

CRITICAL APPROACHES TO THE SUSTAINABLE PRODUCTION OF WATERSCAPES

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AESS Washington DC/June 2016
Critical Sustainability Panel

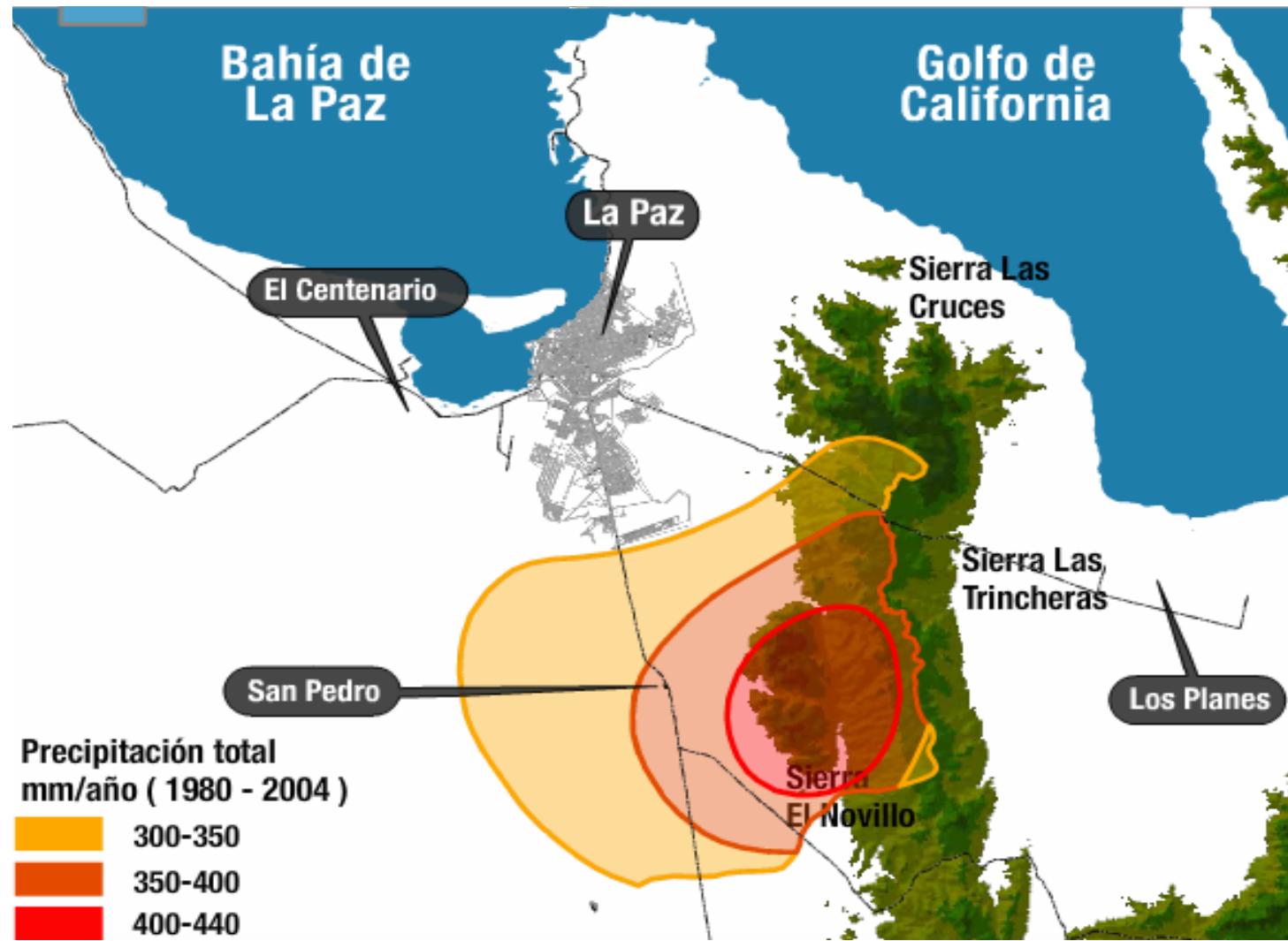
Research Question: How has the La Paz watershed been produced over time and space, and how does knowing this help us go forward towards sustainability?

