2019/10/8

ASEAN-Japan ASCN High Level Meeting WS1 (3L Water Level Gauge Association)

∼Flood Risk Watch Project for Life-Saving Using 3L Water Level Gauge~

Background (1/2)



In recent years, many flood disasters have occurred in Japan.

In these flood disasters, we need **more** water level information in rivers for the reason of **evacuation and flood control**.

However, installation of water level station had not progressed because of the high initial installation and maintenance cost, especially in medium and small size rivers.

Background (2/2)



3L Water Level Gauge



- 3L means "Low Cost", "Long Life", "Localized". In addition, we can save power by mode switching. Therefore, 3L water level Gauge can measure water level by almost only using solar power (No commercial power is required).
- The characteristics of 3L Water Level Gauge is not only "3L" but also "information and communication network". We can use "Cloud System". So, all local residents can receive the water level in a river with their smartphone and low price on real-time.

For Total River Information Network



- As you can see, we have been measuring at only a few points using the existing water level gauge because of quite high price. However, "3L water level gauge" is low price.
- Therefore, "3L water level gauge" can be used for various purposes. Above all, we can measure the river water level <u>linearly</u> by using "3L water level gauge".

Real-Time Data Required for User-Oriented Project

Real-time and wide-range range rainfall data CCTV camera Lateral profile of the current river level, Current and past river Live image from CCTV camera, showing showing the risk stage of flooding the condition of river and flood plain levels, showing the trend of river level rise (Image) (Image) (Image) 国土交通者 川の防災情報 JST: 05 Oct 2 English TRIAL 10:04 English THA 10:04 English **Probable Inundation Area Map** layer is displayed $\odot \propto$ Nakagawa lakadaw Hide explanation 100m evee crown -5.35r Levee crown 0m

Real-time and on-site water level data

Slide to show the land elevation in the area

- \succ This figure shows an example of each local resident's smart phone.
- By using the cloud system, you can check not only the water level but also rainfall, CCTV \succ image and inundation area map (or hazard area map) with your smartphone and low price on real-time.

Thank you for your time and attention.

