Mangrove Mapping

Grp 8

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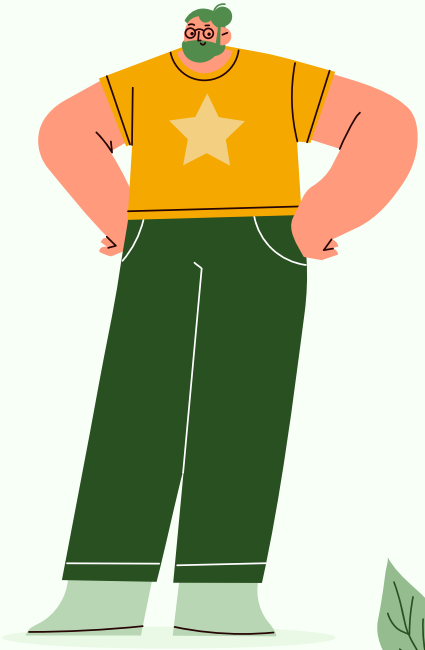
01

Background

why are mangroves important?



Terrestrial forest
Inland recharge affected
Increased salinity
Direct tidal influence
Tidal range
Altered hydraulic regimen
DISTURBED ZONATION

Paris Climate Agreement

Cannot exceed certain levels of CO_2!!!

Then how?

Plant more trees?

Intro to mangroves!

Mangroves are X4 better at absorbing CO_2 than the amazon rainforest!!

