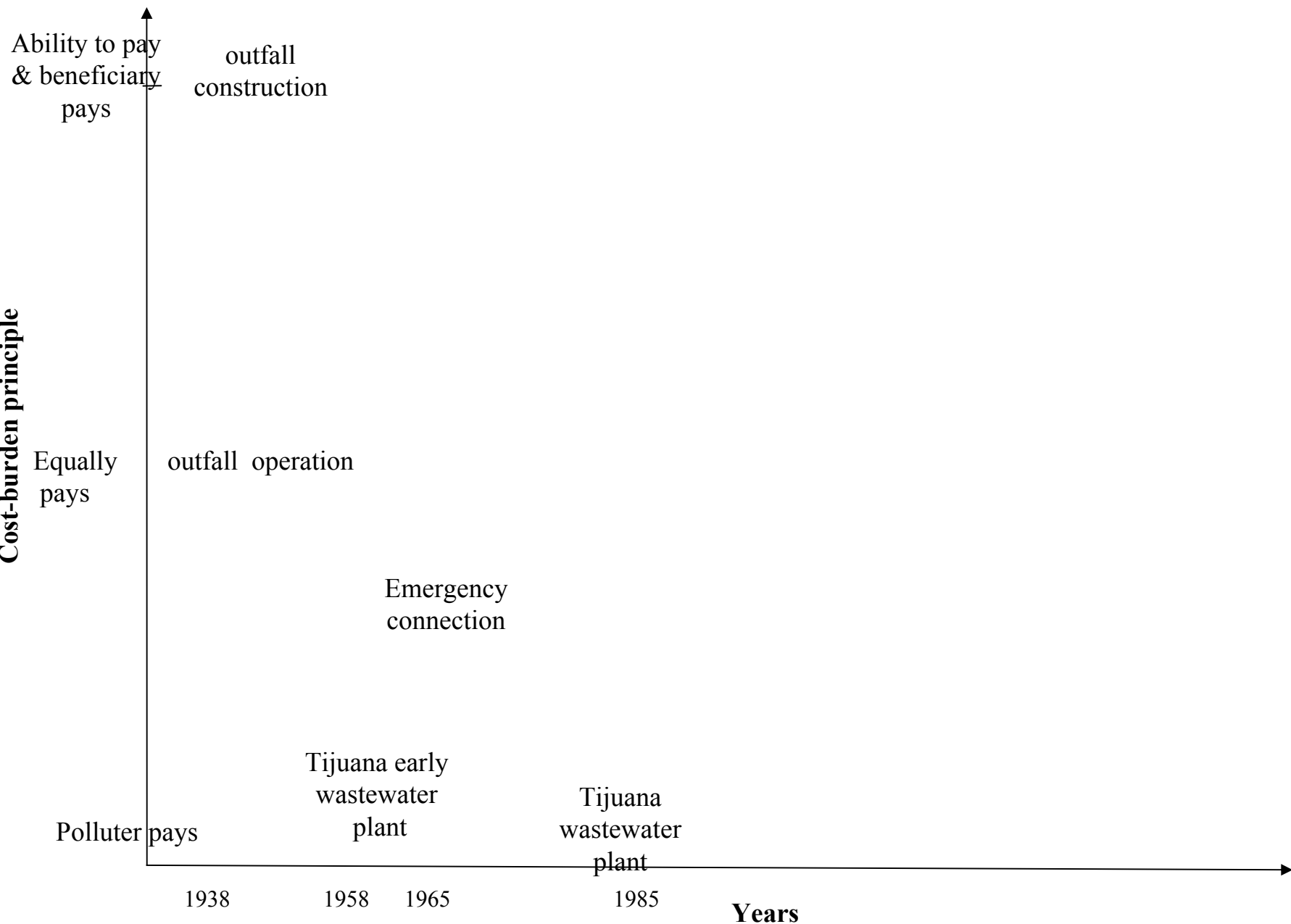




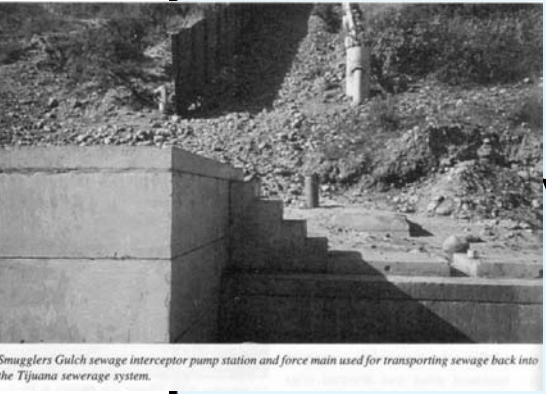
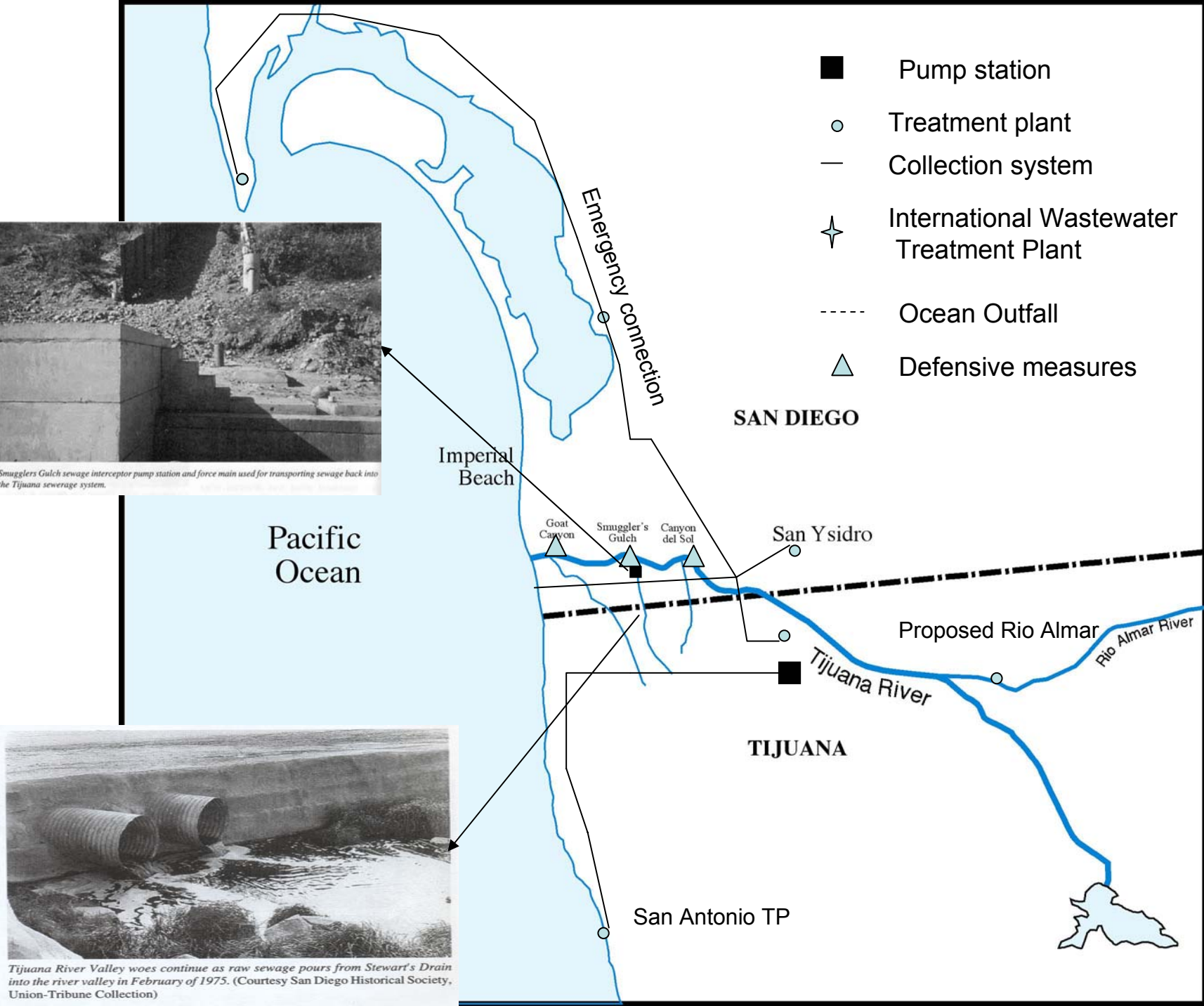
Cost burden evolution of wastewater infrastructure