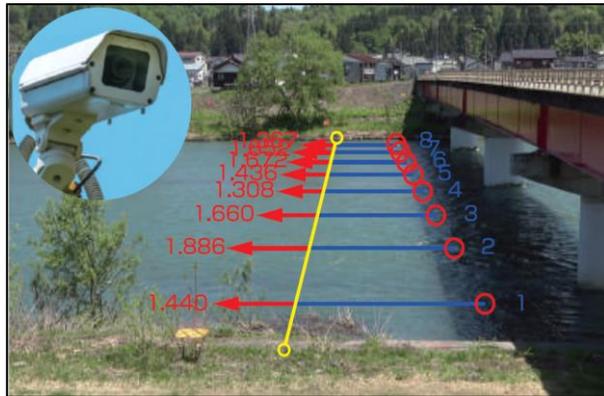




# JCCI International Seminar 2024



## Preparing for Flood Risks Associated with Climate Change; Video-based River Flow Meter, *Hydro-STIV*



Makiko Iguchi

Hydro Technology Institute Co., Ltd., Japan

# Problems



**Billions of People  
Face **Flood Risk**  
Worldwide**

**Discharge Data is  
Essential to Reduce  
Flood Risk**



# How to Measure Discharge?



**Current Meter**



**ADCP**

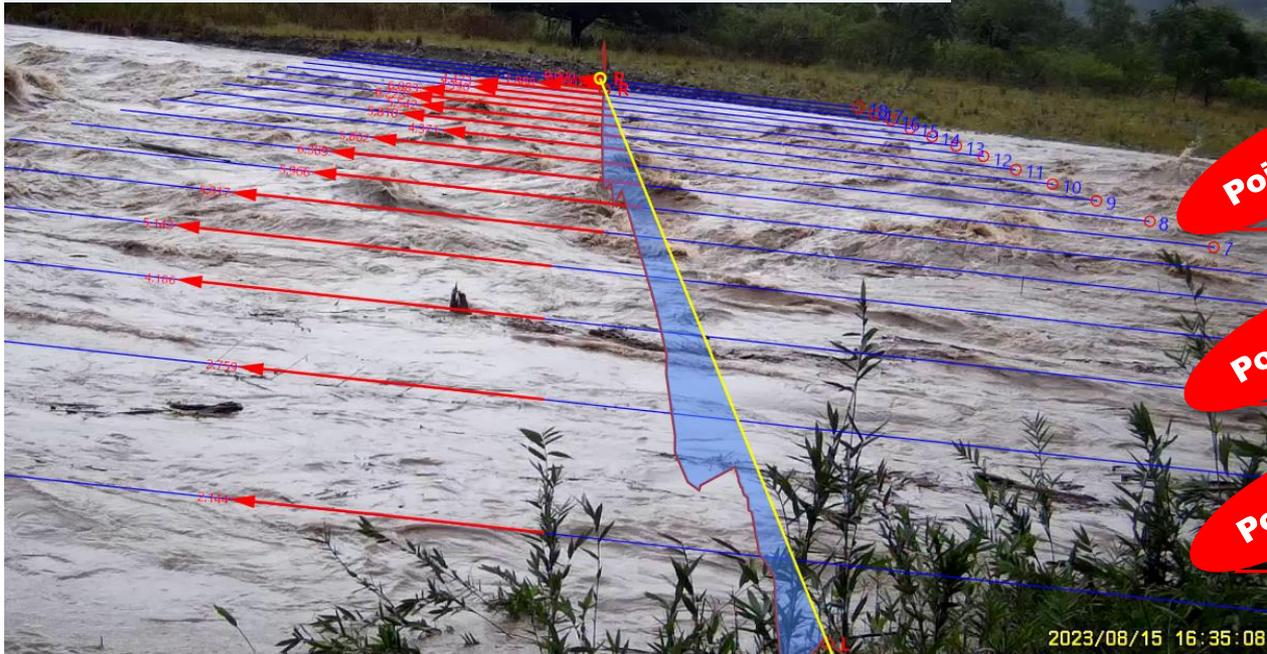


**CANNOT BE USED during FLOOD!**

# Solution

## Hydro-STIV

### Flow Velocity Measurement System Using Video Images



Point 1

**Safety**

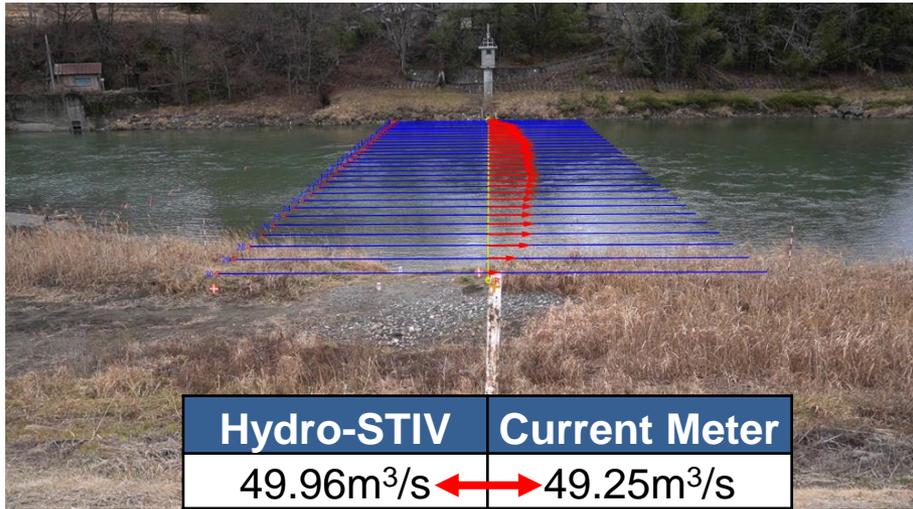
Point 2

**High Accuracy**

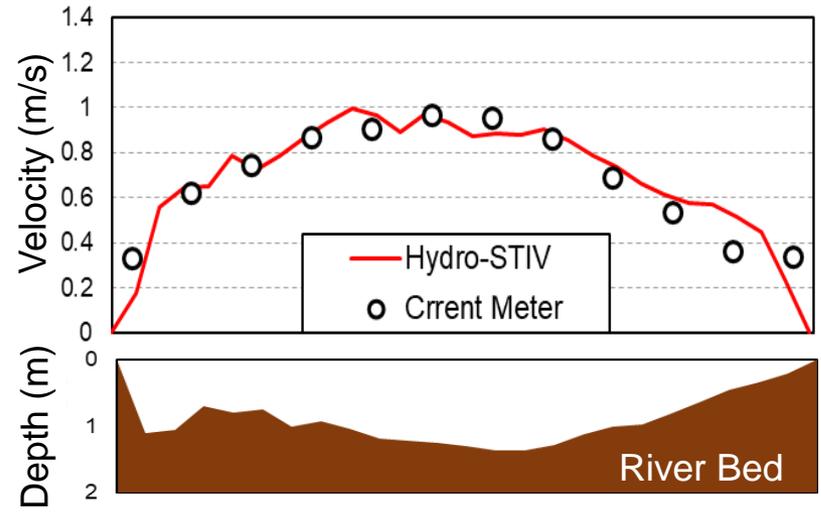
Point 3

**Versatile**

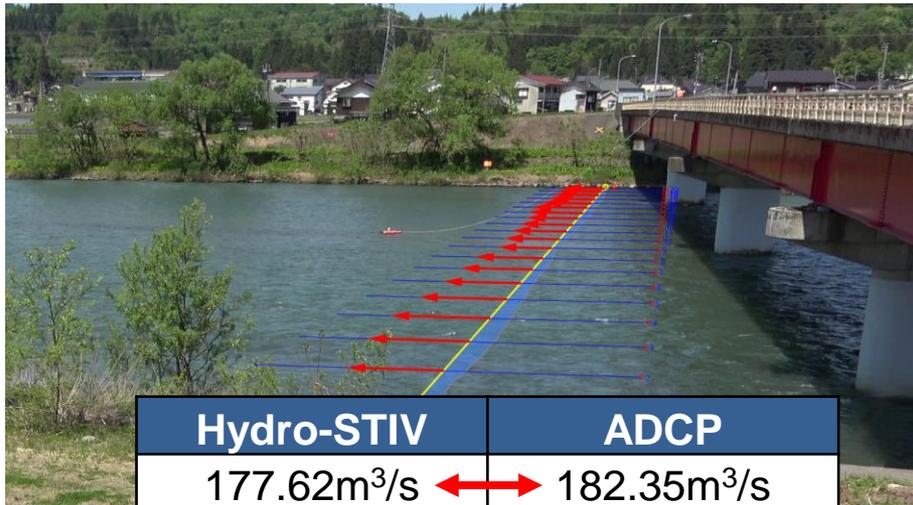
