Global Social Economy Forum

Activities for Combating Desertification and Achieving Local Sustainability in Mongolia

Green Asia Network / Ko, Jae Kwang

Green Asia Network

- Established in 1998, registered on Korean Ministry of Foreign Affairs and Trade
- Focusing on development of alternative model for combating climate change & desertification
- Being accredited to GEF, UNFCCC, UNCCD / special consultation status of UNECOSOC
- Has planted 500,000trees in about 500ha in Mongolia(-2014)
- Currently, implementing the projects on combating desertification & developing sustainable regional development of 5 sites in Mongolia

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The Average Temperature of the Earth

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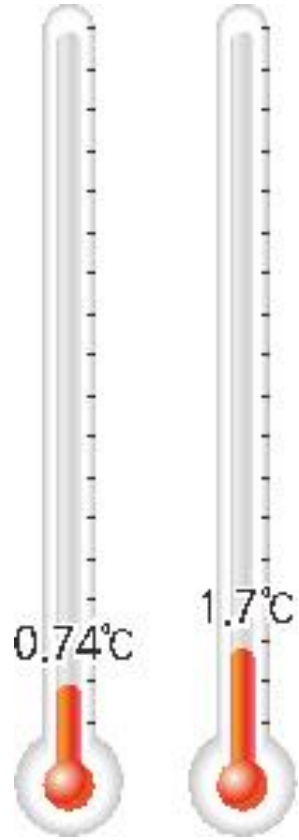
During the past 100 years,
Global annual average temperature has
been increased by Green House Gas Emission

0.74℃ Increase

(IPCC,2007)



Global Environmental Crisis

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Disappearance of glaciers

사라지는 빙하 (북극)

*사료=미항공우주국(NASA)

Global Environmental Crisis

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Severe tropical cyclones and floods (강력한 태풍과 홍수)

Typhoon "Haiyan" in the Philippines(2013)

(2013년, 필리핀 하이옌 태풍)

Hurricane Katrina in the U.S.(2005)

(2005년, 허리케인 카트리나)

The cause: warm sea surface temperature

(원인: 해온 상승)

Global Environmental Crisis

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Melting Permafrost (영구동토층 융해)

Release of CO2 and methane gas in the permafrost of Siberia and Alaska

(시베리아와 알래스카 지역의 영구동토층 융해로 인한 이산화탄소 및 메탄가스 방출)

CO2(500 billion tons) and Methane gas(50 billion tons) are buried

Alaska, destructed Parking Lot

Melted Lake Siberia

Global Environmental Crisis

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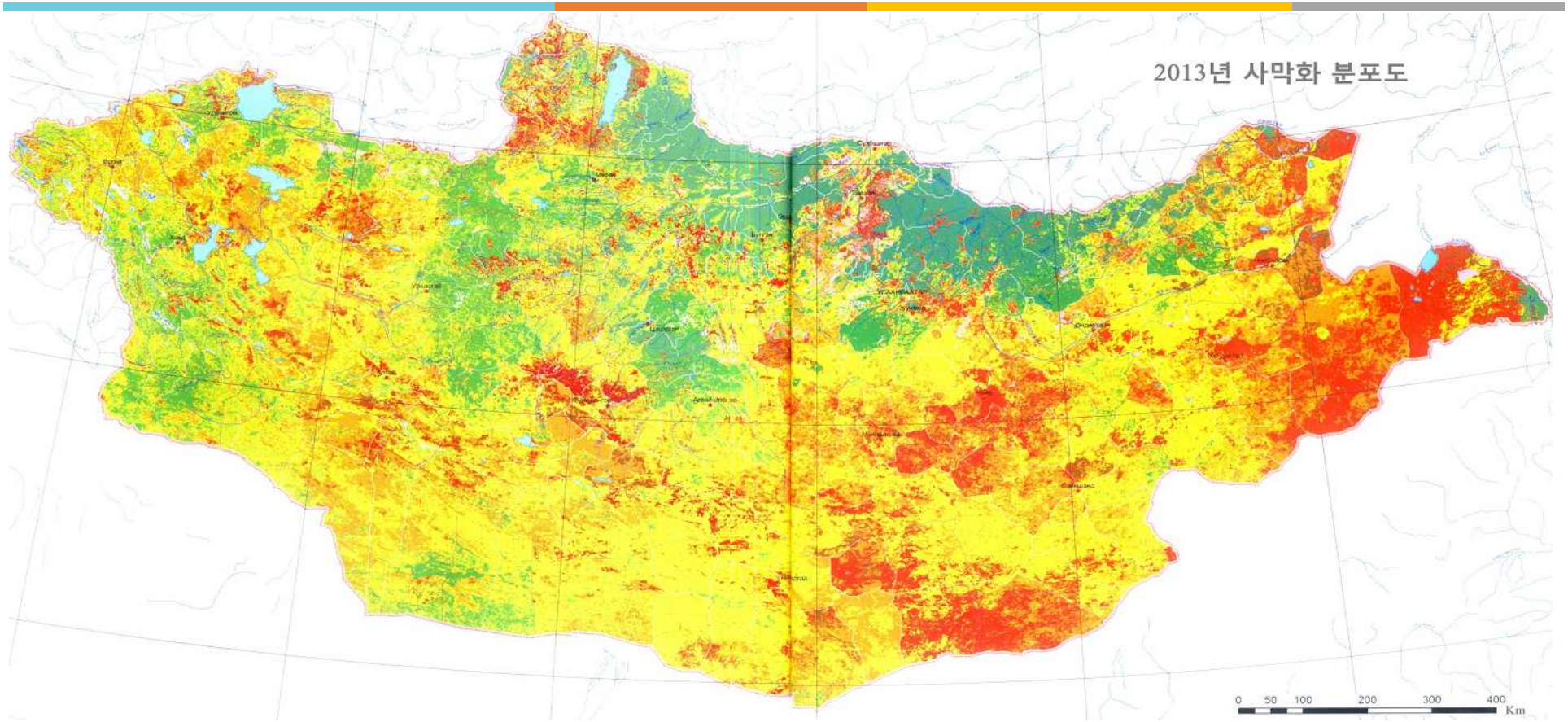
Shrinking of the Aral Sea