Study Area



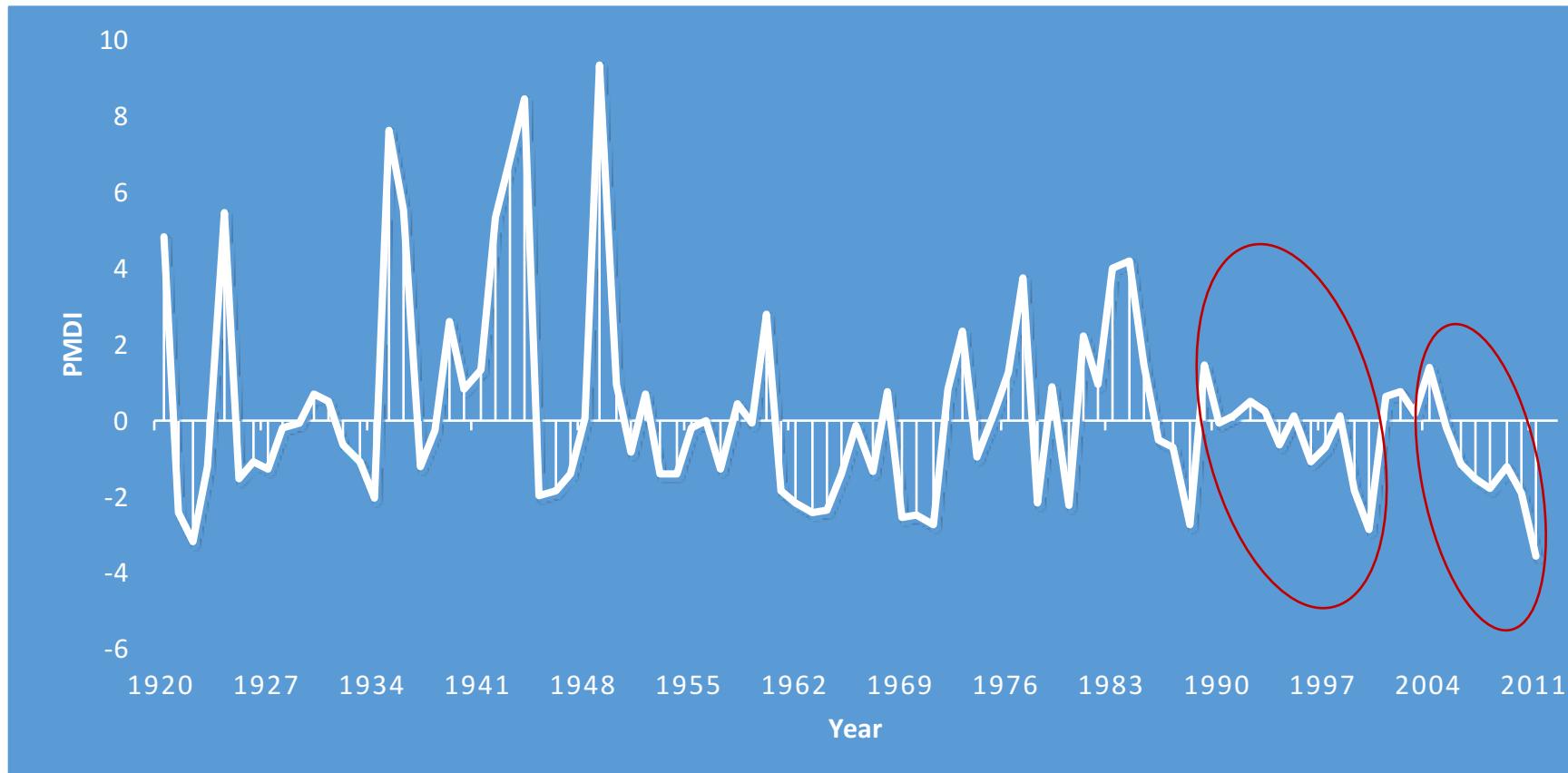
Source: ESRI USGS NOAA

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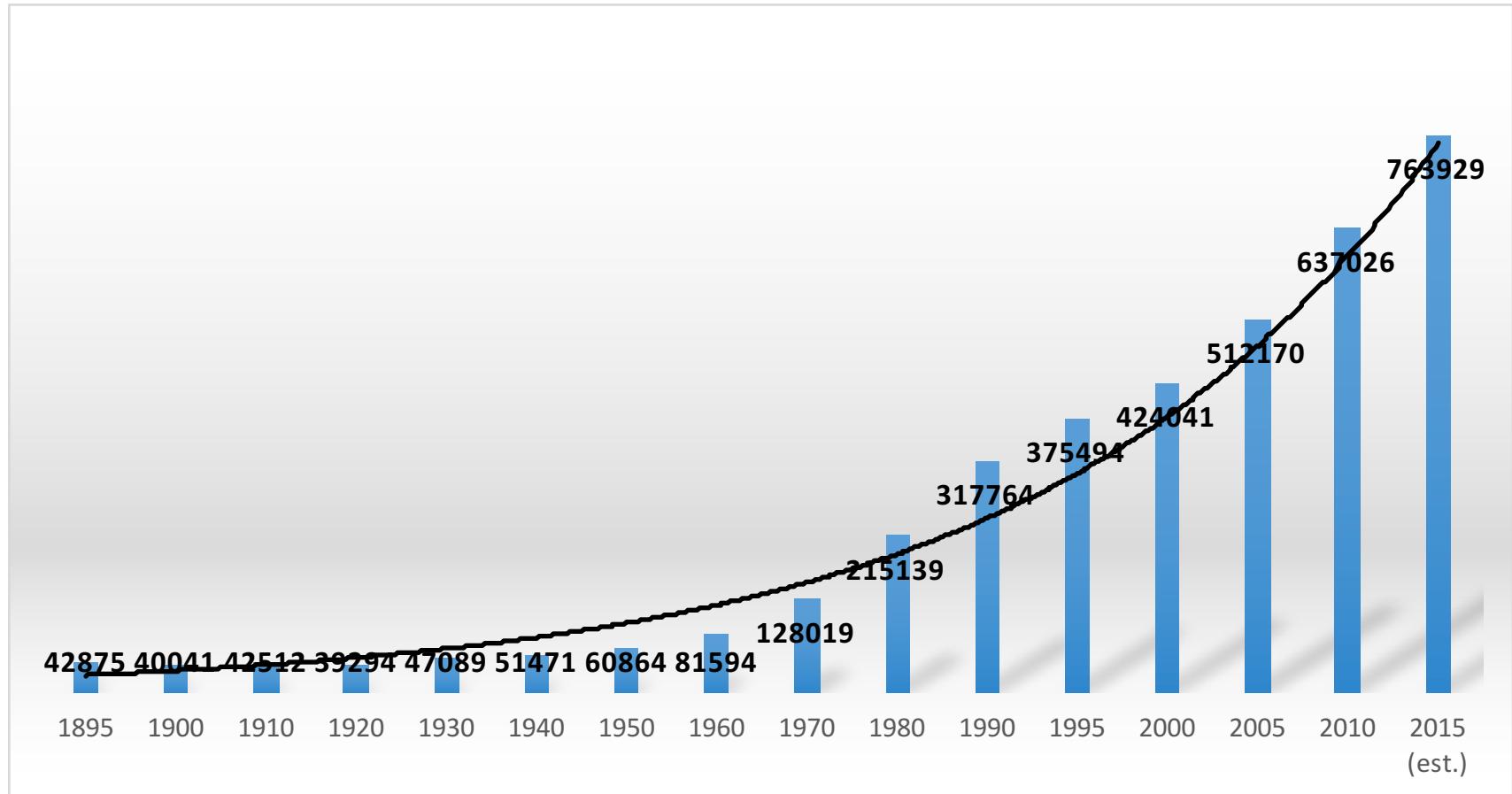
Map showing elevation (green), and gradient of annual mean precipitation (red = high, orange = medium, yellow = low). Source: (Niparajá, 2014)

Precipitation Trends in La Paz



Annual time series of the Palmer Modified Drought Severity Index (PMDI) for La Paz, Mexico where the y-axis represents wetness (positive) to dryness (negative). Source: (NOAA, 2012)