along the San Diego/Tijuana border







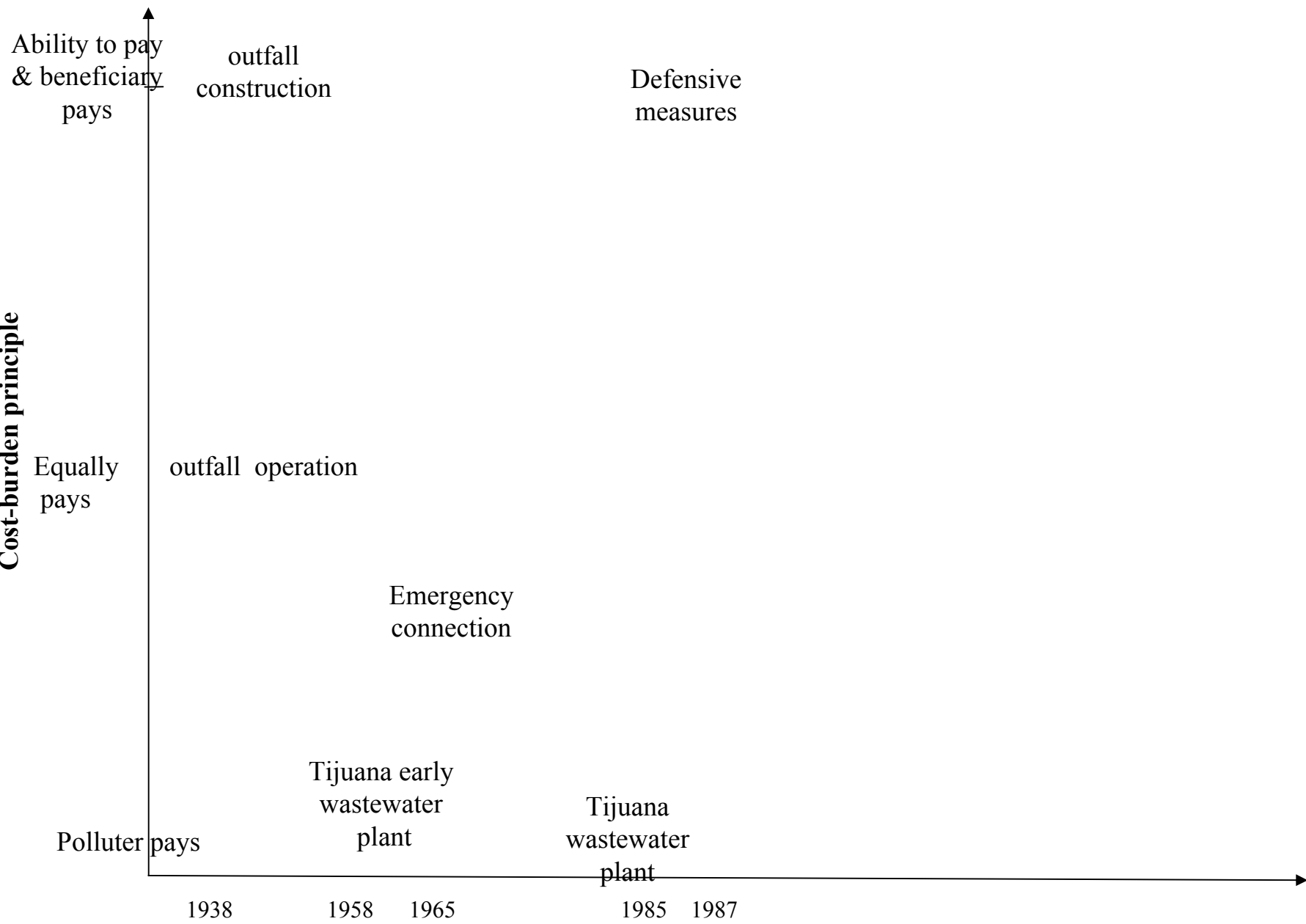
Cost burden evolution of wastewater infrastructure along the San Diego/Tijuana border



