

"Submarine Rivers": A contribution to the fight against Climate Change

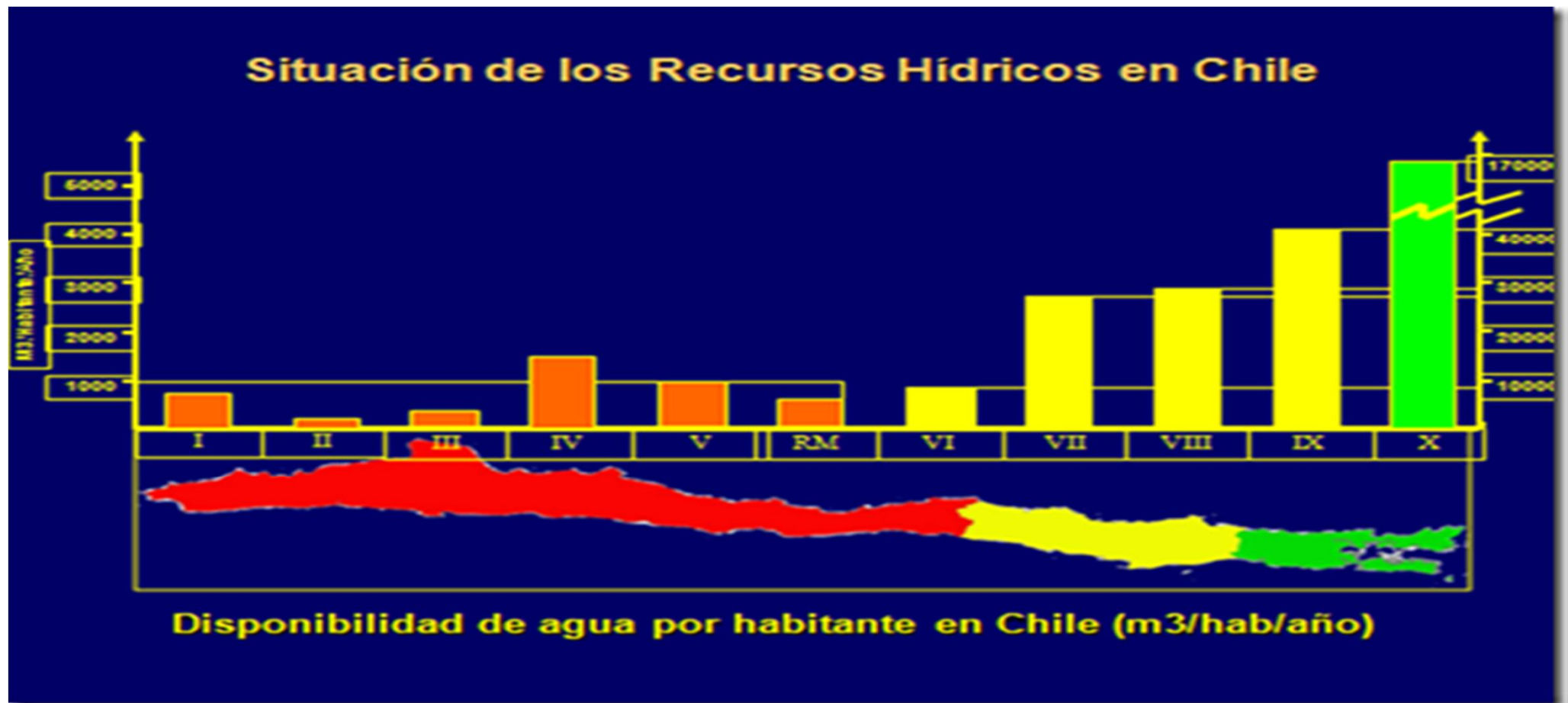
A case study: Chile

Felix Bogliolo

Founding Partner & Chairman Managing Committee

C O N F I D E N T I A L

Chile's hydric situation



C O N F I D E N T I A L

Issues at stake

- Bad service of water for > 2 Million inhabitants in the North
- > 50BN USD of future investments in mining jeopardized by the lack of water
- Squeeze out of small users of water
- Depletion of water tables used by natives
- Desertification progresses
- Worsening by the day due to Climate Change

C O N F I D E N T I A L

Traditional solutions don't work

- Desalination: low volumes, heavy energy consumption, high price
- Chile: not energy rich
- Old project of onshore canal too expensive due to mountainous relief
- Reuse: low volumes that can be used in the immediate surroundings

C O N F I D E N T I A L

Via Marina's novel solution

A
Q
U
A
T
A
C
A
M
A



- Our proprietary system submariver®
- Water intake in some southern river
- A submarine route along the Pacific coast
- Water deliveries in **≈10** northern points up to Peruvian border (>1500km)
- **Flow: ≈30m³/s**
- All users: urban, industrial, agriculture
- Energy consumption: <0.4kWh/m³
- All-in transportation cost: <0.5\$/m³

C O N F I D E N T I A L

Current study

- Offer and demand
- Submarine route
- Full adaptation to Chilean peculiarities: seismicity, bathymetry, ...
- CAPEX
- OPEX (in particular energy)
- All-in price
- Calendar
- Legal, environmental, technical, financial, ...

C O N F I D E N T I A L

Advantages of Submariver®

- Wide range of potential applications all around the world
 - Fresh water as well as “reused” water
- Direct consumption or recharge of water tables
 - Large quantities at an economical price even for long distances
- Good versatility: 15% over investment meets 50% demand increase
 - Transportation price (amortization included) allows agricultural uses beyond normal human consumption
- Fast implementation and construction
- Simple and sturdy, no need for an overqualified workforce
- No waste, no chemicals, no technological dependence
 - Low energy consumption hence more environmentally friendly
- Downstream issues manageable
- Fewer interlocutors involved
- Inert object on the sea bottom: ecologic niche
 - Wide acceptance among civil society

C O N F I D E N T I A L

Thank you for your attention

Time for discussion

Via Marina
5 cours Ferdinand de Lesseps 92500 Rueil-Malmaison
France
+33 1 40 91 93 00 – info@via-marina.com

C O N F I D E N T I A L