



Presentation from
**2016 World Water
Week in Stockholm**

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Role-playing how water markets improve food security and the environment

#gotwater | #WWWeek

30 August 2016

Water market basics

1. Why do we need water markets?
2. Tool that depends on good governance
3. Change where water is used in a way that increases its value

Water market basics

- **Who takes part in water markets?**
Parties that can hold water rights
- **Voluntary transactions** between willing buyers and sellers
- **What's actually traded?** Often not water itself

Considerations

Reflect geophysical realities

Prevent third-party impacts

Monitoring and enforcement

Complying with regulations

Confidentiality and trust

...and more

Example

2.000 SEK/ML



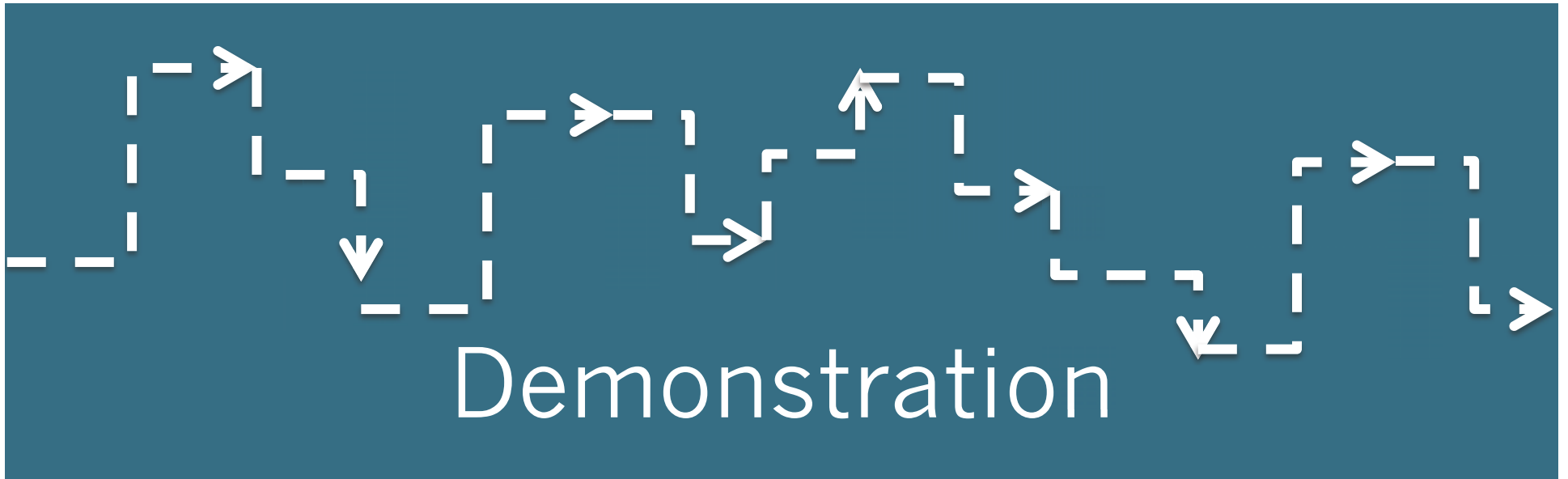
50.000 SEK/ML





Salinas Valley, California

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Managing Director, Ecosystems