Bonus perk: **Protects** shoreline

02 Carbon Trading

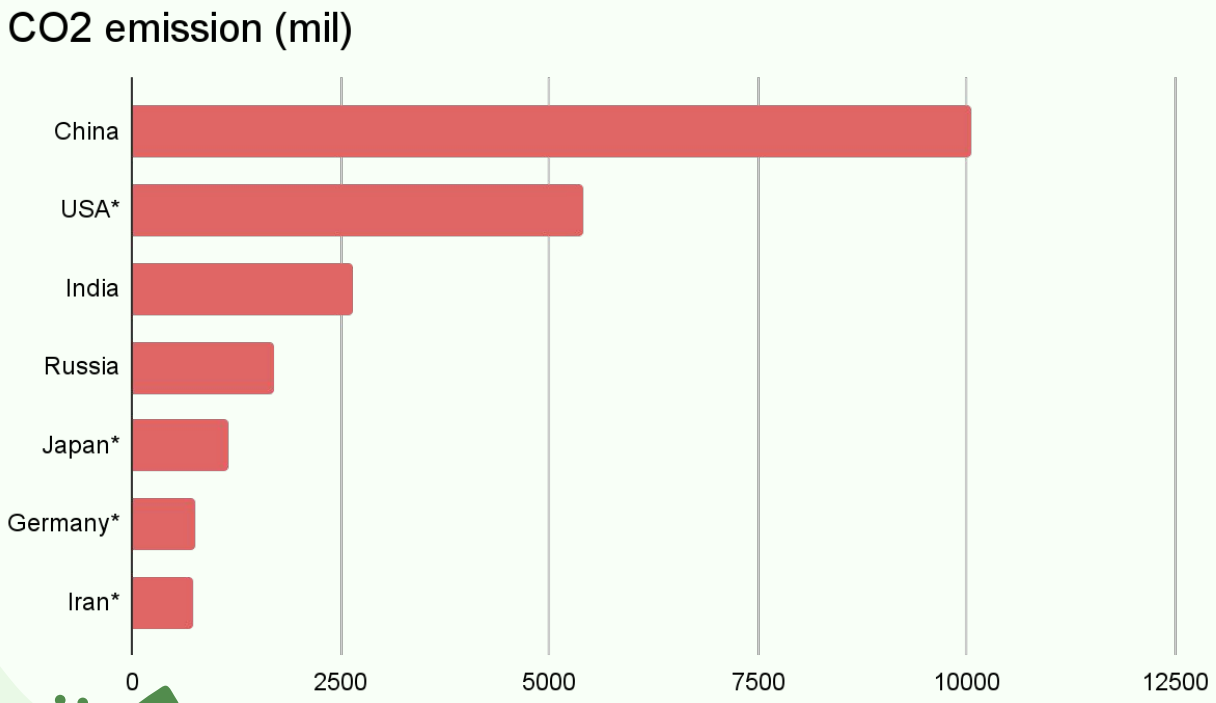
why countries ***love (need)*** it

$$$
CARBON CREDITS

stonks

Consider: Using mangroves to offset carbon

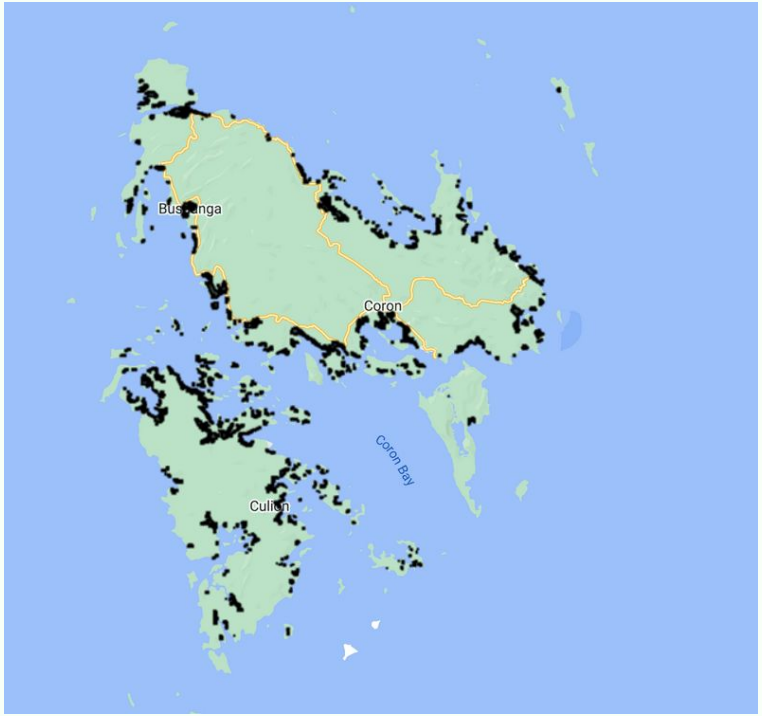
who may consider using mangroves?



*Countries that have little to no mangroves at all!!!

03 How to identify the mangrove clusters?

Remote islands in the Philippines:



