

DOMESTIC AND INTERNATIONAL PERSPECTIVE OF WATER RESOURCES AND LEGAL DISPUTES

GABRIEL ECKSTEIN

21TH ANNUAL BELL COUNTY WATER SYMPOSIUM
“OUR CULTURE, OUR ECONOMY AND OUR WATER USE”
NOVEMBER 16, 2022

TOO LITTLE



- 2011 DROUGHT = \$7.62 B IN ECONOMIC LOSSES FOR TEXAS' AGRICULTURAL SECTOR
- 2022 DROUGHT
 - CROP YIELDS DOWN BY AS MUCH AS 60%
 - HERD SIZES DECLINE 50%
 - \$2 BILLION IN ECONOMIC LOSSES FOR TEXAS' COTTON
 - ELIGIBLE PRODUCERS RECEIVED MORE THAN \$500 B THROUGH THE FEDERAL EMERGENCY RELIEF PROGRAM

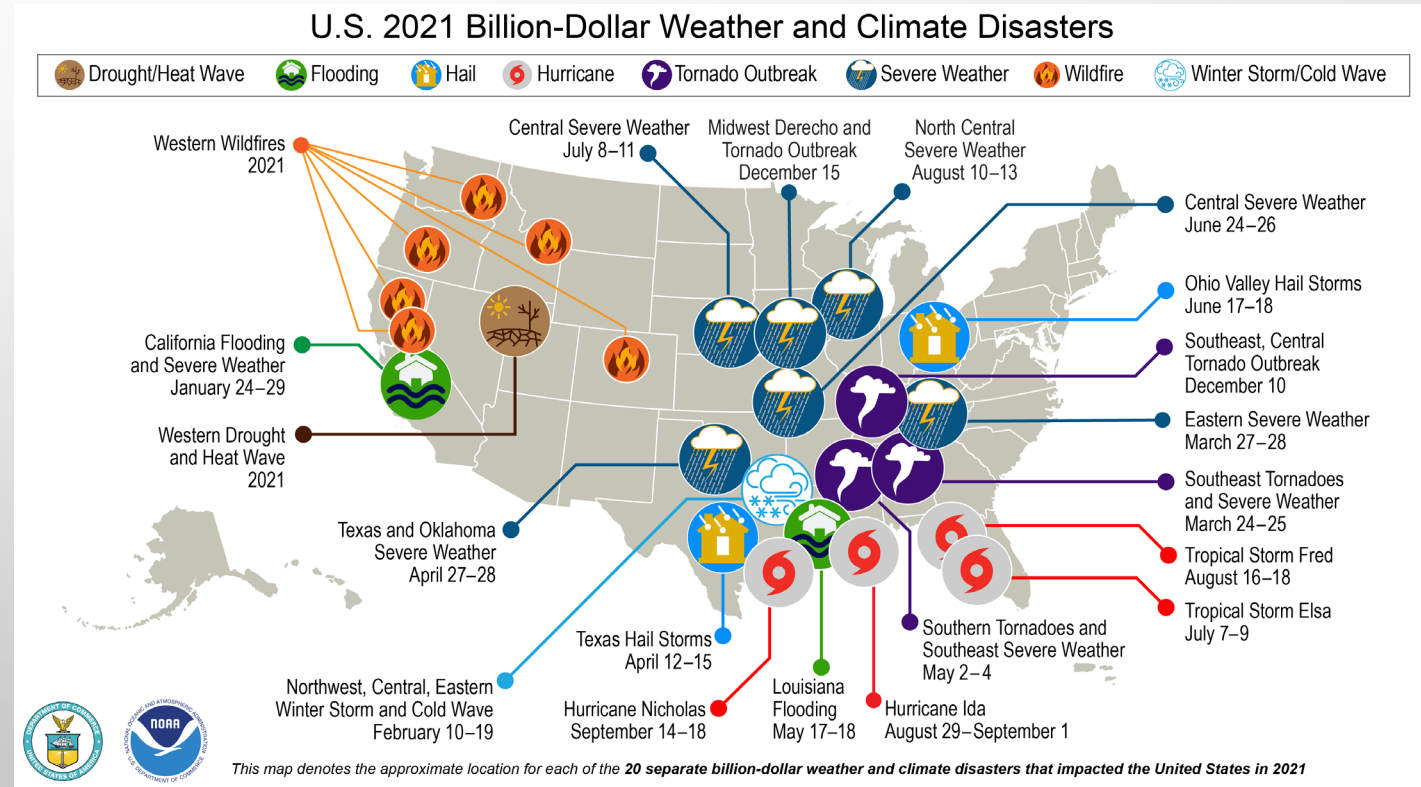
TOO MUCH



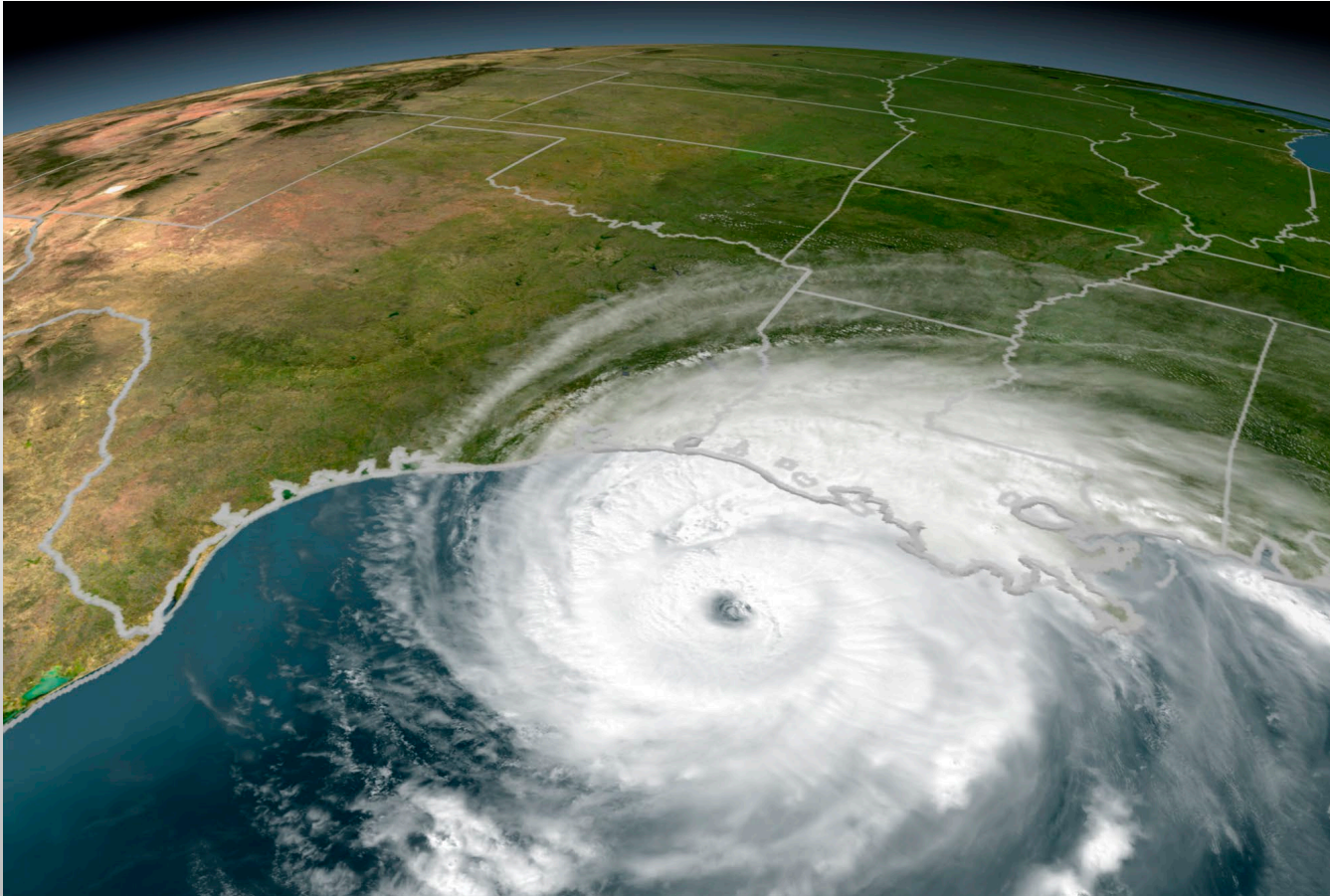
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- 2021 WAS THE THIRD-COSTLIEST DISASTER YEAR EVER FOR THE US, WITH AN ESTIMATED \$145 BILLION IN TOTAL ECONOMIC LOSSES (BEHIND ONLY 2017'S \$346 BILLION AND 2005'S \$244