Trading mechanisms

Bilateral contracts

Bulletin boards

Auctions

Smart markets

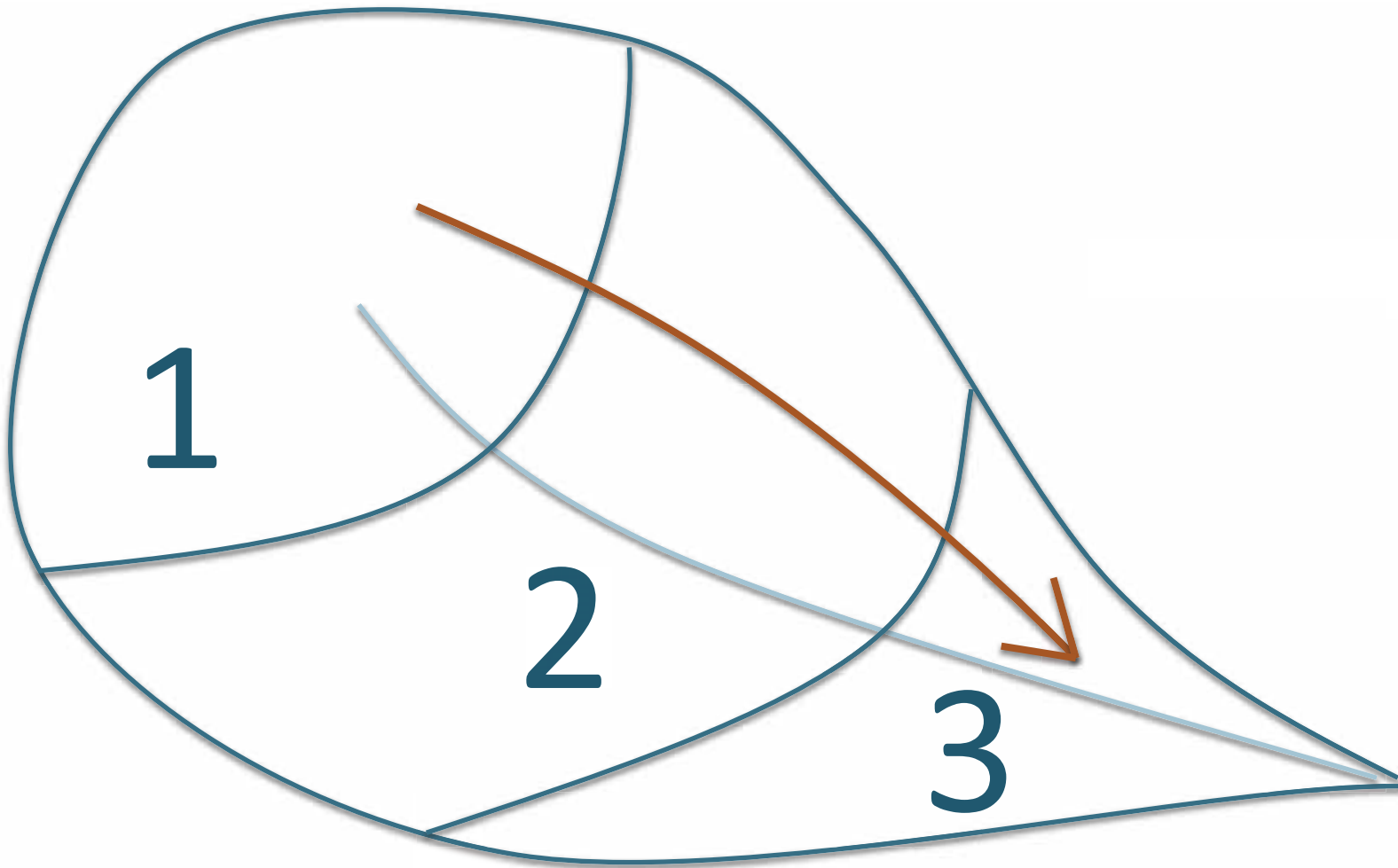
Let's play!

Each person will get a card, containing:

- Buyer/ seller designation
- Value of water
- Amount of water
- Flow zone

→ **Basic** trading rules

Sellers may only trade with buyers downstream!