사라지는 아랄해

The Impact of Climate Change in Mongolia



78% of Mongolia is suffering from desertification : Mongolian government (2010)
(Ministry of Environment and Green Development of Mongolia, official document, 2010)

Increase by 2.1°C(Annual average temperature of Mongolia in the past 60 years)

The impact of Climate Change in Mongolia

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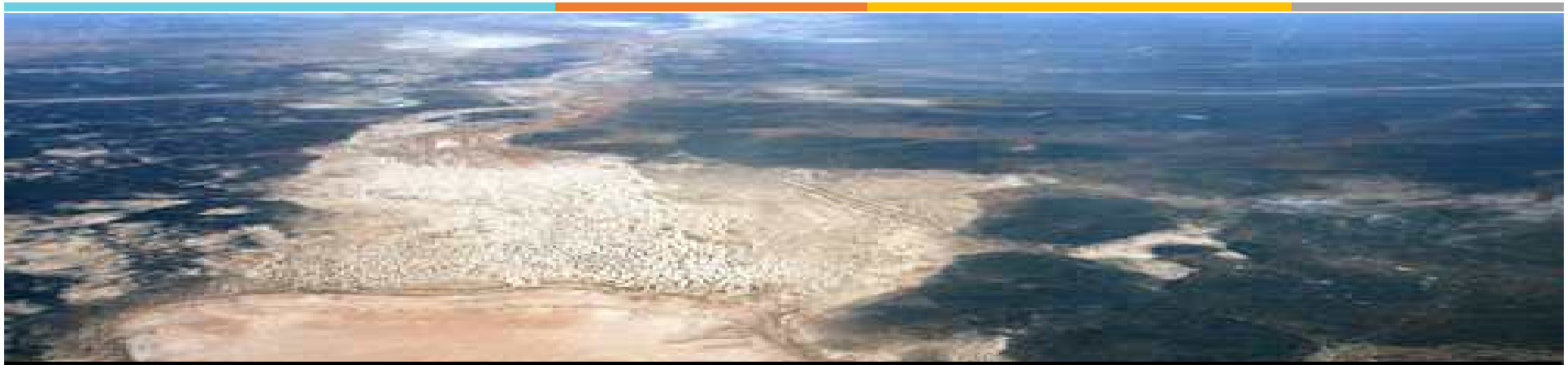

Disappearance of

- 887 rivers and streams (887개의 강)
- 2,069 springs (2,069개의 시내)
- 1,166 lakes and ponds (1,166개의 호수)

The impact of Climate Change in Mongolia

Harsh life for the Nomads

(기후변화로 인해 유목 생활 불가능해짐)

The impact of Climate Change in Mongolia

From 1999 to 2002, severe winters (called *Dzud* in Mongolian) killed 11 million livestock, leaving 12,000 households environmental refugees

('조드'라 불리는 자연재해는 천만 마리의 가축을 죽이고 1.2천 가정이 환경 난민으로 전락시킴)

Desertification and Environmental Refugees

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Nomadic pastoralists left their home for job to cities fall into the poverty

(가축을 잃은 유목민은 도시로 일자리를 찾으러 와 도시 빈민으로 전락)

Climate change(desertification) and poverty are like two sides of same coin

(기후변화(사막화)와 빈곤은 동전의 양면)


GAN’s activities target the environmental threat by addressing
problems related to land degradation and eco refugees
그래서 푸른아시아는 사막화와 환경난민 등 환경위기를
해결하기 위한 활동들을 하게 되었습니다.