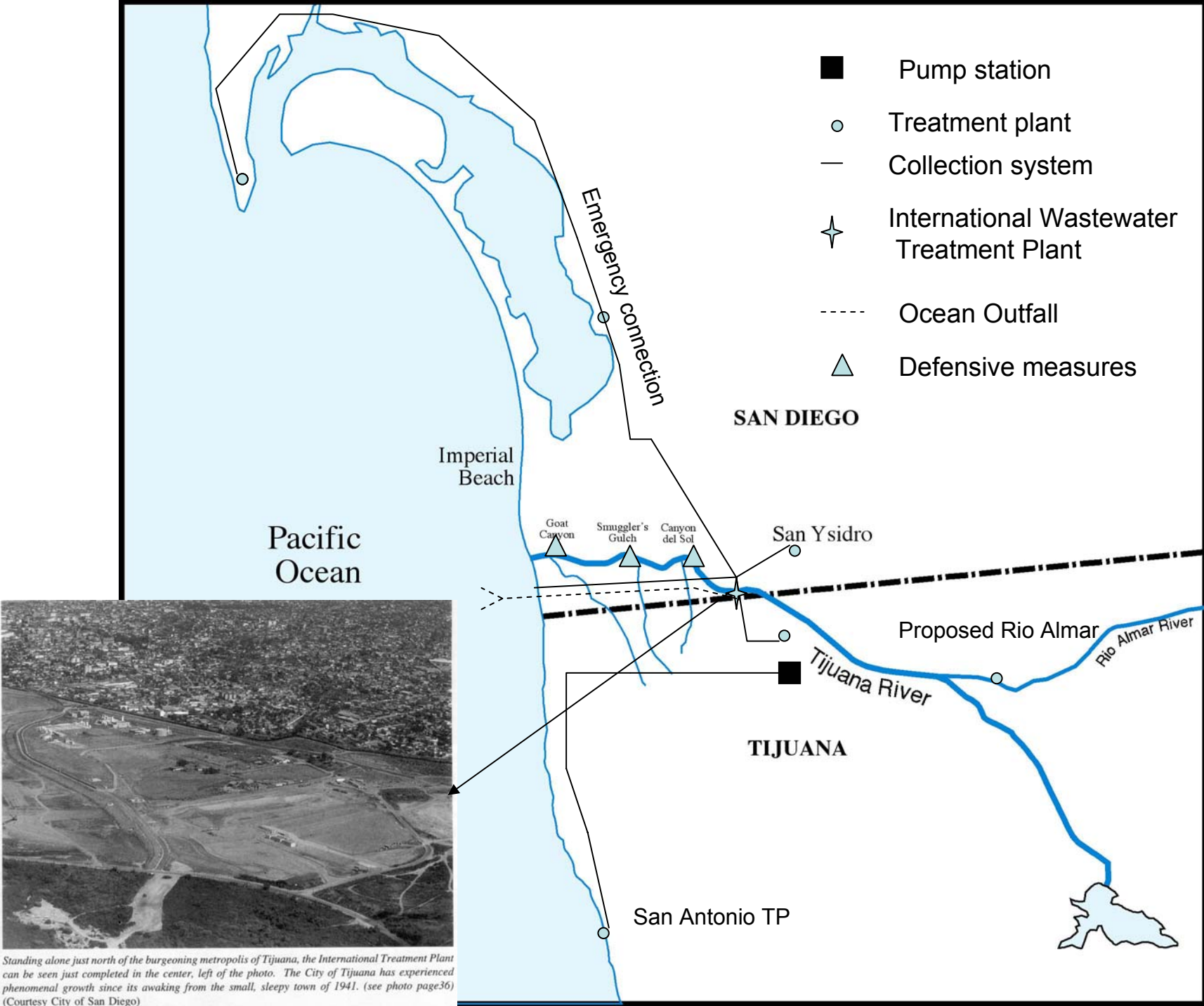
Smugglers Gulch sewage interceptor pump station and force main used for transporting sewage back into the Tijuana sewerage system.