TOO MUCH

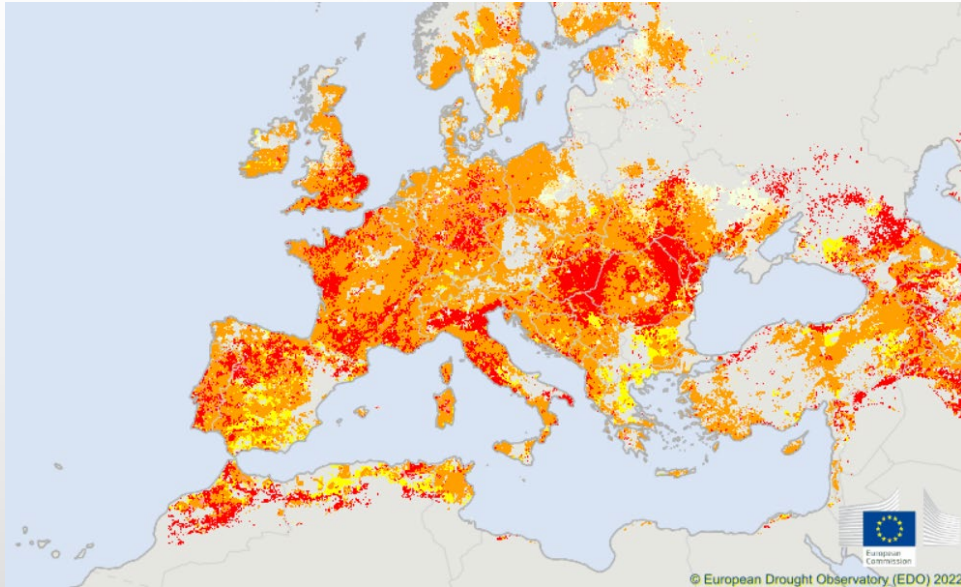


- SINCE 2017, SIX MAJOR STORMS OF EITHER CATEGORY 4 OR 5 STRENGTH HAVE MADE LANDFALL ALONG THE GULF COAST
- IDA (2021), LAURA (2020), MICHAEL (2018), IRMA (2017) AND HARVEY (2017) TOTAL DAMAGE OF MORE THAN \$375 B; DAMAGE FROM IAN IS STILL BEING ASSESSED

GLOBAL PHENOMENON



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- 2022 – EUROPE’S WORST DROUGHT IN 500 YEARS
- TYPHOON RAI KILLED MORE THAN 400 IN THE PHILIPPINES LAST DECEMBER AND CAUSED AT LEAST HALF A BILLION DOLLARS IN ECONOMIC LOSSES AND DAMAGES
- RECENT FLOODING IN PAKISTAN KILLED +1,700 AND DESTROYED MOST THE COUNTRY’S CROPS