Population Growth Baja California Sur, Mexico 1895-2015



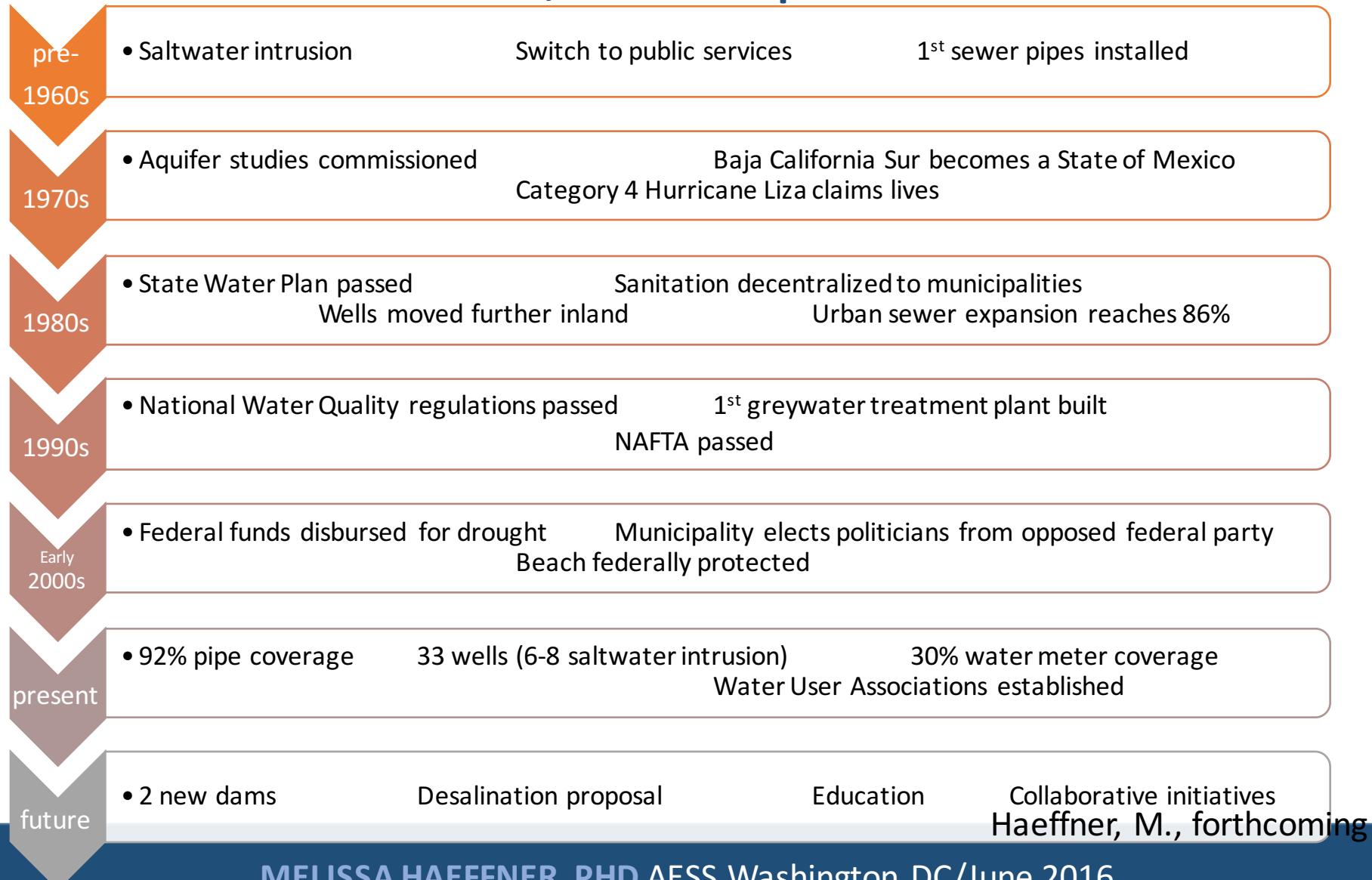
Source: INEGI, 2012

Methods

Sector	Level
Technological	Federal
Technological	State
Science	State
Science	State
Science	Local
Science	Local
Policy	Federal
Policy	State
Distribution	Local
Distribution	Local
Socio-cultural	Federal
Socio-cultural	State
Socio-cultural	State
Socio-cultural	State