Bilateral contracts

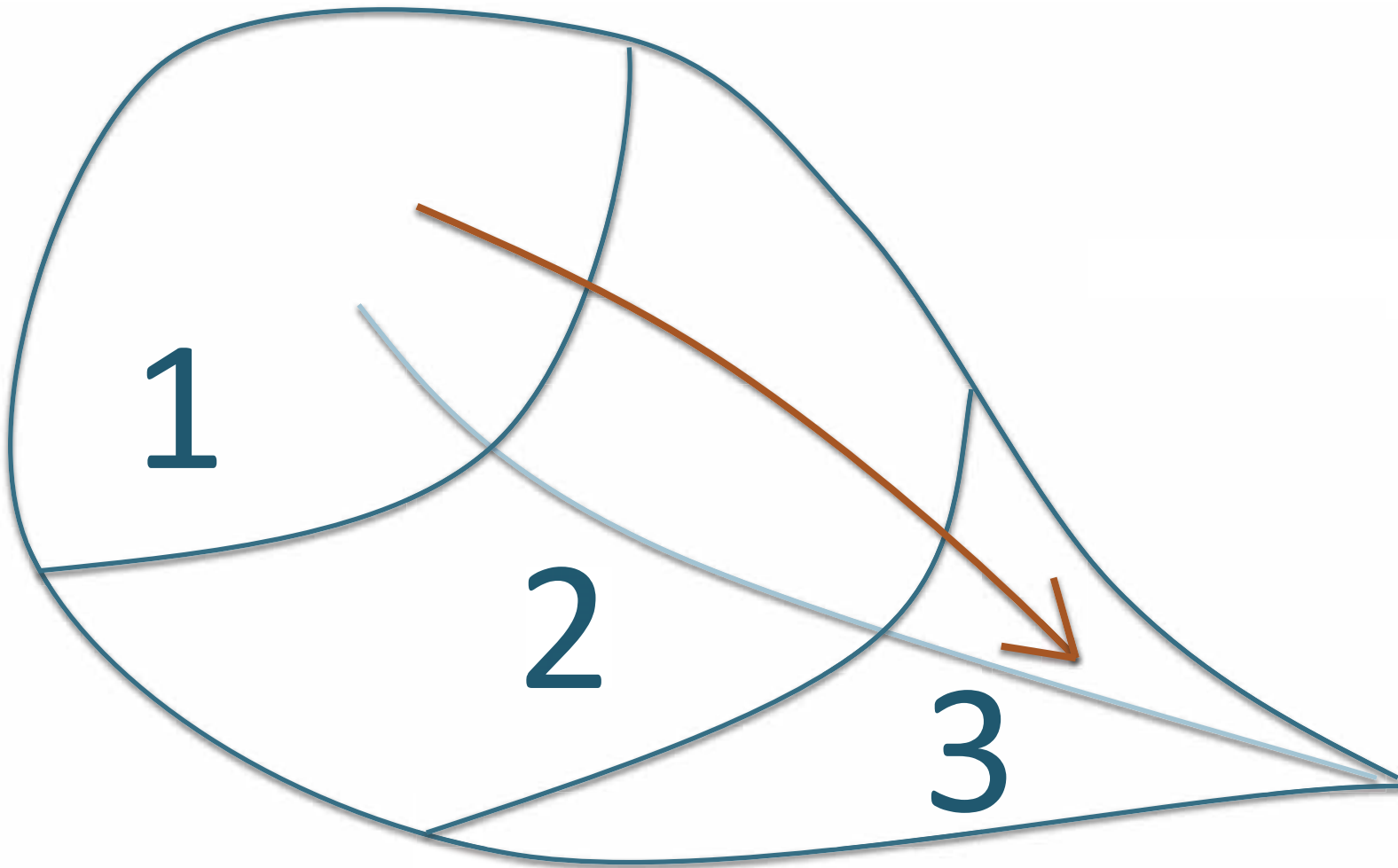
Who runs it?

No one. Highly decentralized.

How?

Talk to your neighbors! Can you find someone to trade with?

Sellers may only trade with
buyers downstream!



Bilateral contracts

Examples?

Most markets: Many places within the Western USA (California, Arizona, Nebraska, Colorado), Oman, China, Pakistan, Chile, Mexico...

Bulletin boards

Who runs it?

The regulator, a broker, or third party.
Bulletin boards can be electronic or physical.

How?

Sellers list their offers.

Buyers, can you find a match?

Bulletin boards

Examples?

Australia, Texas, multiple irrigation districts in the USA...