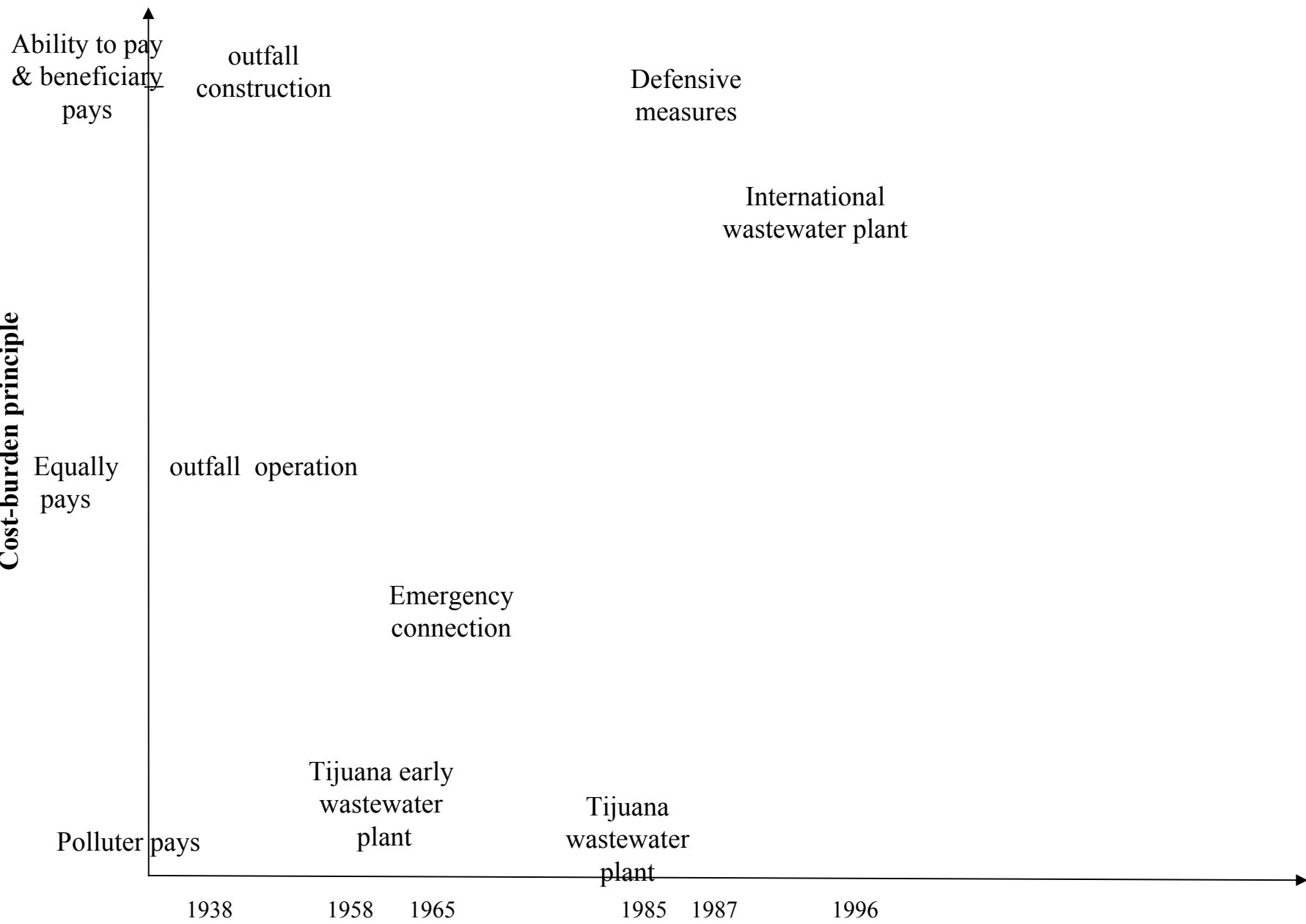
Tijuana River Valley woes continue as raw sewage pours from Stewart's Drain into the river valley in February of 1975. (Courtesy San Diego Historical Society, Union-Tribune Collection)



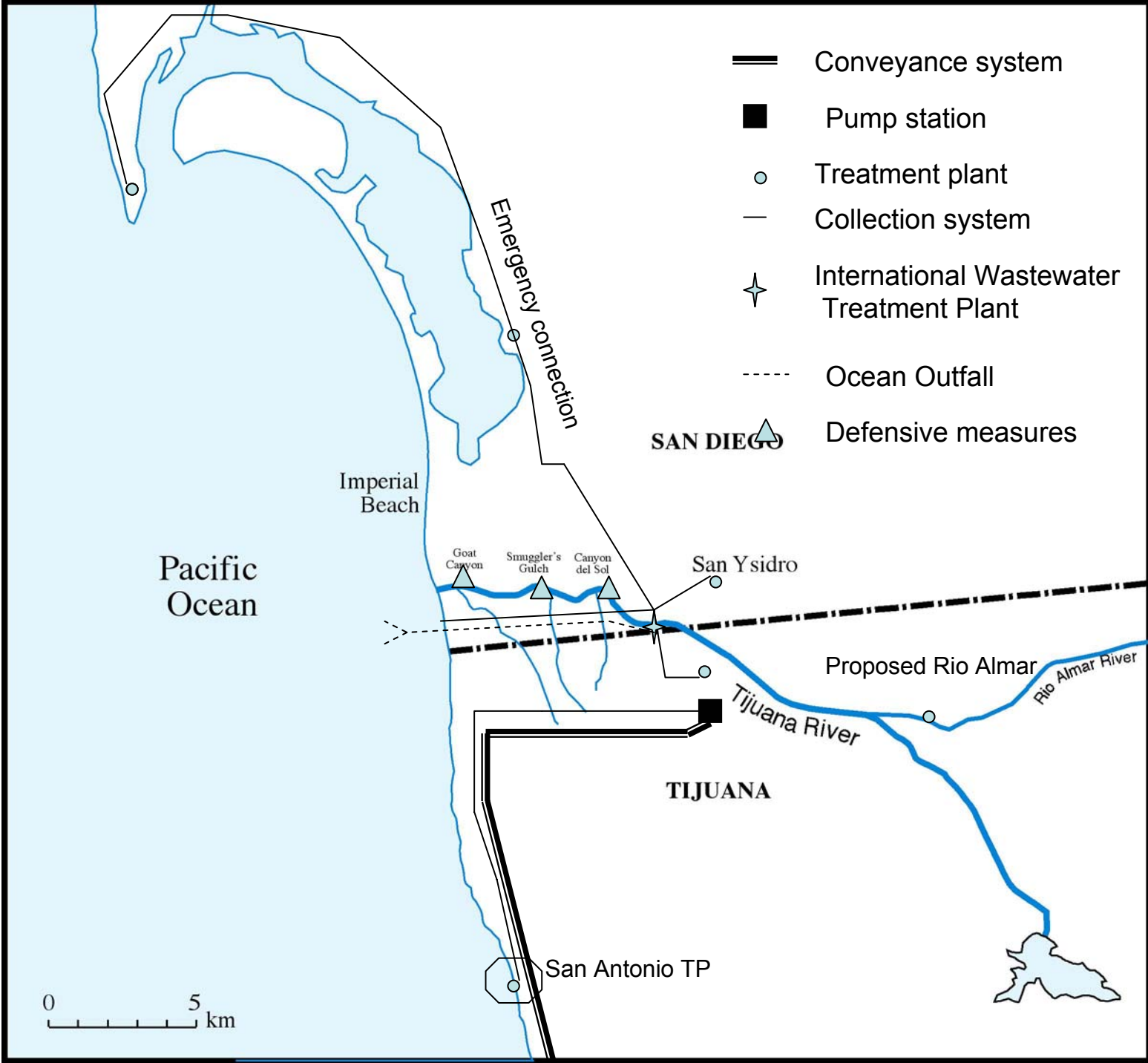
Cost burden evolution of wastewater infrastructure along the San Diego/Tijuana border