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Urban Water Infrastructure Development in La Paz, 1960s-present



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Pre-1960s Indigenous, Colonialism, Mexican territory



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1960-70s Public delivery of fresh water supplies



Photo credit: Rob McKinstry

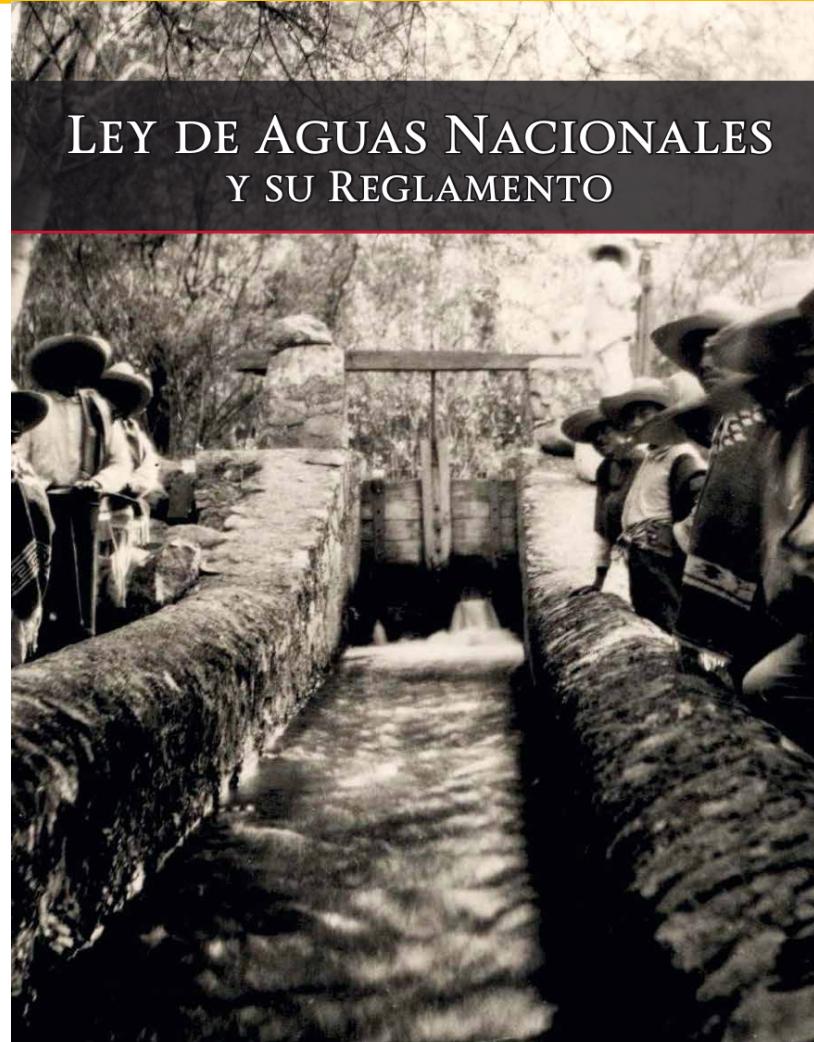
<https://www.behance.net/gallery/2079736/Travel-and-Event-Photography>

1970-80s Local and state awareness

“The State Plan of the 1980s was to change the agricultural uses of wells... They also began to reuse greywater and to treat wastewater so they could stop drawing water from the aquifer, and to balance extraction with recharge.”

1980-90s

Top-down water reform



MÉXICO
GOBIERNO DE LA REPÚBLICA



SECRETARÍA DE
MEDIO AMBIENTE
Y RECURSOS NATURALES

CONAGUA
COMISIÓN NACIONAL DEL AGUA

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“From 1998 to 2010, the administrations of the municipality were different [political] parties [than the federal government], so federal programs failed. La Paz elected PAN and then PRD, so resources simply did not arrive...for this reason there was no growth in the hydraulic system, drinking water, drainage, etc.”

