

The background of the slide is a photograph of a person from behind, wearing a dark cap and a patterned shirt, sitting in a boat on a river. The person is holding a net, and the water is calm, reflecting the surrounding greenery. The sky is clear and blue.

## Preparing a Plan to “Restore” the Konawaruk:

A test case to estimate the real cost of mining  
Aisha Williams  
WWF Guyana

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Mining Week 2015:

Conference: Science & engineering solutions for safety,  
security & success in mining

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# Context – Guyana's development

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Guyana is on a green development path

Payment for ecosystem services– e.g.

Guyana – Norway agreement:

Payments based on deforestation & green development

Largely natural resource based economy\*

**Gold mining sector** -an important element

\*Gross Domestic Product in Guyana was worth 3.23 billion US dollars in 2014







Do something about it...

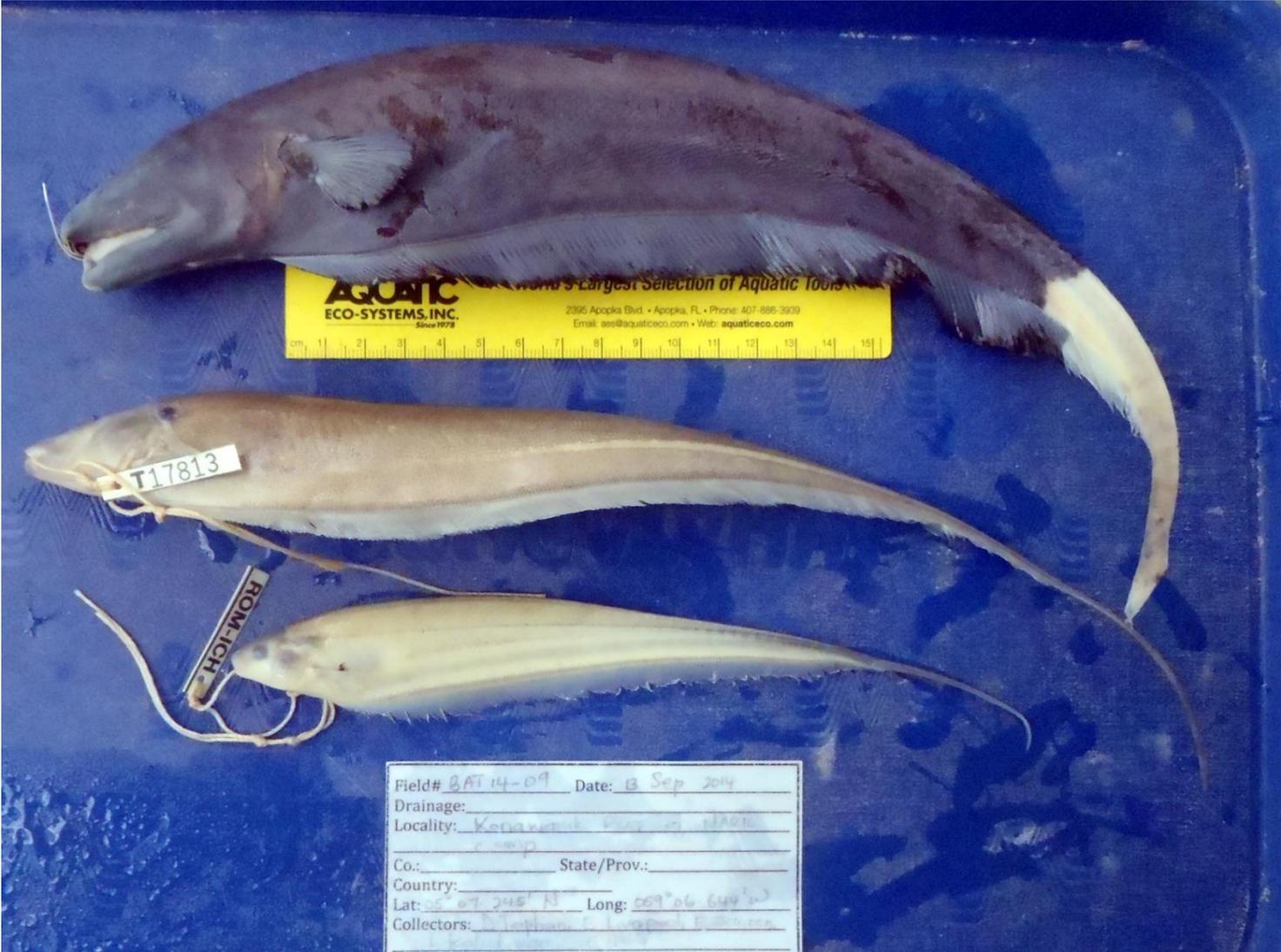


**GDF assisted us in getting to Blackwater creek quickly**



**Several species of fishes survive in these clear headwater streams**

We found Knifefish (Logologos) at all sites but overall the fish diversity is reduced





*Sylviocarcinus pictus* (Photo by C.Osborne)



***Dragon flies: Oligoclada sp.***  
(Photo by: N. von Ellenrieder)

Ferns: 30 (PTERYDOPHYTE)



Flowering Plants: 479 (ANGIOSPERMS)



Photos by: Santos Miguel Nino



Waterfall on Konawaruk has very turbid, muddy water – it's a barrier to upstream movement of fishes

**We are exploring options for Konawaruk river restoration:**  
*structural and functional return of a degraded riverine ecosystem*



**Will the river  
recover or will  
aesthetics  
improve ?**



# What would it “cost” and cost?

- **Data**
- **Expertise**
- **Financing**
- **The will**



**So is it feasible to restore these heavily impacted rivers?  
Are we prepared to pay the real cost for restoration?**



Photo by: Andrew Snyder

**What is more  
feasible to prevent  
or to restore “dead”  
rivers?**







**Konawaruk Project Partners:  
EPA-Guyana, GGMC,  
DoNRE Land Reclamation Project, WWF**

**thank you**

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