# High Accuracy



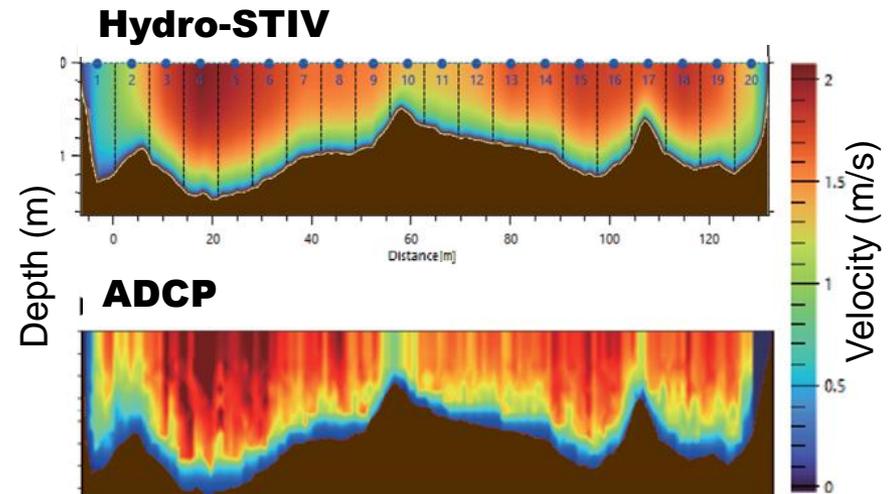
**Difference 1.4%**



**[ Hydro-STIV vs Current Meter ]**



**Difference 2.6%**

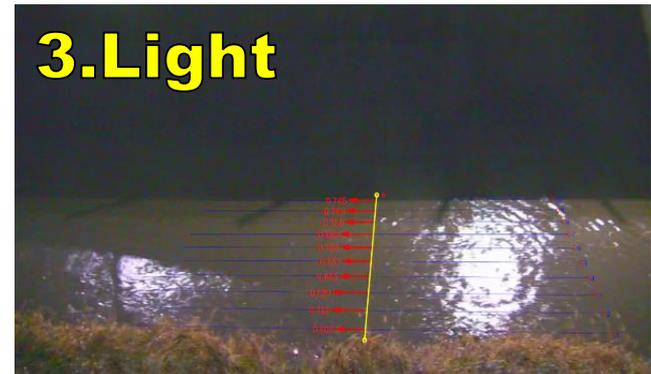
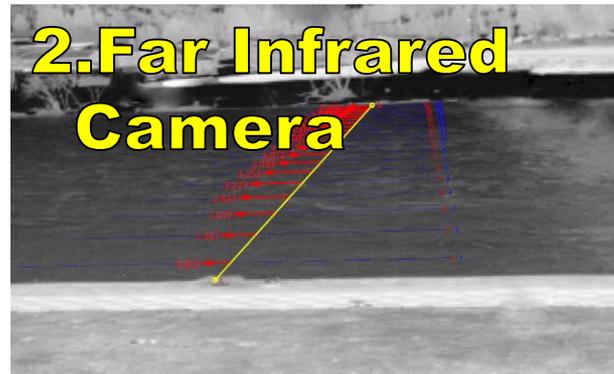


**[ Hydro-STIV vs ADCP ]**

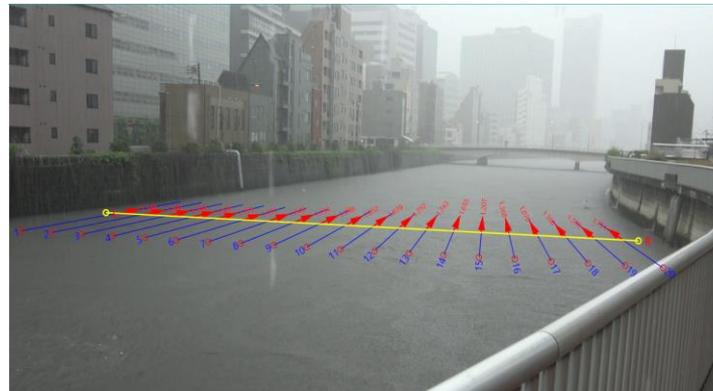
# Versatile(1)

## Available for a variety of situations

At Night?



During Heavy Rain?