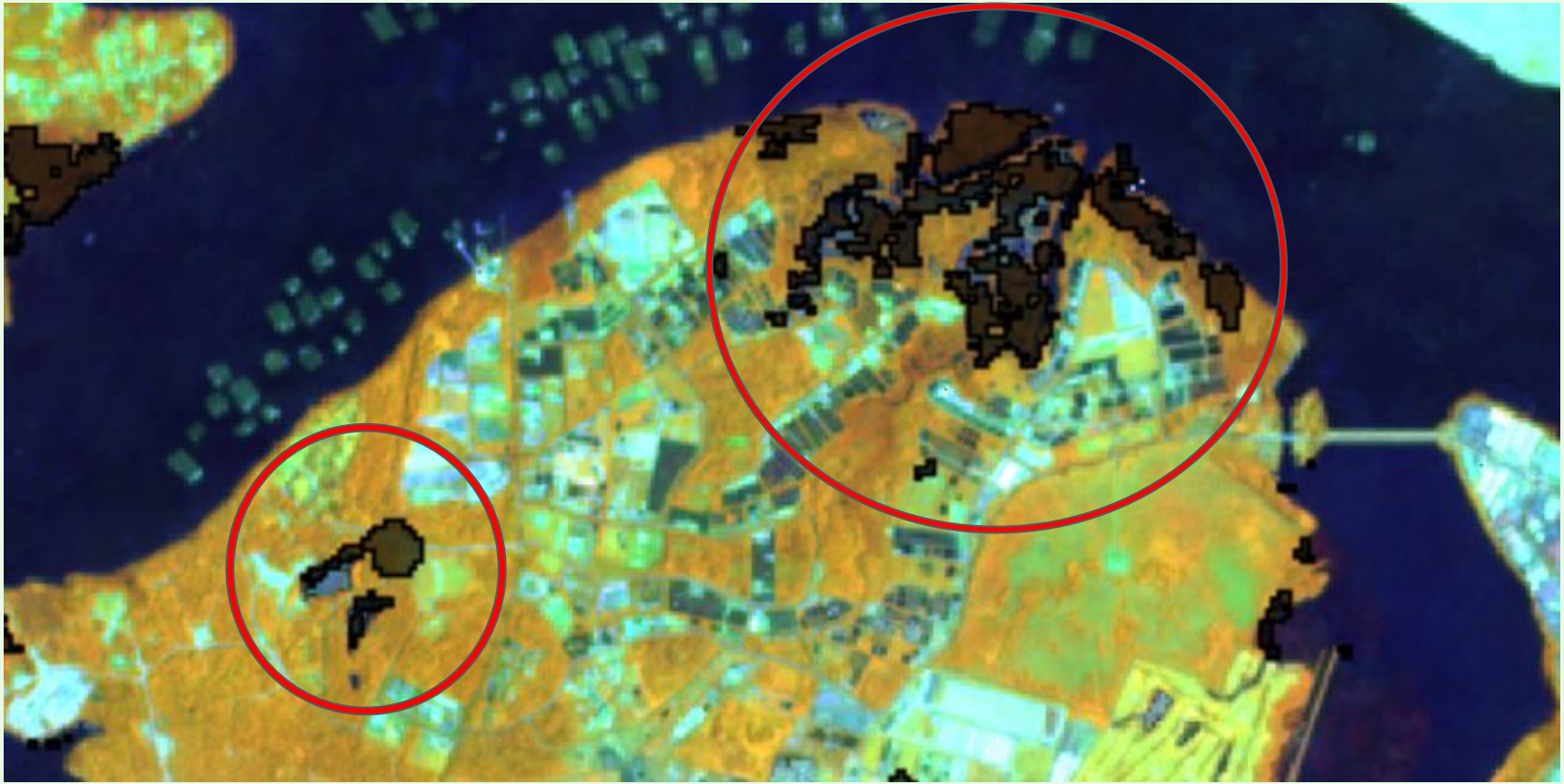
Sentinel-2 with MWI filter

Taken from GEE using sentinel-2

Mangroves have a higher MVI index compared to other types of vegetation

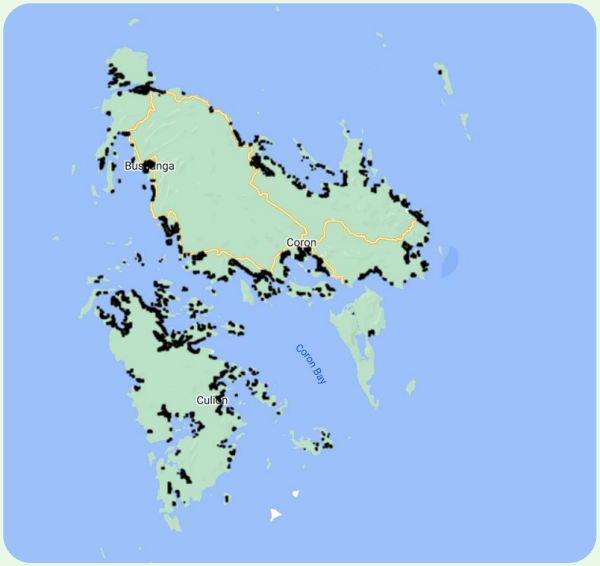
Which is why the filter shows mangroves with a darker colour

For easier visualization, set value of MWI from 4.5 to 5



How to calibrate/ensure accuracy?