Auctions & reverse auctions

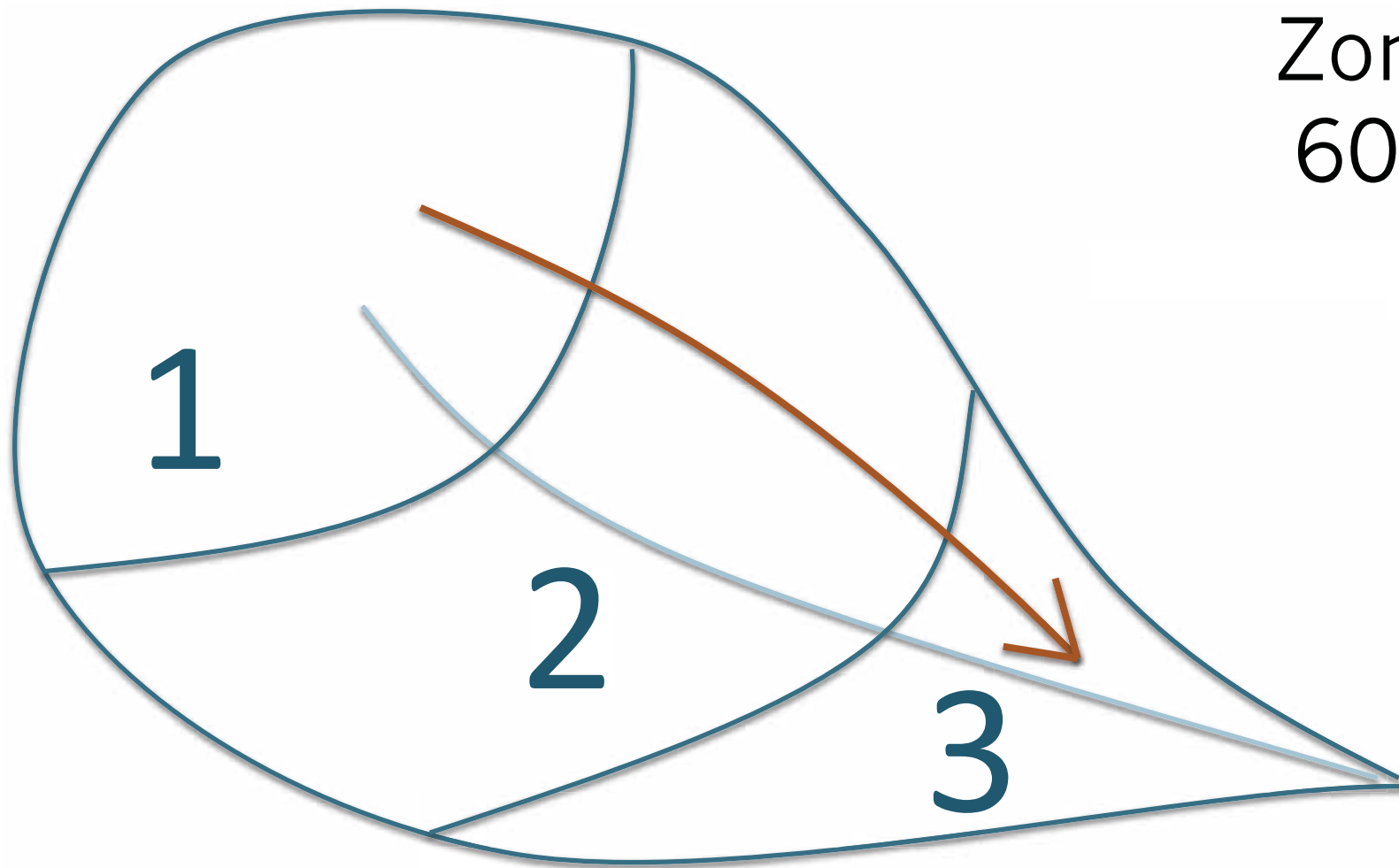
Who runs it?

A regulator or third party. Typically favors one side of the market.

How?