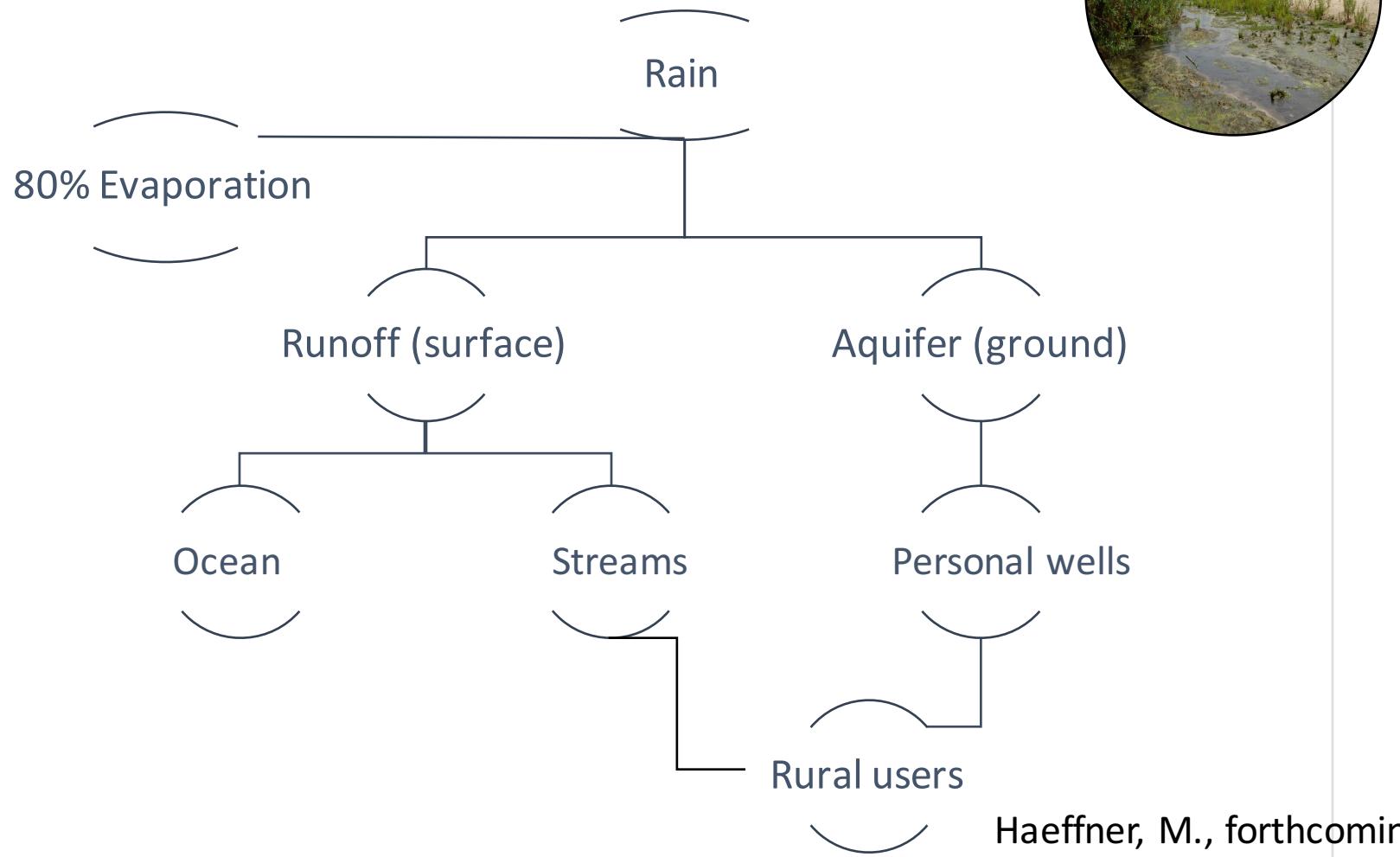


2010 - Aligning federal, state and local goals present

"There has been a lot of coordination in the last two years and we have advanced much more in environmental issues. The Office of Sustainable Development coordinated the State Climate Change Plan with the University, we did the Oasis Sudcalifornianos program, Solid and Urban Waste also was a very large step forward, the State Solid Waste Management Plan was made and municipal plans are underway, proposals for environmental legislation by our Office are being made."