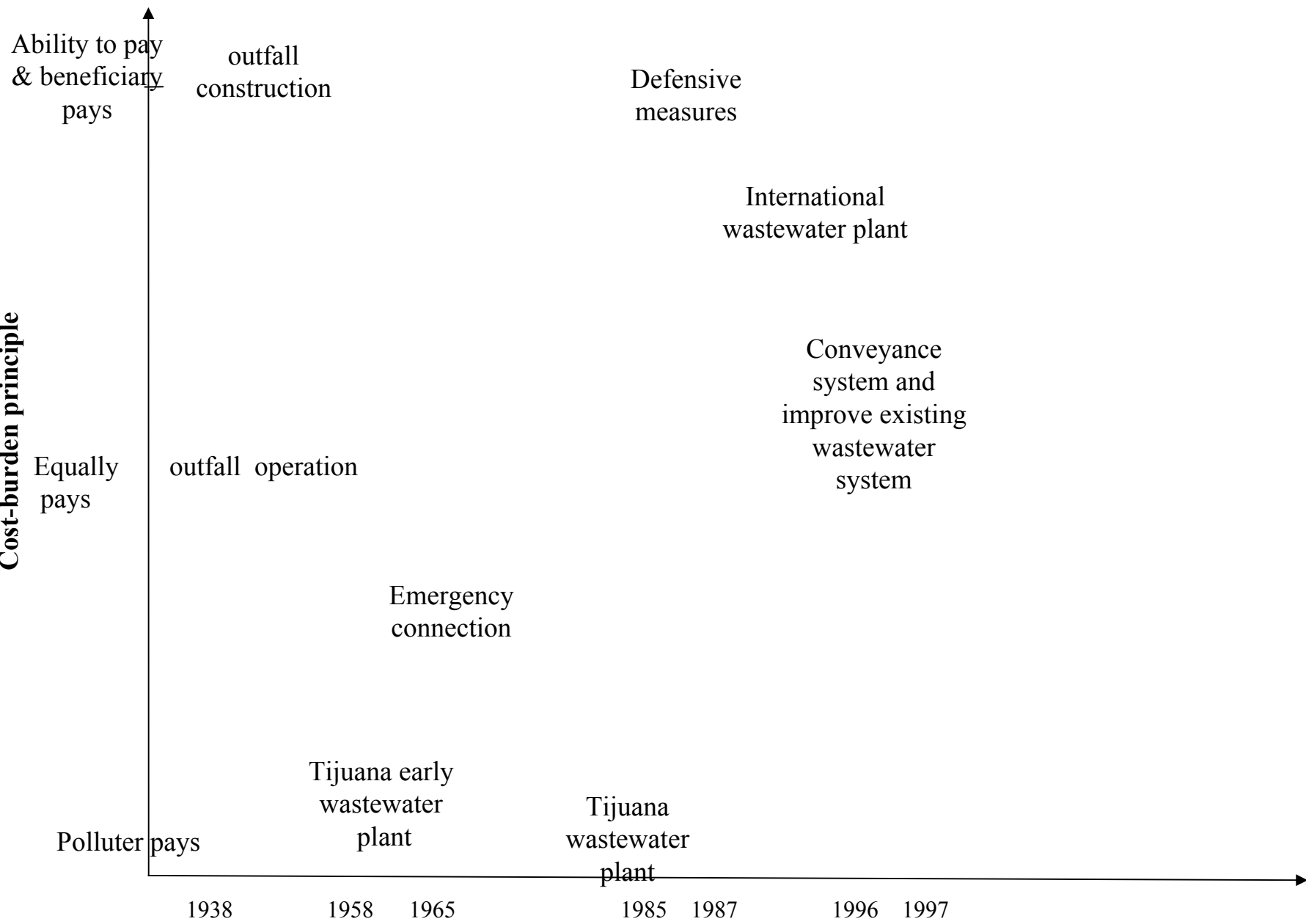


Standing alone just north of the burgeoning metropolis of Tijuana, the International Treatment Plant can be seen just completed in the center, left of the photo. The City of Tijuana has experienced phenomenal growth since its awaking from the small, sleepy town of 1941. (see photo page36) (Courtesy City of San Diego)

