

W. TAKEUCHI LAB.

Monitoring global environmental changes and international collaborations



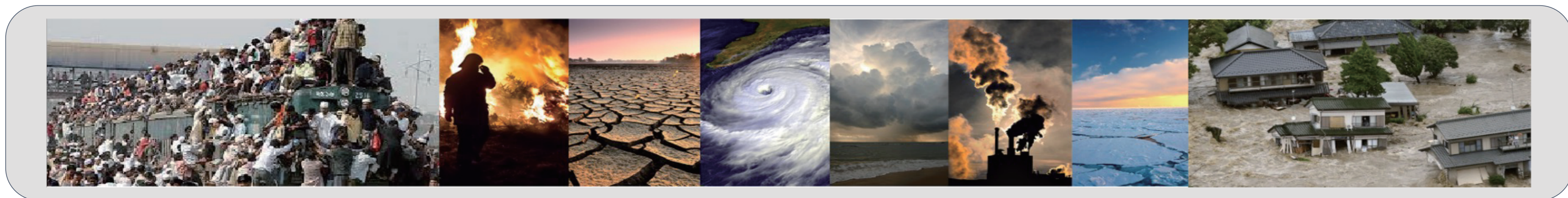
Department of Human and Social Systems

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Remote Sensing of Environment and Disaster

https://wtlab.iis.u-tokyo.ac.jp/en/index_e.html

Developing remote sensing based methodologies for measuring anthropogenic environmental changes



Solution oriented research and technology collaborated with Asian countries



<p>PM2.5 concentrations measured in urban and mountain environments</p>	<p>Three-Dimensional Air Pollution Characterization</p>	<p>Field sensors + Satellite image integration</p>	<p>Methane (CH₄) emission monitoring from rice paddies</p>
<p>SAR Image Acquisition Subsidence estimation Building damage estimation</p>	<p>Infrastructure health monitoring & damage assessment</p>	<p>6 meter 10 meter 25 meter Performance of canal detection from PALSAR-2 at different spatial resolutions</p>	<p>Environmental restoration in Indonesian peatland</p>
<p>Japan-Ground Motion Service Ground deformation in Myanmar earthquake</p>	<p>Ground deformation detection by SAR</p>	<p>"GanoStage" Smartphone Application Disease detection by App. Climate vulnerability map</p>	<p>Oil palm plantations disease & climate vulnerability</p>
<p>Original Data Proposed Method Imputation and Correction methods</p>	<p>Data enhancement for nighttime light imagery</p>	<p>Human-bear conflict risk map</p>	<p>Human-wildlife conflicts and wildlife conservation</p>
<p>Coral risk map</p>	<p>Coral vulnerability and relevant factors</p>	<p>3D model of university campus</p>	<p>Campus digital twin for Green Infrastructure(GI) management</p>
<p>Direct sun hours 3D simulation of Roppongi Hills (May)</p>	<p>Data-driven insights for sustainability of urban green infrastructure</p>	<p>GNSS velocity to ITRF2014 and Sundaland block</p>	<p>Crustal deformation analysis using GNSS CORS data</p>