



Charles Sturt  
University

# Getting technical solutions right!

KEYNOTE PRESENTATION TO THE 2<sup>ND</sup> LOWER MEKONG  
FISH PASSAGE CONFERENCE

PROF LEE BAUMGARTNER  
GULBALI INSTITUTE; CHARLES STURT UNIVERSITY



# Rivers sustain life

Rivers sustain life, providing food, water, and livelihoods for millions. But poorly managed development is disrupting this balance, threatening both ecosystems and communities.

Ms Em Ven



Food

Income

Bartering

Health

Cultural

Social

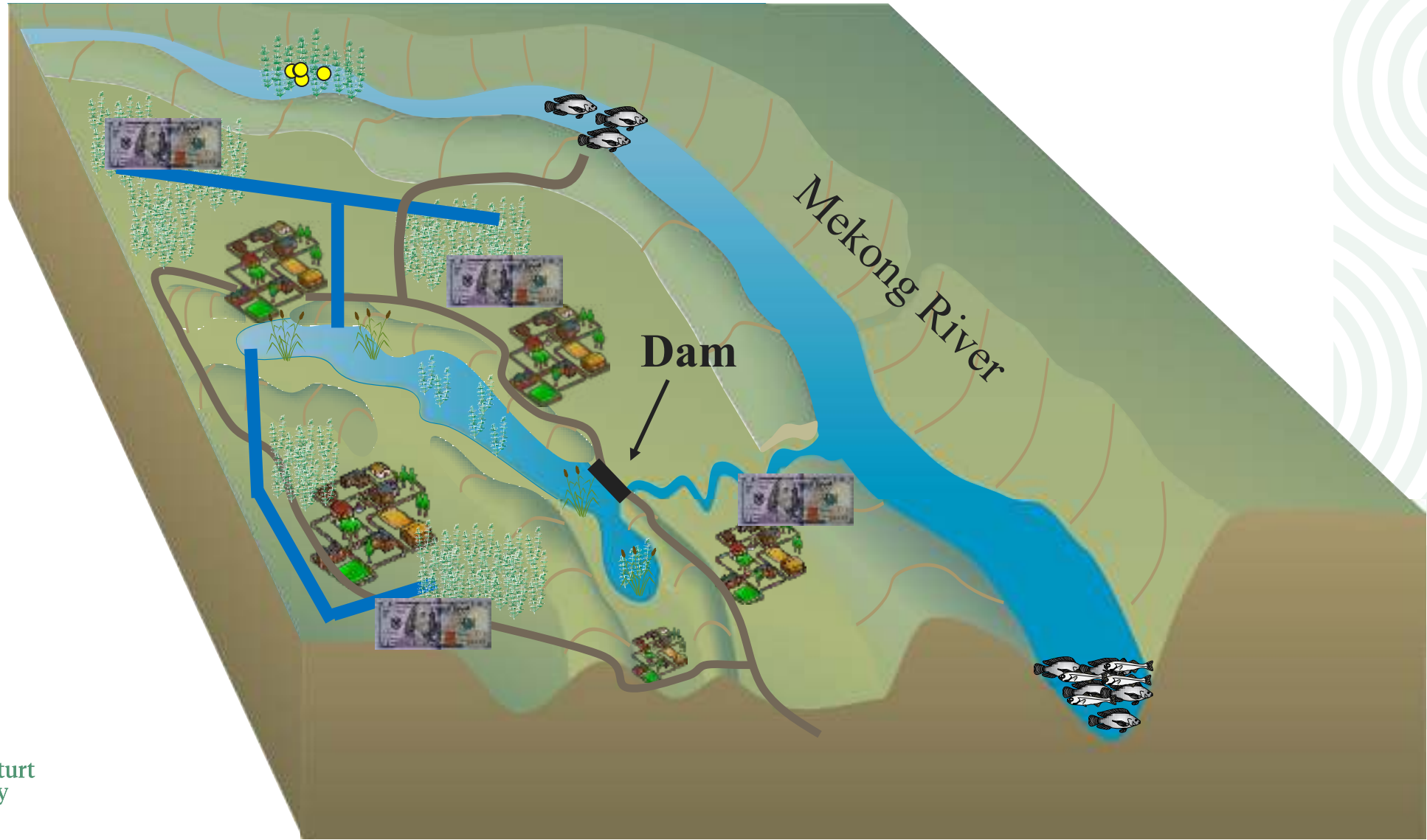


## Pre Dam – What is happening?

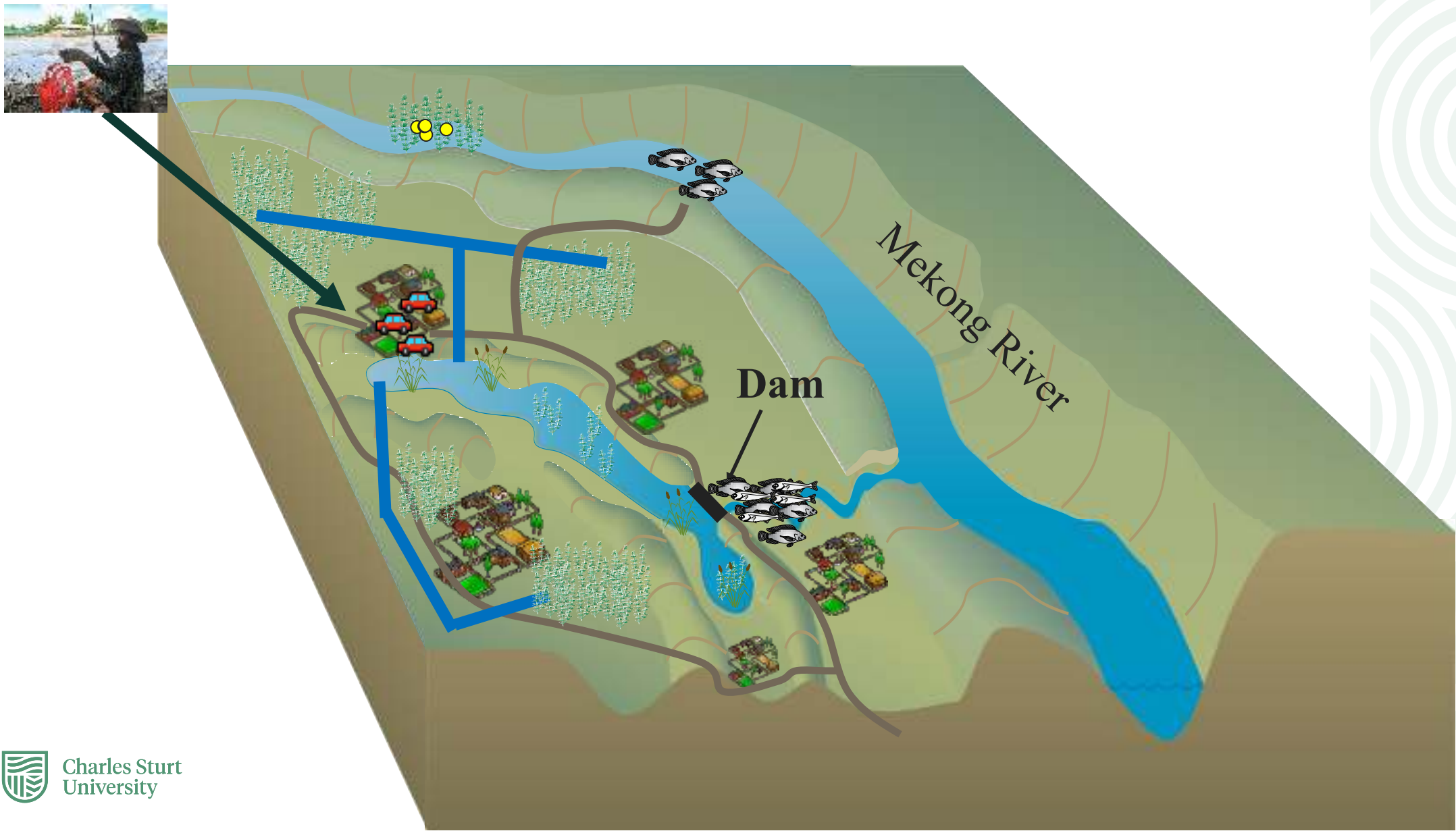




Lets build a dam.....for shared prosperity!! \$\$



Now it gets complicated.....





# The Ripple Effect on Livelihoods

Fewer fish mean reduced nutrition and income for vulnerable populations. Development for one group (irrigation) has unintended consequences for another (fishers).





# Fishways: Bringing back the Balance

Proven interventions like fishways can restore fish populations without compromising development. Win-Win outcomes. Without these interventions, river development will continue to harm fish and people alike.