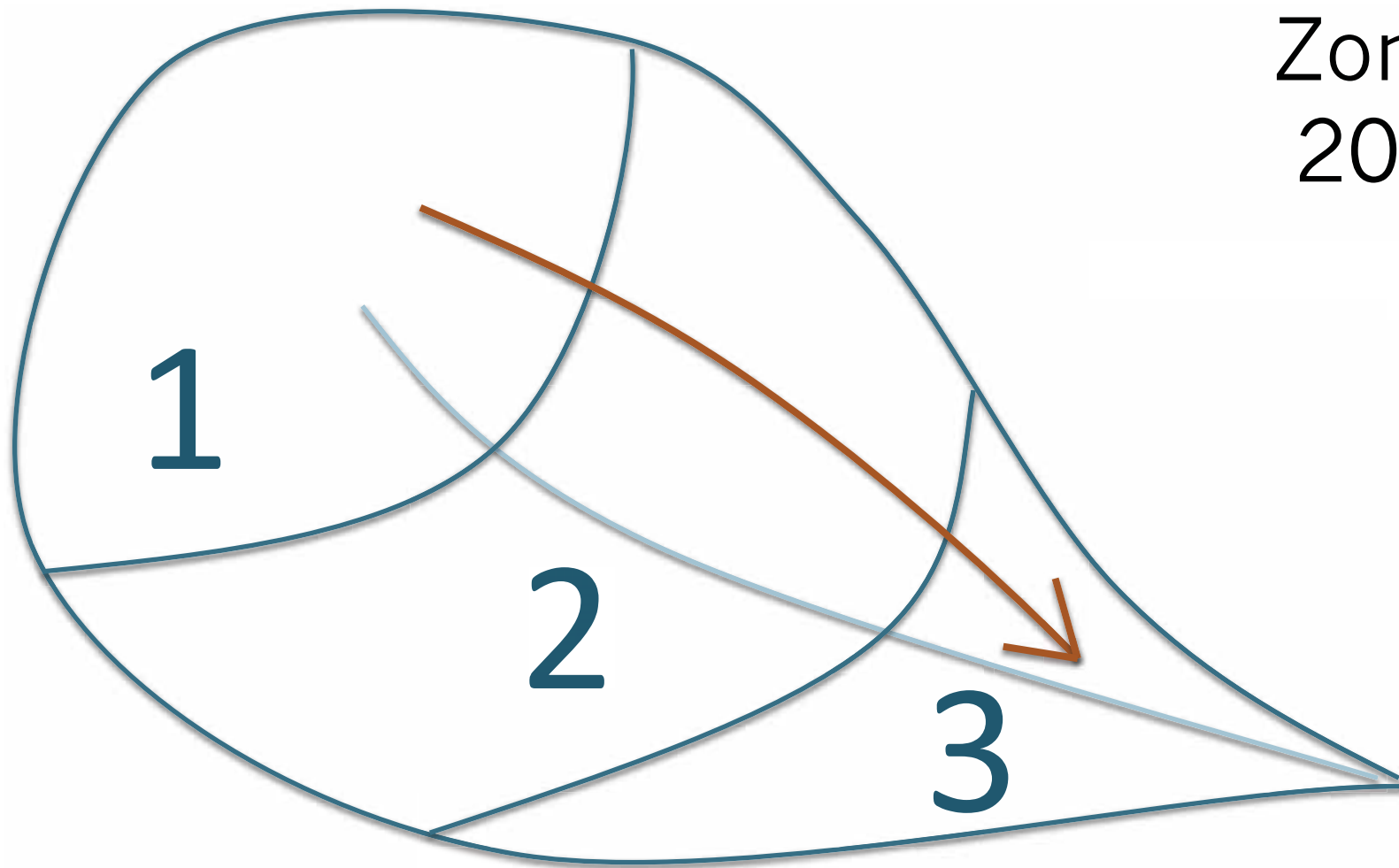
Each seller (buyer) auctions off their water to the highest (lowest) eligible bidder.

Seller #7



Zone 1
60 ML

Buyer #3



Zone 2
20 ML

Auctions & reverse auctions

Examples?

Western USA, India...

Smart markets

Who runs it?

Third party or regulator.

How?

Each buyer and seller anonymously places confidential bids and offers on the market.