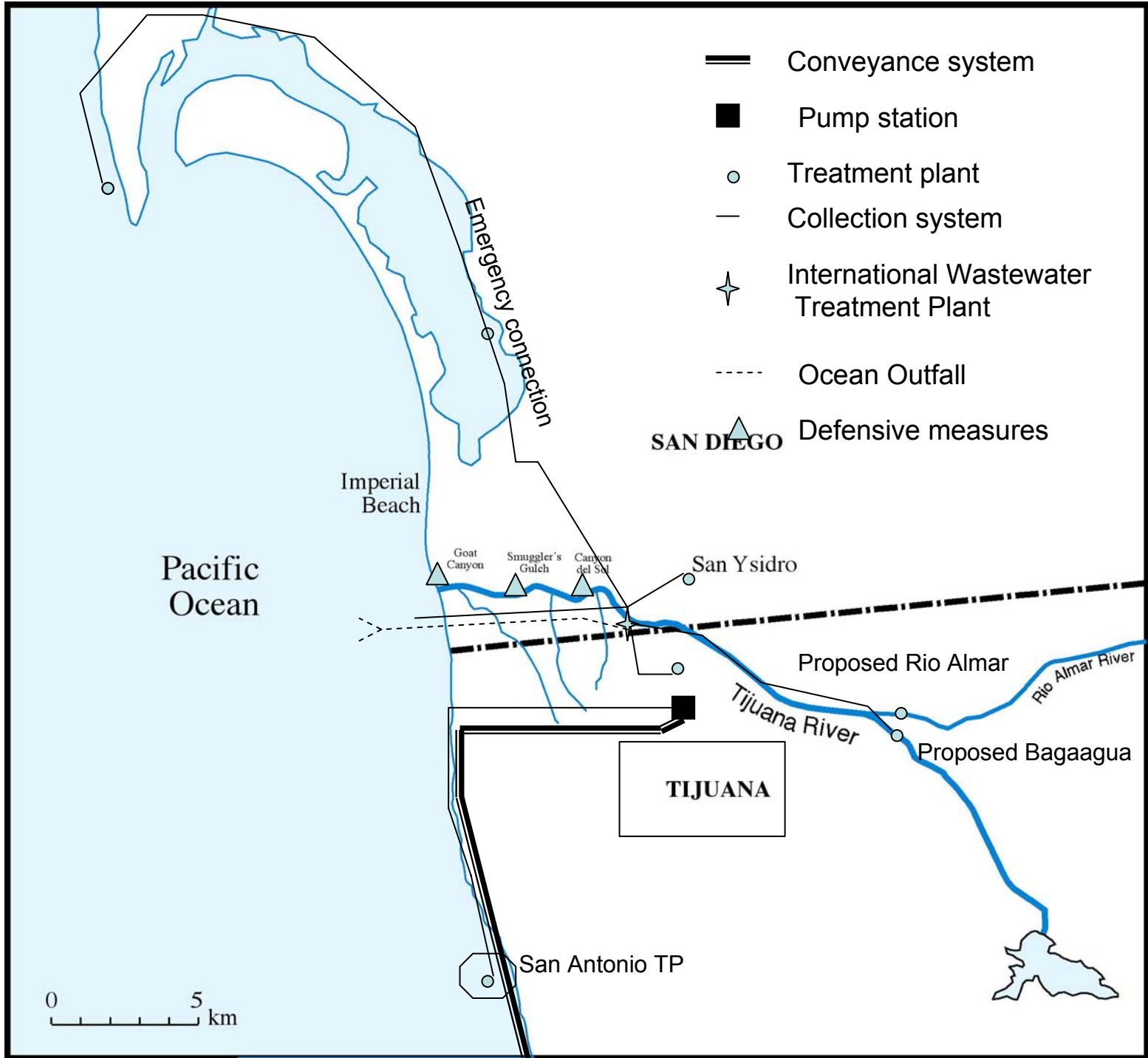


Cost burden evolution of wastewater infrastructure along the San Diego/Tijuana border





Cost-burden evolution of wastewater infrastructure along the San Diego/Tijuana border