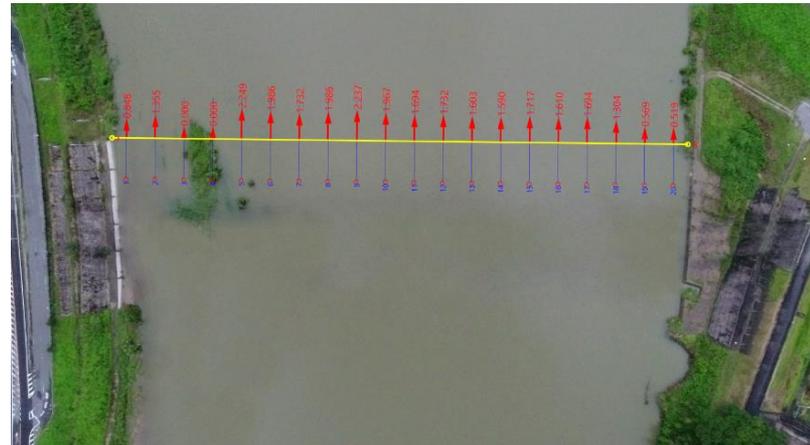




Use Dron Camera

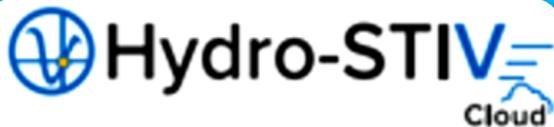


Mountainous Area

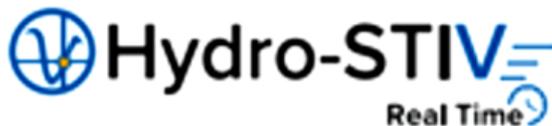
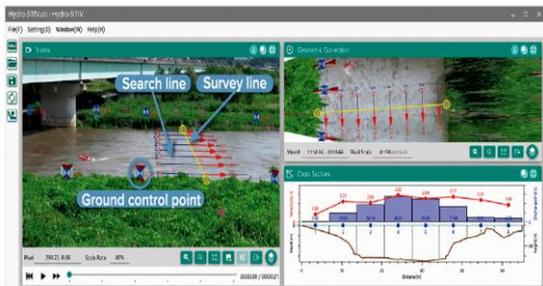


Wide River

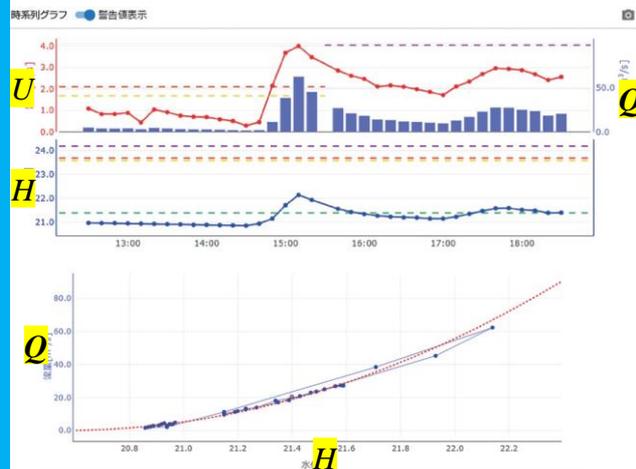
# Application of Hydro-STIV



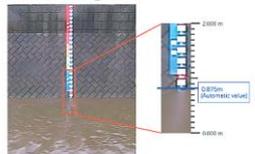
GCPs are required.  
Fixed river monitoring camera  
can be used.



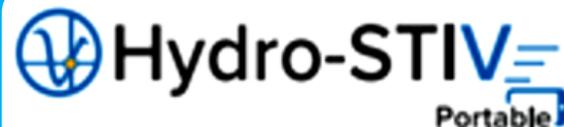
Discharge hydrograph can be  
Created in real time.



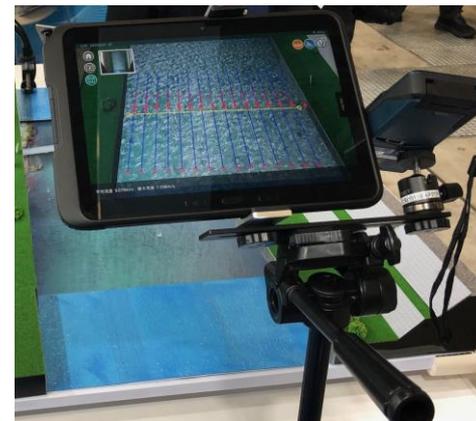
▶ When using a water meter



▶ When using a vertical structure



No GCP is required.  
Immediate measurement is  
possible at the site.



# Already Adopted in Many Countries

## Country

Australia, Canada, Chile, Finland, France,  
Iceland, Korea, New Zealand, U.K.,  
USA, Sweden, Vietnam

## Organization

Government agencies  
Research institutions  
Private companies  
Educational institutions  
Municipalities



---

Hydro Technology Institute Co.,Ltd.