Towards a Global ~~Federated~~ Framework For Open Science Cloud

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LOGO

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Taiwan Typhoon Simulation

updates

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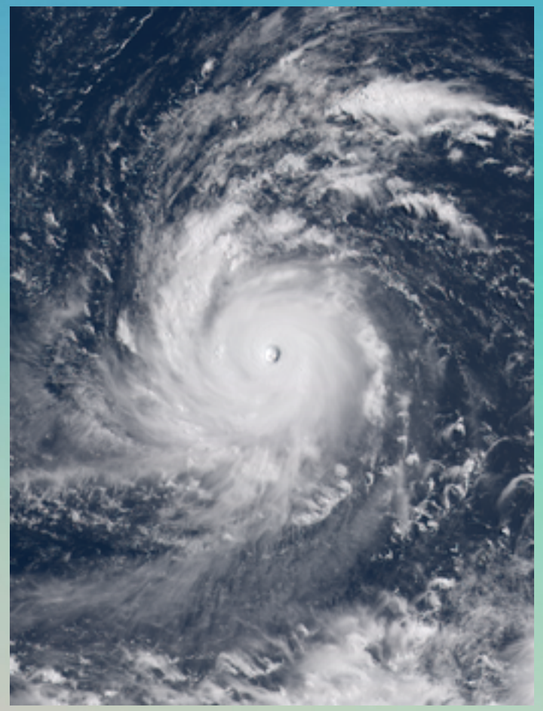
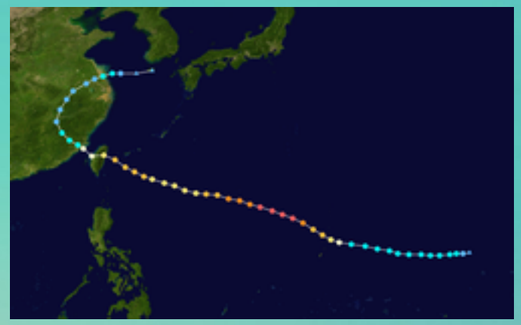
Taiwan Typhoon Simulation

Past Typhoon Simulation of Typhoon Soudelor

Present Typhoons simulations





Typhoon Soudelor was a catagery five typhoon in 2015. It was formed on 29 July 2015 and dissipiated on 12 August 2015

Areas affected
Mariana Islands, Japan, Philippines, Taiwan, China, South Korea, Japan

Typhoon Souledor Simulation

WRF-4DVAR SIMULATION

This simulation is on going

ACADEMIA SINICA GRID COMPUTING CENTRE (ASGC)

Data is locally collected

Doppler Radar Data is used,

Is Satellite Radiation Data available locally?

Data from China Meteorological Adminstration

we can use MWHS FY3A-FY-3B which has 15 km resolution

We need to determine by how much the accuracy is improved

Typhoon Souledor Simulation

OPENCOASTS

1

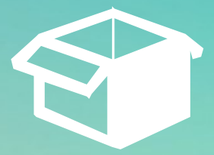
FORECASTS

48 hour forecasts are being performed daily in OPENCoastS since July 5. Results indicate that the model is stable, without any signs of numerical problems.

2

COMPARISON

A comparison between modeled and measured sea surface elevations indicates that the accuracy is within expectations, but there is room for improvement



3

IMPROVEMENT

Data required for improvement (bathymetry, topography, real-time tide gauge data),

4

IMPLEMENTATION

implementation of SENTINEL2 imagery in OPENCoastS

5

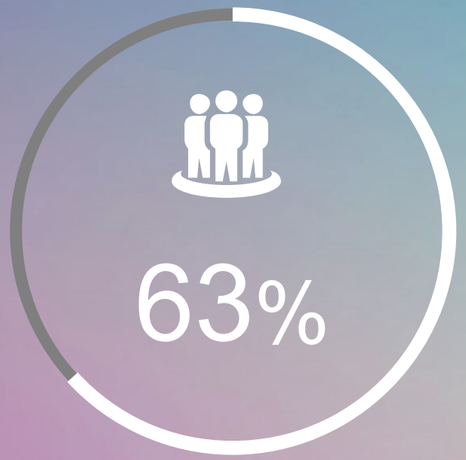
Data Resources

From China, Data resources were provided from China Meteorological Administration and CASEarth but the required Atmospheric Parameters were not available

SMART CITY

SHENZHEN

SMART CITY



Isolated Servers

Shenzhen smart city simulation software is currently only available on Isolated servers

Porting

Porting the smart city software from isolated servers to CSTCloud is facing a number of technichal issues

Atmospheric Parameters

A request has been made to derive the Atmospheric Parameters using the smart city software along with SENTINEL 2 imagery

PRECISION MEDICINE

The main issue with Precision Medicine is th issue of Ethics. There should be global guidliness and regulations on ethics to facilitate data sharing and data processing. This matter should be referred to higher bodies

NEXT STEPS

GOING FOREWORD

NEXT STEPS

Typhoon Souledor was simulated and was used for calibration

Past Taiwan Typhoon Simulation

Current Taiwan Typhoon

Using both WRF-4DVAR and OpenCoasts , we try to simulate current typhoons

SMART CITY

Simulate Storm surge for smart city using OpenCoasts

LAUNCH Precision Medicine

global ethics guidelines and regulations for precision medicine

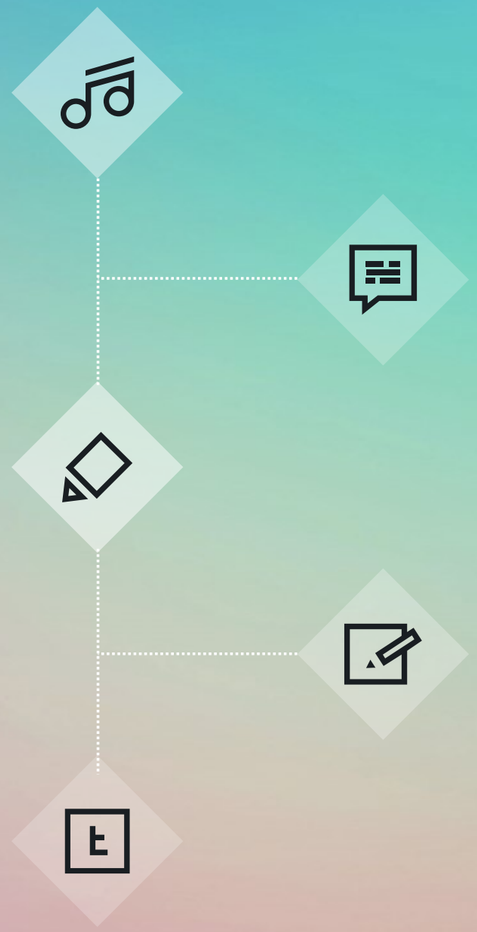
SUSTAINABILITY

MAJOR DEVELOPMENTS

SUSTAINABILITY

DEVELOPMENTS

GOSC is currently being addressed on EGI Symposium work shop in November 2020, on CNIC-CAS symposium in May 2021 in Beijing and on ITU Study Group Meeting in Geneva in October 2020



USER COMMUNITY

GOSC has now acquired the status of a major platform that can deliver services. A large user community and stakeholders will also be participating in the near future. There is funding and standards cordination activities in 2021

THANK YOU