TYPICAL RESPONSE TO WATER DISPUTES

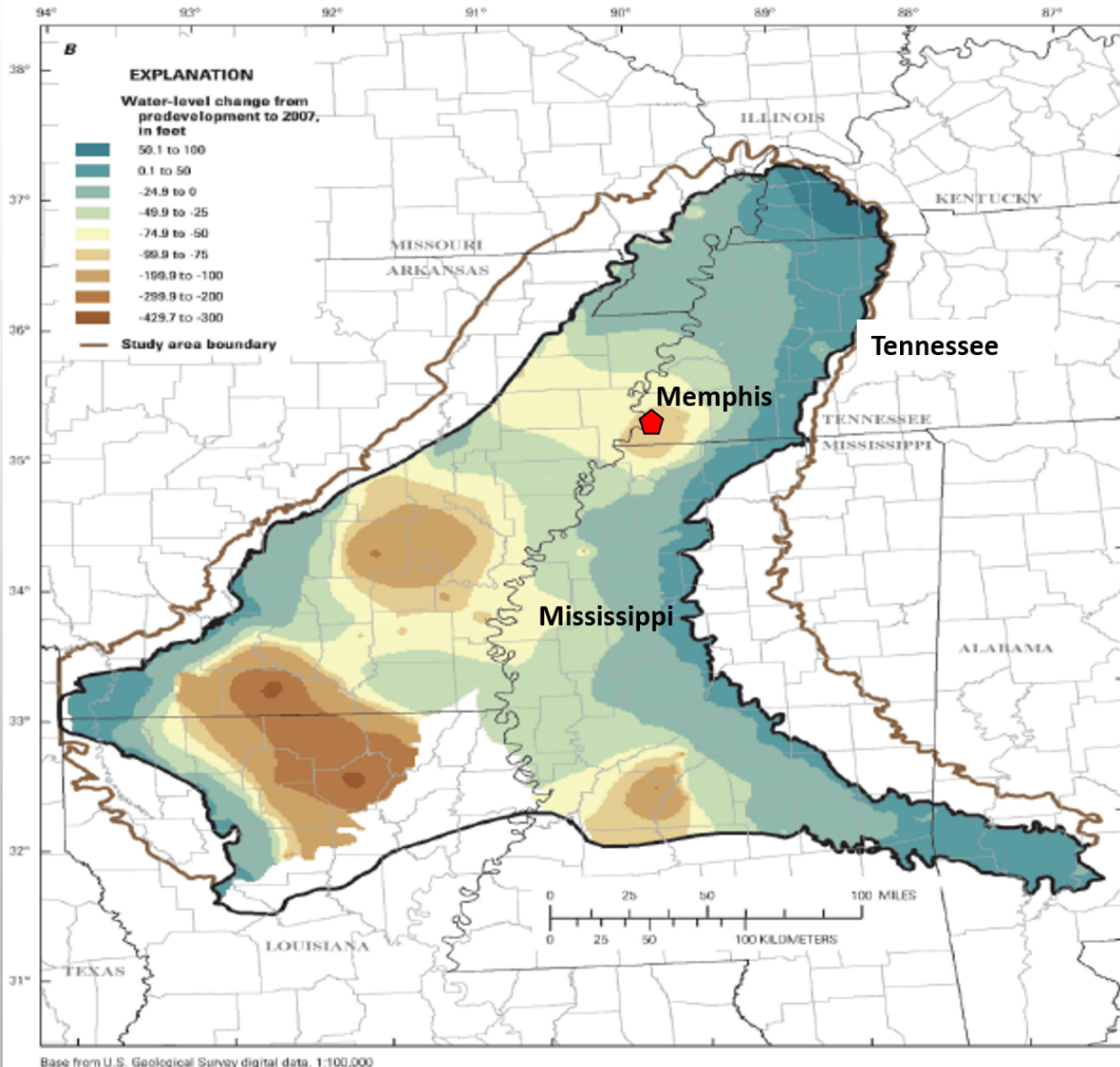


Discussing Water Rights, A Western Pastime

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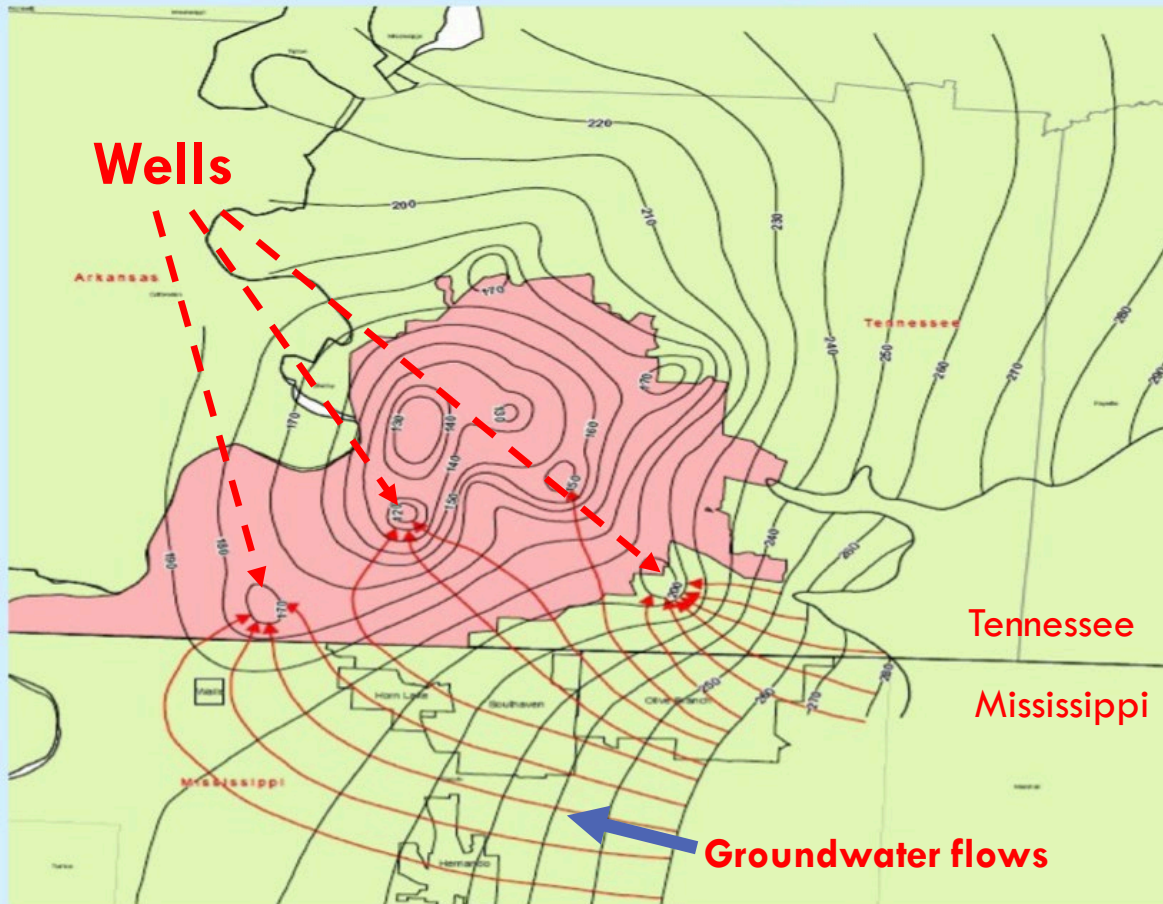
- CIRCLE THE WAGONS
- ASSERT WATER RIGHTS
- LITIGATE
- EXCLUDE THE HAVE-NOTS