Sustainable Regional Development Model

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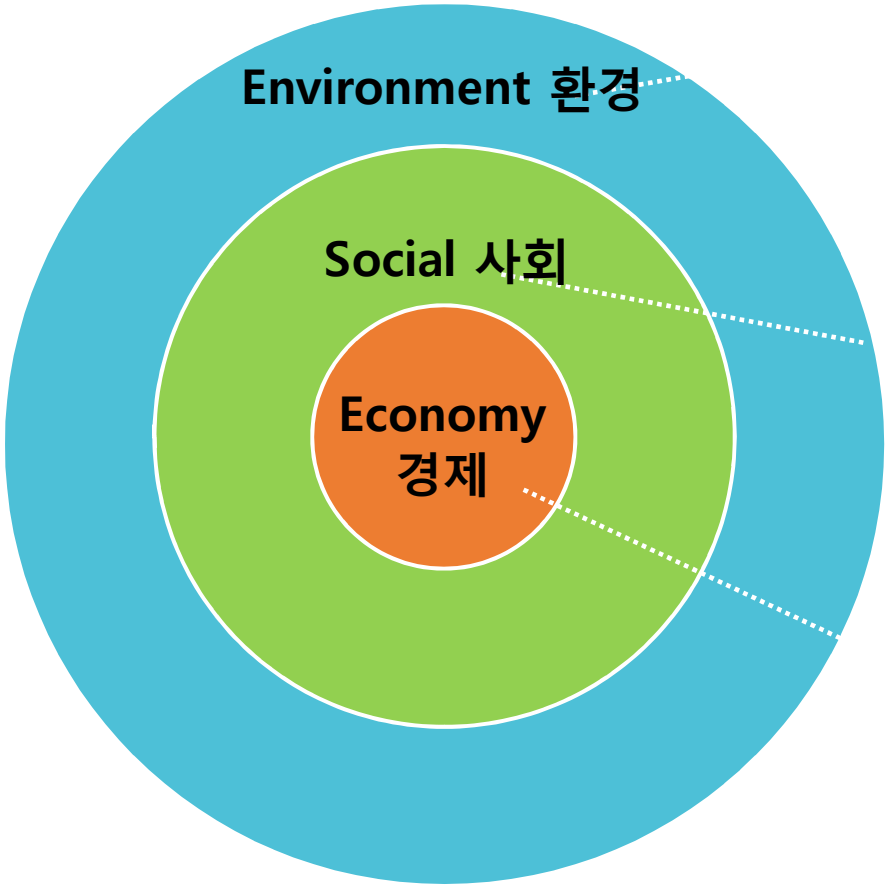