== Conveyance system

■ Pump station

○ Treatment plant

— Collection system

✦ International Wastewater Treatment Plant

--- Ocean Outfall

▲ SAN DIEGO Defensive measures

Pacific Ocean

Imperial Beach

Emergency connection

Goat Canyon
Smuggler's Gulch
Canyon del Sol

San Ysidro

Proposed Rio Almar

Tijuana River

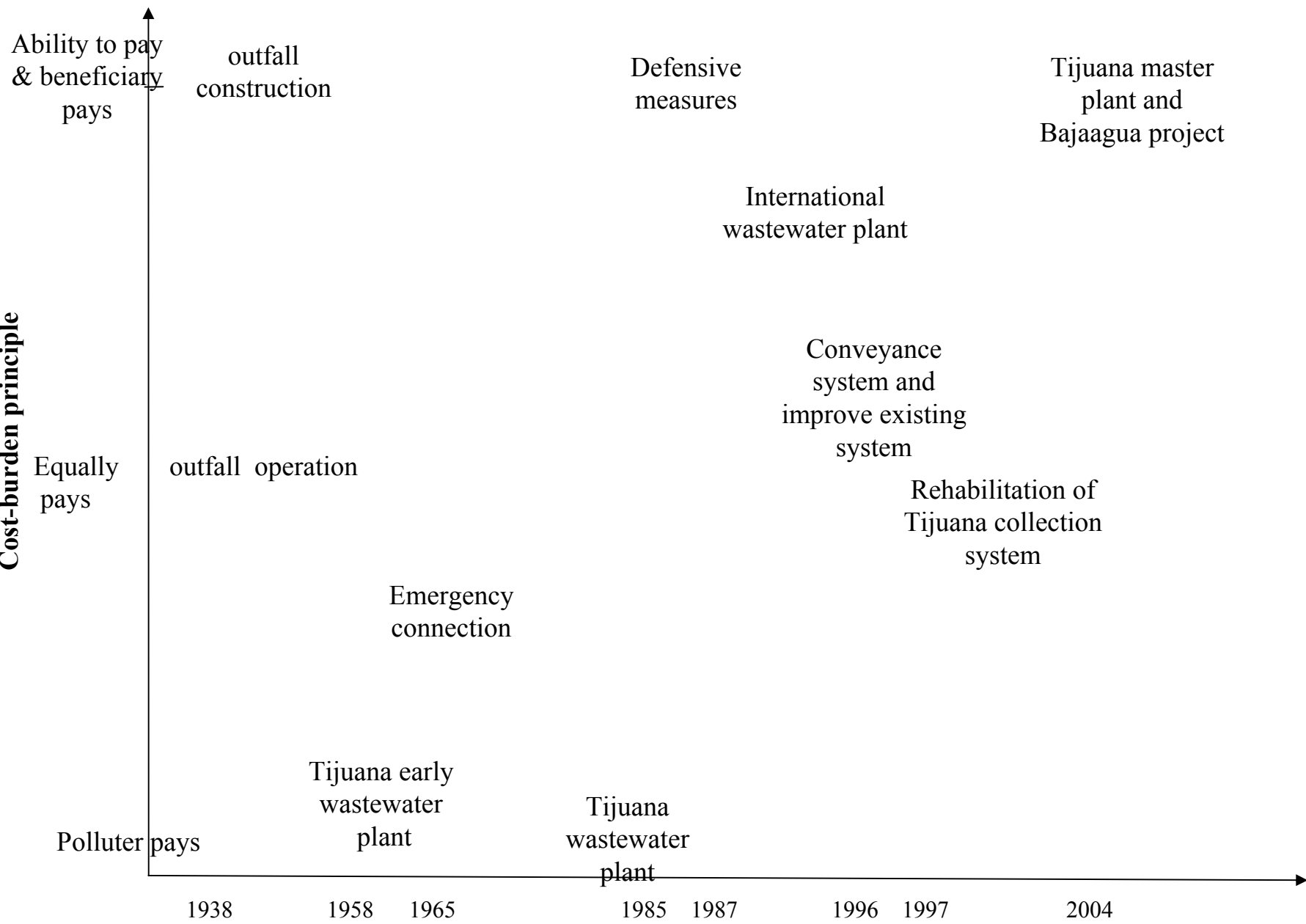
Rio Almar River

Proposed Bagaagua

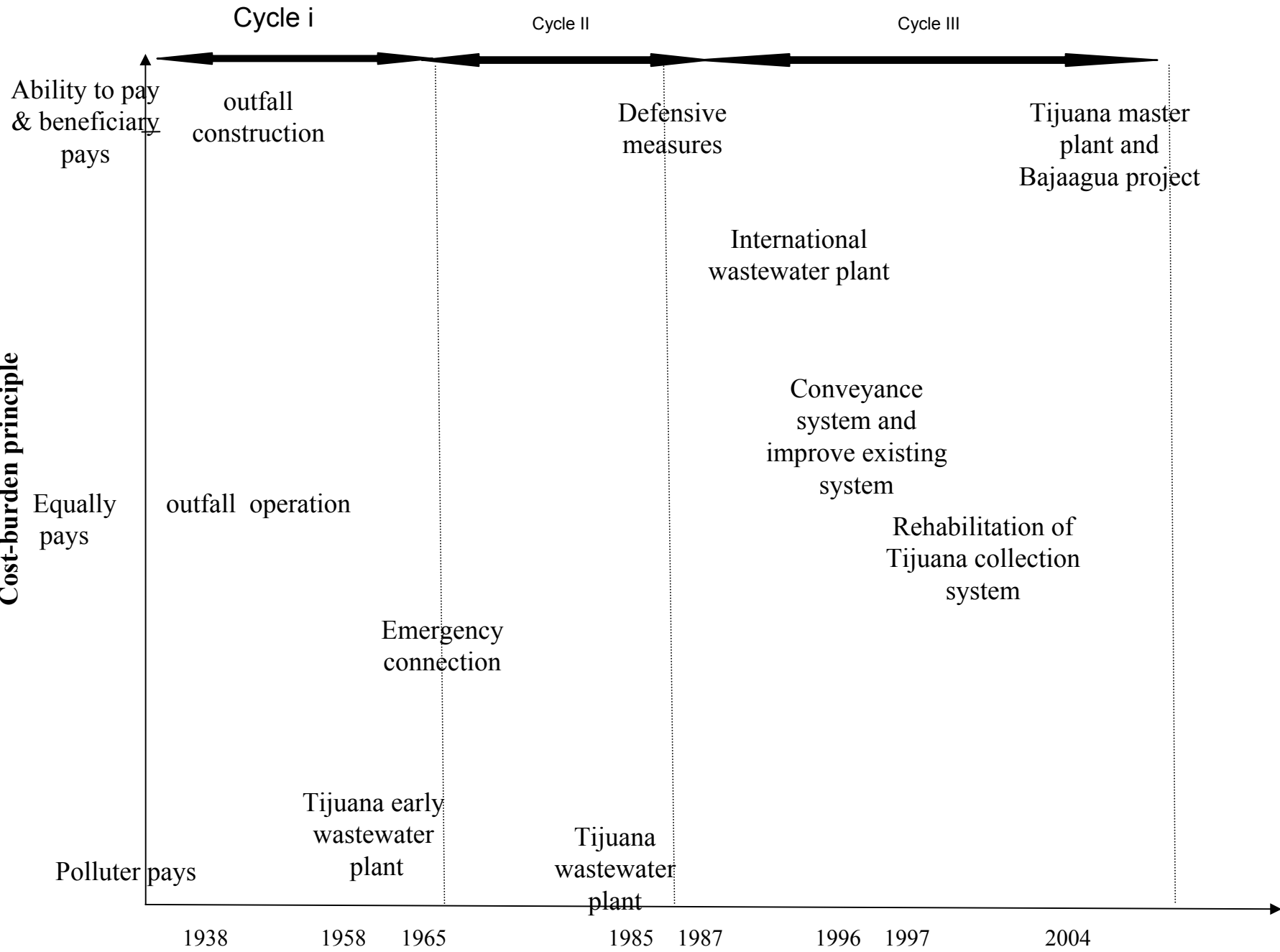
TIJUANA

San Antonio TP

0 5 km

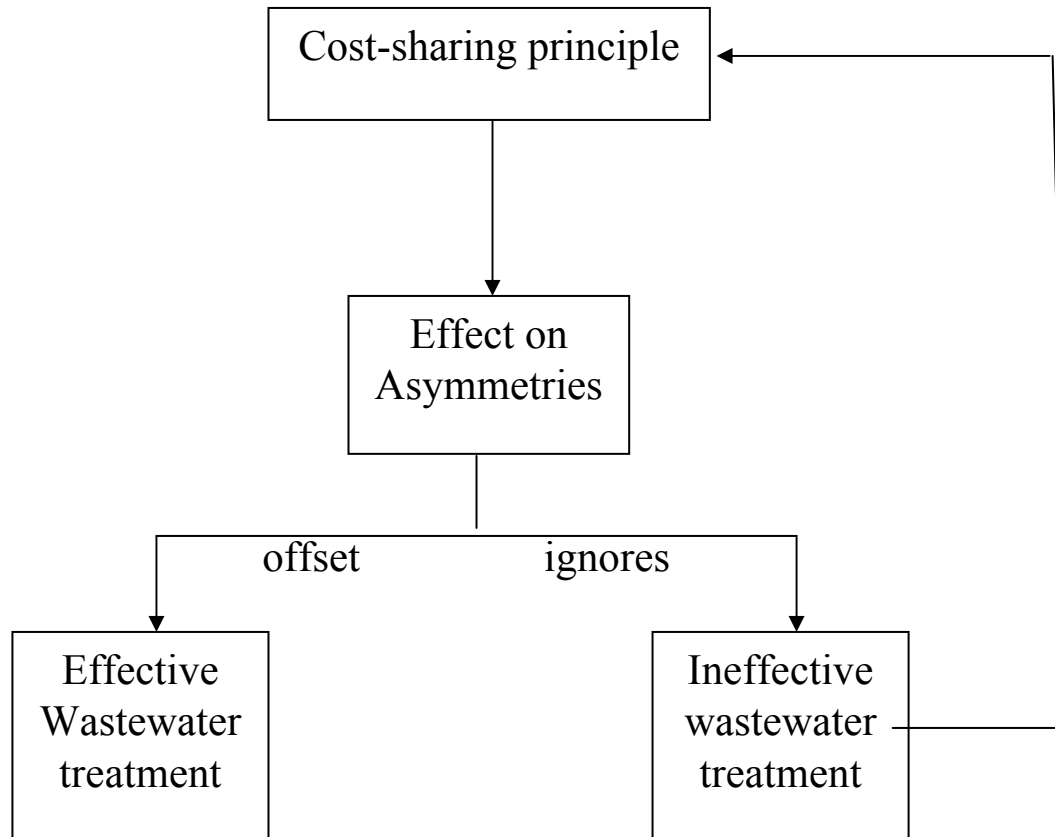


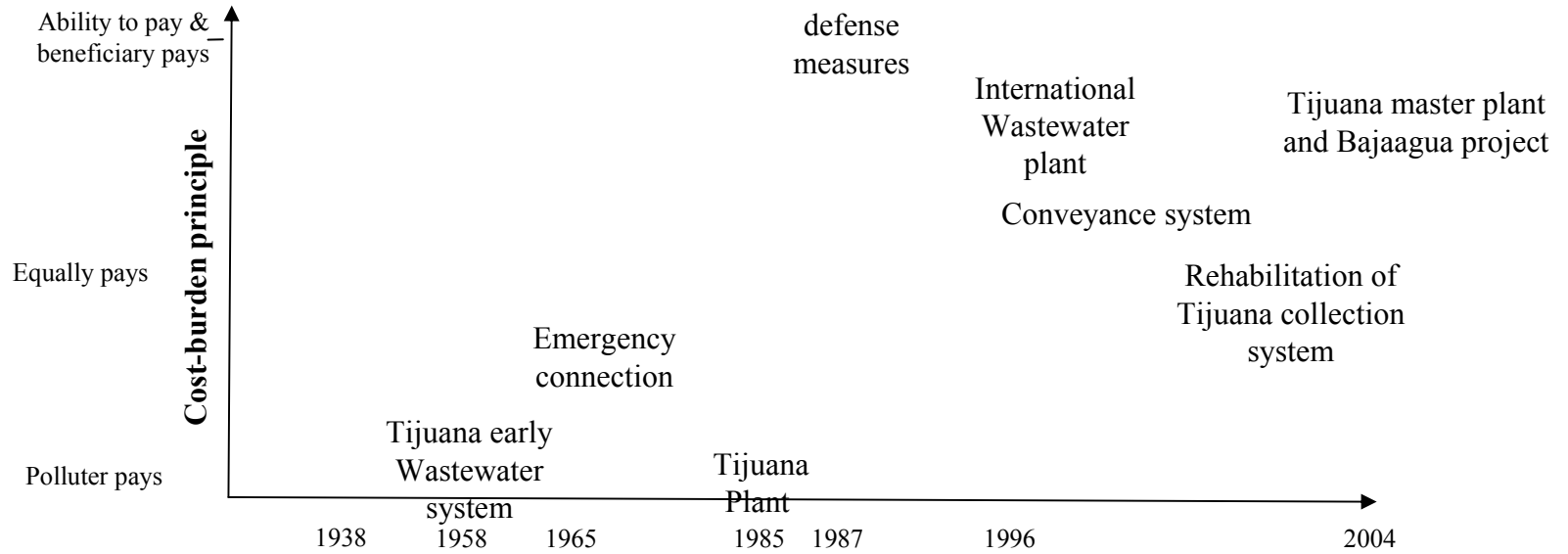
Cost burden evolution of wastewater infrastructure along the San Diego/Tijuana border



Cost burden evolution of wastewater infrastructure along the San Diego/Tijuana border

Research hypothesis





Projects built and programs adopted	Agreement signed	Cost-burden principle	Effect of cost-burden principle on Tijuana/San Diego asymmetries			
			Power asymmetry	Ability to pay	Willingness to pay	Operational capacities
Early wastewater plant -Wastewater plant		PPP	-	-	-	-
- Emergency connection	Minute 222	Soft version of PPP	-	-	-	+
- IWTP	Minute 283, 296	Polluter pays the difference	+	+	+	+
conveyance system; improve existing system; rehabilitation of tijuana collection system	NAFTA side agreement;	Equally paid	+	-	+	+
- Bajaagua project - Tijuana Master plan		beneficiary pays	-	+	-	+

conclusions

- To understand the choice of the cost-burden principle there is need to look beyond the traditional debate on what principle is efficient, fair and normative
- It requires focusing on how the principles affect the asymmetries and thus correspond with effectiveness differently
- It is the PPP that was to provide ineffective wastewater treatment since it ignored the existing political and economic asymmetries
- This is why the PPP was replaced with other principles that better addressed the asymmetries in in power, willingness and ability to pay and operational capacities.

Pollution control asymmetries	Indicators	San Diego	Tijuana
Willingness to pay	Location	Downstream	Upstream
	Water quality standards	High	Low
Ability to pay	User fee collection	High	Low
	Economic capacities	High	Low
Operational capacities	Availability of technology	High	Low
	Ability to enforce pretreatment	High	Low
Power balance	Military, economic and political power	High	Low

Pollution control asymmetries between San Diego and Tijuana