# Implement a fish passage project.....





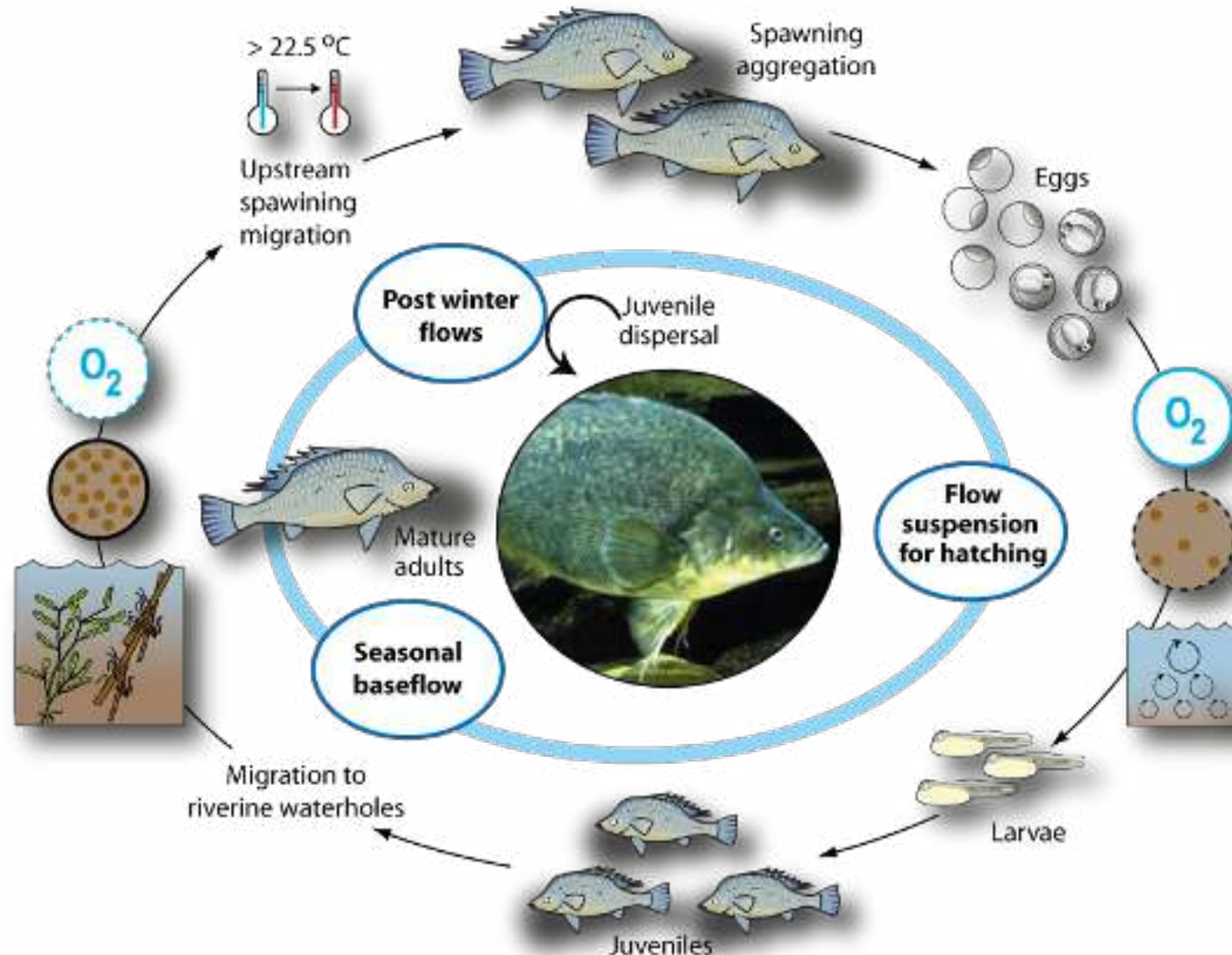
# Fish passage is not easy.....

A perfectly designed fish passage restoration project is like a work of art. Very intricate. Very detailed. All aspects considered and properly put together. Everyone benefits!



# Why was this solution so good?.....

It had a great design team backed up by strong data. It was outcome-centric and not optimised to constructability.





# Fish passage is not easy.....

A poorly designed fish passage project is no better than a dam!



# Why was this so bad?.....

**It had a single designer, from a single discipline and was based on no data at all. The focus was completely on constructability.**





# A good team is key to success

An engineer might learn a lot of biology, and a biologist might learn a lot of engineering – but in the end both are needed to deliver an effective fish passage restoration project.



The team must know the difference between a good and bad fish passage project

This is not negotiable!





# Education is the key - The FishEd initiative

*Give someone a fish, and you feed them for a day. Teach someone to fish, and you feed them for a lifetime.*