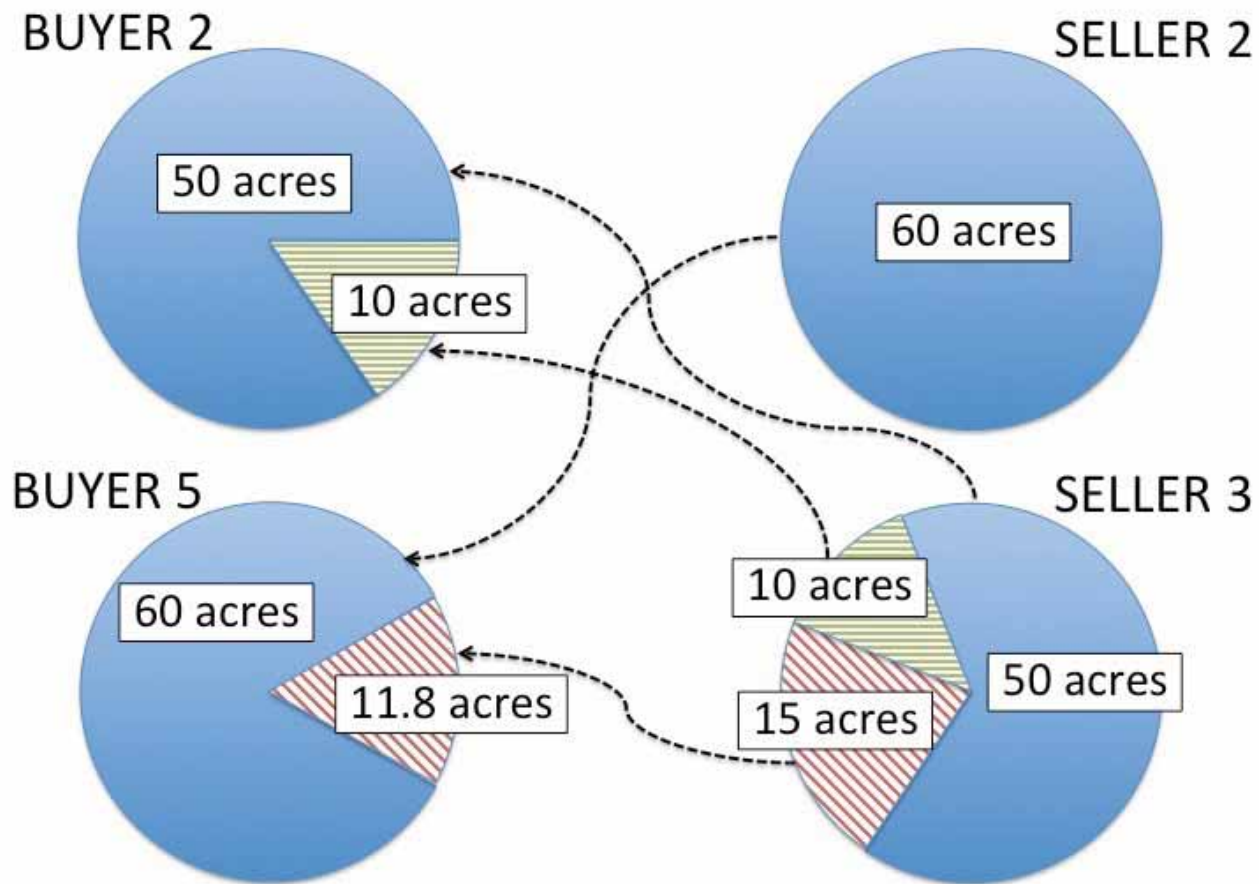
These are aggregated to find the best set of matches within the regulations.

Smart markets

Examples?

Western USA (Nebraska, Washington State)

Smart markets



Summary

In trading water rights, participants have trouble:

- Identifying an interested party
- Negotiating a price
- Obtaining regulatory compliance
- Maintaining **confidentiality** and **trust**

Summary

In trading water rights, regulators have trouble:

- Acting as “matchmaker”
- Manually checking rules
- Verifying compliance
- Ensuring neutrality

Summary

- Water market structures can address some or all of the challenges of trading
- Each structure has different outcomes in efficiency and equity

An aerial photograph of a desert canyon at sunset. A river winds through the canyon, reflecting the vibrant orange and blue colors of the sky. A large, prominent rock formation stands in the center of the river. The text "THANK YOU! QUESTIONS?" is overlaid in white serif font on a dark semi-transparent background.

THANK YOU! QUESTIONS?

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