comparison: large & no amount of mangroves



The Philippines

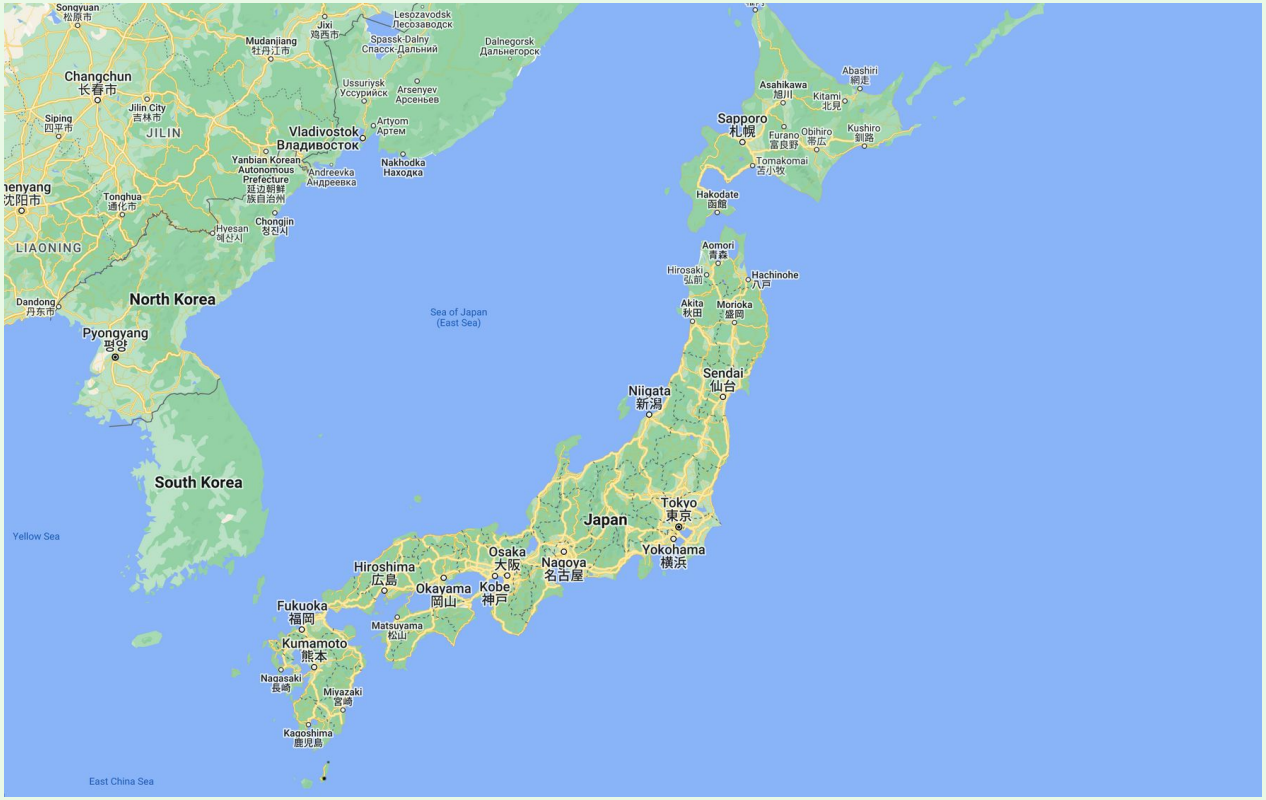
VS

Africa

let's take a look at some potential target countries

United States of America

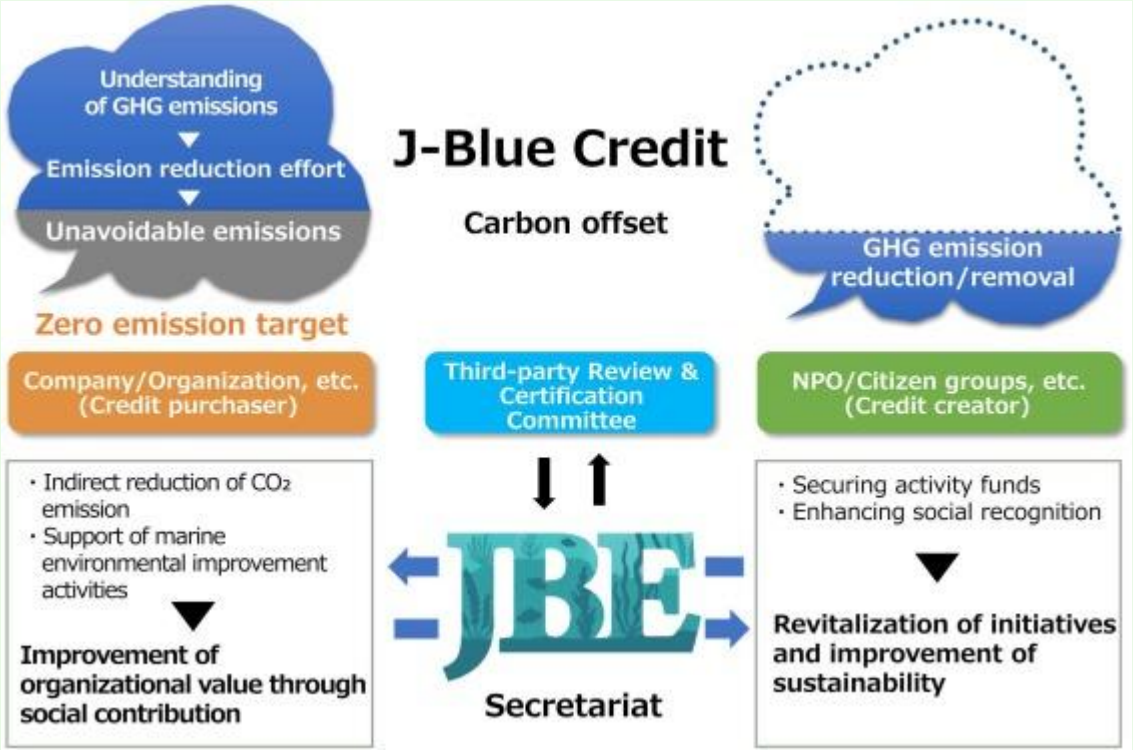
belongs to mexico


Songyuan
松原市
Jixi
鸡西市
Lesozavodsk
Лесозаводск
Mudanjiang
牡丹江市
Spassk-Dalny
Спасск-Дальний
Dalnegorsk
Дальнегорск
Changchun
长春市
Ussuriysk
Уссурийск
Arsenyev
Арсеньев
Jilin City
吉林市
Siping
四平市
JILIN
Vladivostok
Владивосток
Artyom
Артем
Nakhodka
Находка
Yanbian Korean
Autonomous
Prefecture
延边朝鲜
族自治州
Andreevka
Андреевка
Tonghua
通化市
Chongjin
청진시
Hyesan
혜산시
LIAONING
Dandong
丹东市
North Korea
Pyongyang
평양
Sea of Japan
(East Sea)
South Korea
Yellow Sea
East China Sea
Asahikawa
旭川
Abashiri
網走
Kitami
北見
Sapporo
札幌
Furano
富良野
Obihiro
帯広
Kushiro
釧路
Tomakomai
苫小牧
Hakodate
函館
Aomori
青森
Hirosaki
弘前
Hachinohe
八戸
Akita
秋田
Morioka
盛岡
Sendai
仙台
Niigata
新潟
Tokyo
東京
Japan
Yokohama
横浜
Osaka
大阪
Nagoya
名古屋
Hiroshima
広島
Okayama
岡山
Kobe
神戸
Fukuoka
福岡
Matsuyama
松山
Kumamoto
熊本
Nagasaki
長崎
Miyazaki
宮崎
Kagoshima
鹿児島

Japan**

NO
Mangroves?

Japan is investing **A LOT** into offsetting carbon!!!



So which countries has plenty of mangroves?

~6 million hectares!

Thank you!