Achieving Local Sustainablity
지속가능한 지역 개발 모델

01 Environment Rehabilitation(환경복원)

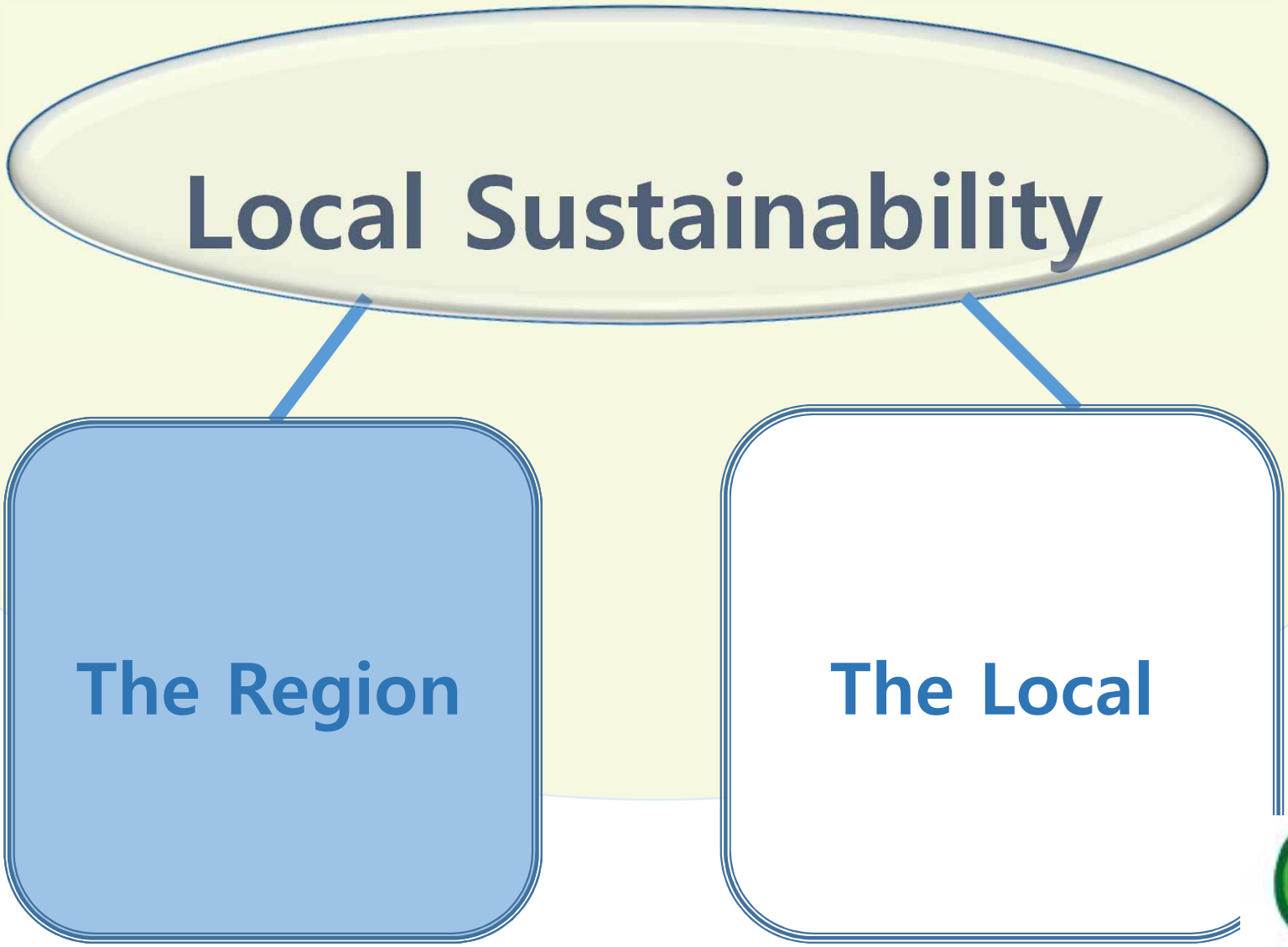
- Abatement of Desertification (사막화 저감)
- Afforestation (조림 및 산림 증대)
- Water Retaining (수자원 증대, 습도 증가)
- Responding to Climate Change (기후변화 대응)

02 Empowerment (주민역량 개발)

- Environment and Agricaultural Education (환경 및 농임업 교육)
- Enhancing Human Rights and Welfare (인권과 복지 증진)
- Local Participation (주민 참여)

03 Self Reliance (자립 능력 향상)

- Job Creation (일자리)
- Training and Specialization (직업 교육, 전문성 강화)
- Establishing a Cooperative (협동조합 설립)



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Barren Forestry Site in Mongolia