MISS V. TEN (US SUPREME COURT)



- MISS:
 - MISS “OWNS” GROUNDWATER IN PLACE UNDERNEATH MISS
 - TENN HAS STOLEN MISS GROUNDWATER FOR DECADES AND OWES MISS \$61.5M
- TENN: CROSS-BORDER GROUNDWATER SHOULD BE SUBJECT TO “EQUITABLE APPORTIONMENT” DOCTRINE

MISS V. TEN (US SUPREME COURT)



[Cameron 2009]

SUPREME COURT

- EQUITABLE APPORTIONMENT APPLIES TO A TRANSBOUNDARY AQUIFER WHERE ONE STATE'S USE OF THAT AQUIFER AFFECTS ANOTHER STATE
- WHILE EACH STATE HAS FULL "JURISDICTION" OVER THE LANDS AND FORMATIONS CONTAINING WATER WITHIN ITS BORDERS, SUCH JURISDICTION DOES NOT CONFER "UNFETTERED OWNERSHIP OR CONTROL" OF FLOWING INTERSTATE WATERS

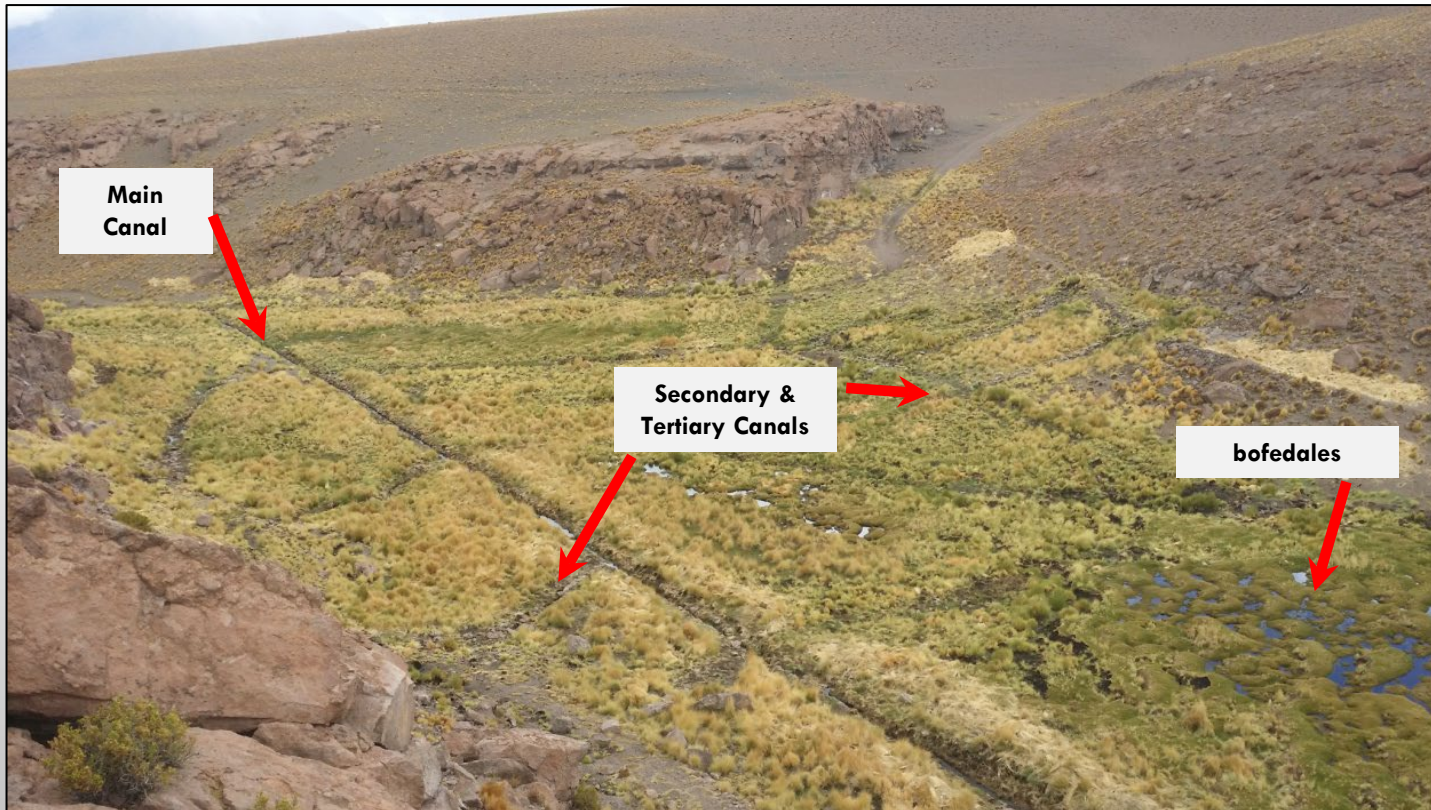
CHILE V. BOLIVIA (INT'L COURT OF JUSTICE)