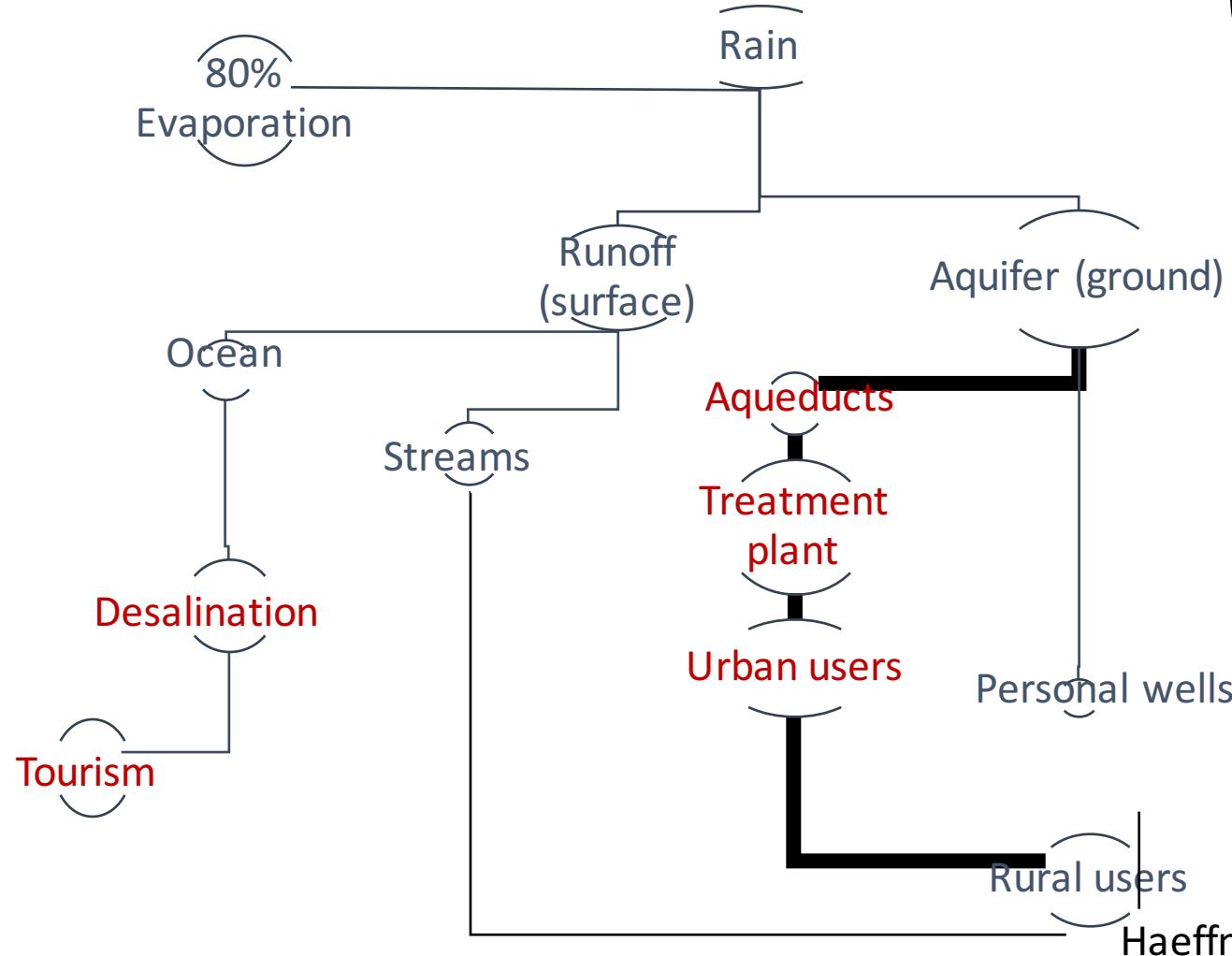
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Rural Water Sources



Haeffner, M., forthcoming

Urban-Rural Water Sources



Haeffner, M., forthcoming

"The critic is not the one who debunks, but the one who assembles. The critic is not the one who lifts the rugs from under the feet of the naive believers, but the one who offers the participants arenas in which to gather."

Latour, B. (2004) Why has critique run out of steam? From matters of fact to matters of concern. Critical Inquiry (30): 264.

Thank you

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