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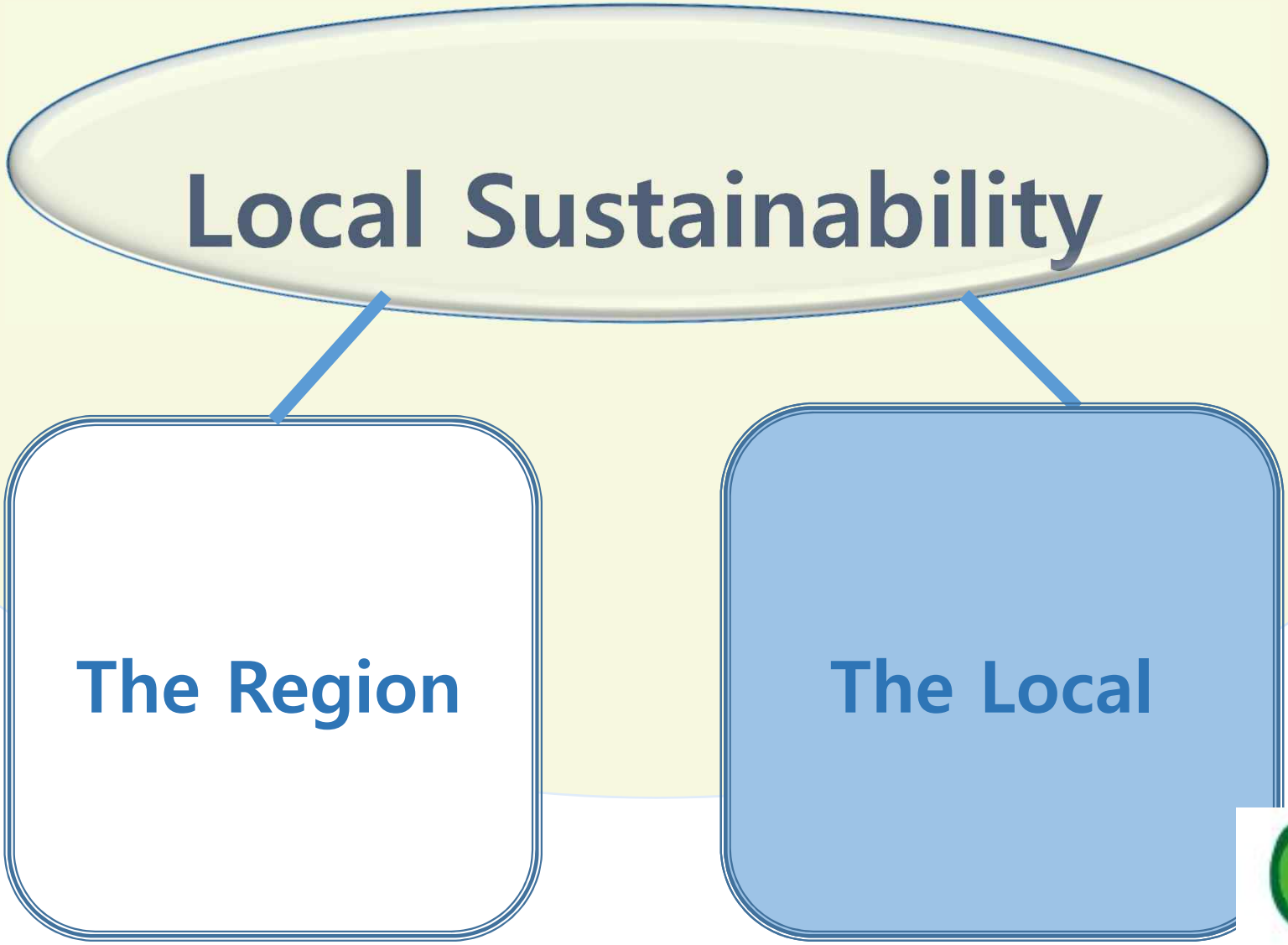

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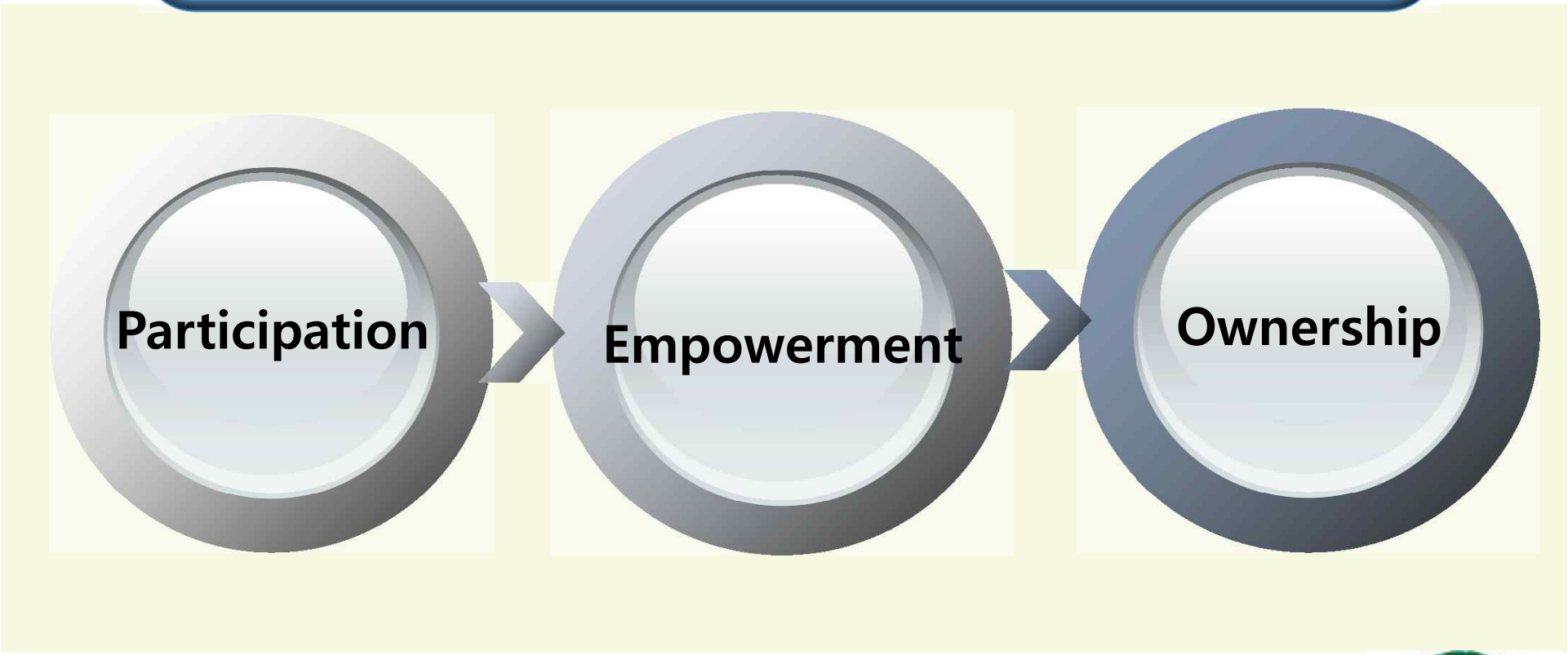
Local Sustainability of The Local