LAS AGUAS EN DISPUTA

El Silala se origina en el departamento boliviano de Potosí y cruza la frontera internacional por el norte de Chile. En total tiene una extensión de 56 kms. desembocando en los ríos chilenos San Pedro y Loa, en Antofagasta.



CHILE V. BOLIVIA (INT'L COURT OF JUSTICE)



- BOLIVIA:
 - SILALA WOULD NOT FLOW TO CHILE IF IT HAD NOT BEEN CHANNELIZED
 - BOLIVIA “OWNS” THE WATER AND CHILE MUST PAY FOR IT
- CHILE:
 - SILALA FLOWED NATURALLY ACROSS BORDER PRIOR TO CHANNELIZATION
 - SILALA WATER SUBJECT TO EQUITABLE & REASONABLE UTILIZATION

CHILE V. BOLIVIA (INT'L COURT OF JUSTICE)



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LESSONS LEARNED



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- 1) CONFLICT/LITIGATION
 - EXPENSIVE
 - FOCUSED ON VALUE OF INDIVIDUAL RIGHTS THAN VALUE OF ENSURING WATER FOR PRESENT AND FUTURE USE
- 2) STATE BORDERS/PROPERTY BOUNDARIES MAKE HORRIBLE MANAGEMENT UNITS
- 3) COMPROMISE, COOPERATION, AND COLLABORATION (CCC) MORE LIKELY TO PROTECT LONG TERM WATER AVAILABILITY
- 4) PRIORITIZE WATER FOR PRESENT AND FUTURE **FOR ALL**



LESSONS LEARNED



- 5) SHARE AND EDUCATE: KNOWLEDGE IS THE LIFEBLOOD OF CCC AND SUSTAINABILITY
- 6) LEARN FROM OTHERS AND THINK OUTSIDE THE BOX
 - NEW SOURCES
 - NEW TECHNOLOGIES
 - NEW APPROACHES
 - EXAMPLE OF ISRAEL
 - MICRO-DRIP IRRIGATION
 - +90% MUNICIPAL WASTEWATER IS RECYCLED AND SOLD TO AGRICULTURE
 - 7 OCEAN DESAL PLANS AND DOZENS OF BRACKISH GROUNDWATER DESAL
 - WATER FOR ENERGY EXCHANGE WITH JORDAN
 - MUCH MORE

(ALSO SINGAPORE, AUSTRALIA, OTHERS)



CONCLUSION

- WATER CHALLENGES ARE BOTH LOCAL AND GLOBAL
- IN THE LONG RUN, COMPROMISE, COOPERATION, AND COLLABORATION WILL GET YOU MORE WATER
- LEARN AND SHARE EXPERIENCES LOCALLY AND GLOBALLY

THANK YOU!

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