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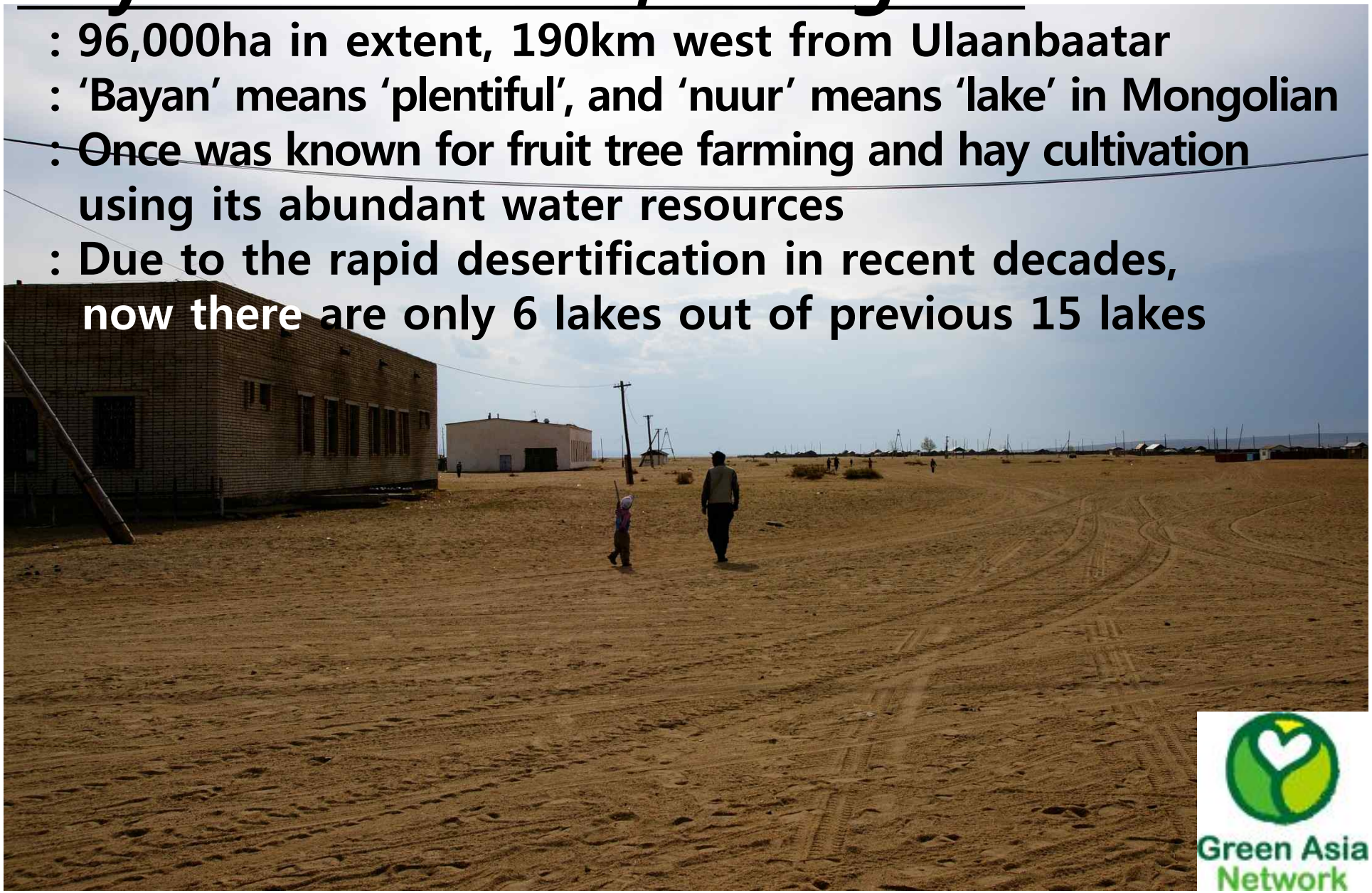
Bayannuur Soum, Mongolia



: 96,000ha in extent, 190km west from Ulaanbaatar

: 'Bayan' means 'plentiful', and 'nuur' means 'lake' in Mongolian

: Once was known for fruit tree farming and hay cultivation using its abundant water resources

: Due to the rapid desertification in recent decades, now there are only 6 lakes out of previous 15 lakes

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Local Sustainability

The Region

Afforestation to
Combat Desertification

The Local

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Local Sustainability of The Local

- Local Economic Self-Sufficiency

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Participation

Local Economic Self-Sufficiency

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<Job Creation>

- **Job Creation for 45~55 Households**
  (Out of 410 households/1,791 people in BY)
  - Planting/Managing Trees and Guarding

Participation

Local Economic Self-Sufficiency

<Cultivation>

- Fruit Trees – Chachargan, Uhriin Nud, Apricot, etc.
- Cash Crops in Forestry Sites
  – Green Peppers, Cabbage, Radish, Watermelon, etc.

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Local Economic Self-Sufficiency

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Indicator		Explanation of figure, such as time period measured
Agricultural yields before and after	5,200 kg (including 1,700 kg of fruit) and 30,000 seedlings	Sales revenue for this was $96,800 ▶3,500 kg of crops for self-consumption include potatoes, cabbages, carrots, pumpkins, radish, tomatoes, cucumbers ▶1,700 kg of crops for sale include sea buckthorn trees, and black currant trees (1 kg = $4 USD with a total of $6,800) ▶30,000 trees (at $3 USD per tree equals $90,000 USD)
Local people's income	$96,800 USD	$96,800 = 70 households x $1,383 USD annually from sales revenue (see above box) For one household, Mongolian minimum wage is $1,381 USD annually

Local Sustainability of The Local

- Local Economic Self-Sufficiency

- Economic Empowerment
- Social Empowerment

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Empowerment

Economic Empowerment

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<Vocational Education>

- Offering Agroforestry Manager Qualification Course for Local
  - Theoretical Education
  - Agro-forestry Techniques

which can be easily achieved

Empowerment

Social Empowerment

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<Organizing The Local>

- Monthly Local Meeting
- Team Leader System
- Organization of Local Events

Local Sustainability of The Local

- Local Economic Self-Sufficiency

- Economic Empowerment
- Social Empowerment

- Creating a Sustainable Form of the Project

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Ownership

Creating a Sustainable Form of the Project

The Local

Trainee

- Contract by the year
- After 3years of Training, become a co-op member

Co-op Member

- Managing 300 Chachargans and 1000-1500 Windbreaks
- Having Ownership of Harvest
- Paying 50% of Sales to Co-op
  - 30% for Community Fund
  - 20% for Forestry Maintenance

Co-op

- Joint Ownership of Forest
- Joint Management of Community Fund
- Establishment of Fruit processing Factory : Develop into Social Enterprise

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Local Sustainability of The Local

- Local Economic Self-Sufficiency

- Economic Empowerment
- Social Empowerment

- Creating a Sustainable Form of the Project

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The Story of Sarangchimeg

“We are indeed lucky to do good things visible and tangible”
“I hope more people to know this work is beneficial to our children and being productive for this region,
and to cooperate with us”.

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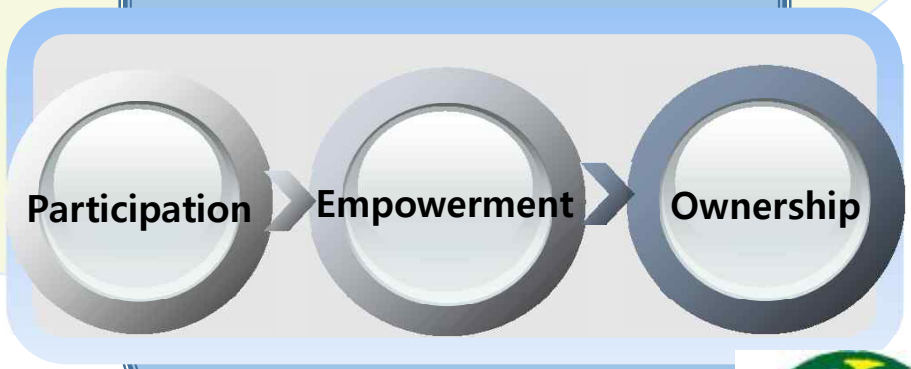
Local Sustainability

The Region

The Local



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Environmental Impact 환경적 효과

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Increase in grassland production
(초지 생산량 증대)

2004

2007

2011

Land fertility improvement
(토지 비옥도 증대)

Social Impact 사회적 효과

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Empowerment of the Locals by participating (지역 주민 참여 및 역량 강화)

Arrange monthly meeting (월례회의 진행):
Discuss current activities and future endeavours and events

Host a local market to sell their fruit harvest
(생산자-소비자간 직접적 수확물 판매)

Economic Impact 경제적 효과

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Improved economic opportunities (경제적 효과 증대)

Fruit tree cultivation: Sea buckthorn and black currant (유실수 재배)
Raising tree saplings and harvesting crops (양묘 및 농작물 생산)

All profit earned from these sales will be retained by the locals
(수확물 판매를 통해 얻어진 소득은 지역민들에게 돌아갑니다)

Black currant
(우흐린누드)

Sea buckthorn
(차차르간)

‘TerrAsia’ Project
Gan’s Model Spreading Strategy

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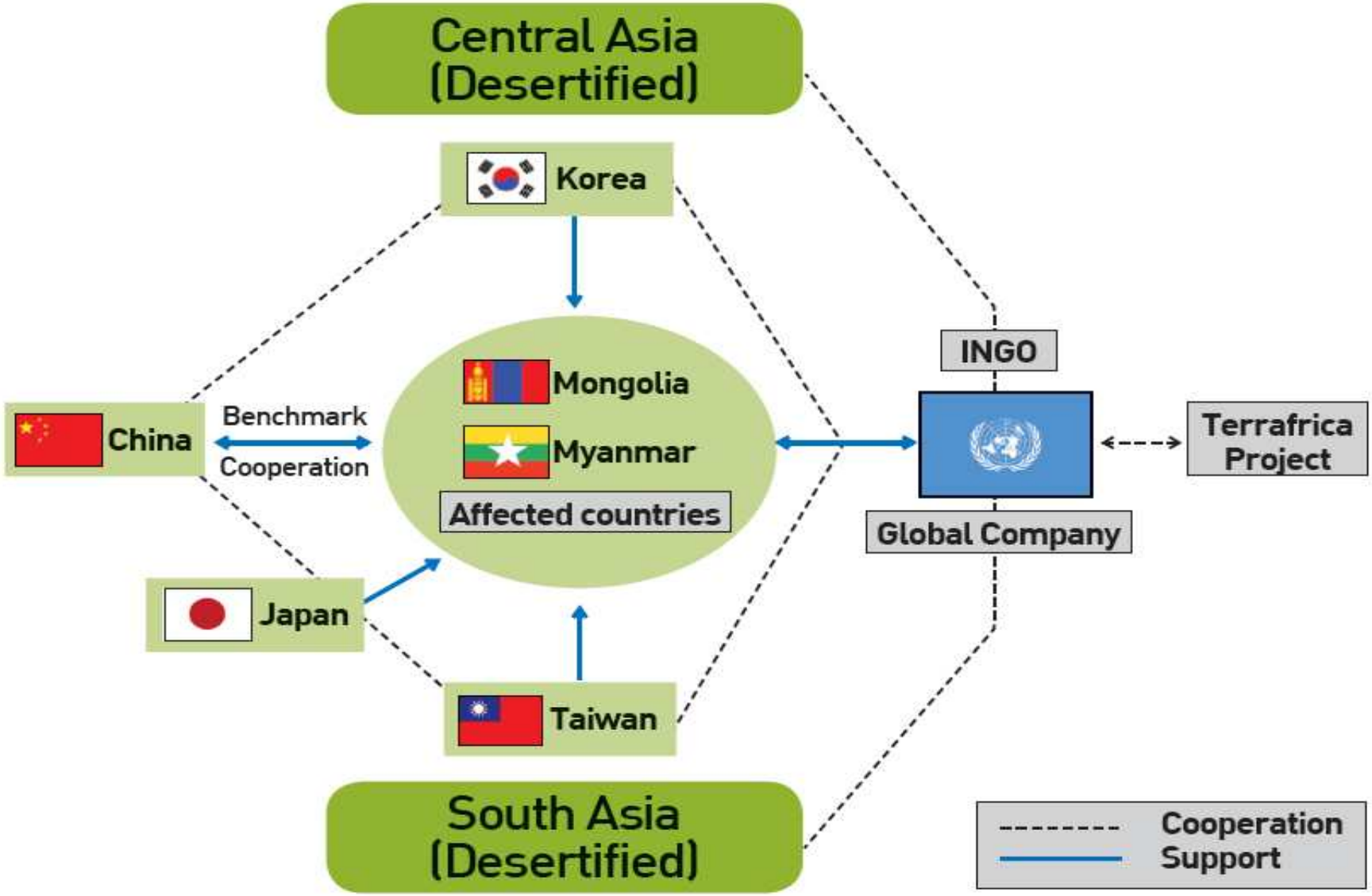

Design our common future!

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