

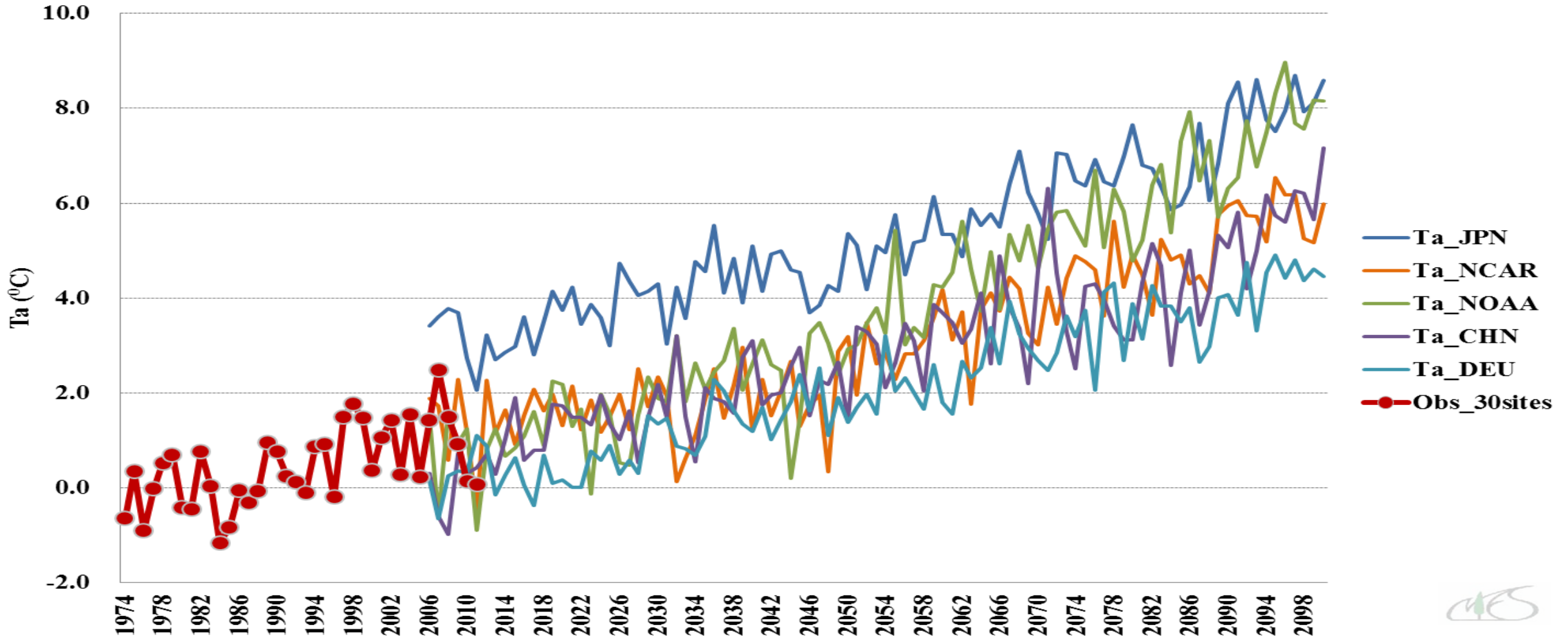
Objective of Adaptation and Green Development Project in Mongolia

– Project on Development of Innovative Adaptation System
and MRV Method for JCM in Mongolia –

Chuo University
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Annual Ta Observation & Prediction in Mongolia by GCMs (IPCC AR5 Scenarios, RCP8.5)



TECHNOLOGY NEEDS ASSESSMENT

VOLUME 1 – Climate Change Adaptation in Mongolia

2013



✓ **Arable farming** and **Animal husbandry** sub sectors were identified as the sectors most vulnerable to climate change

Animal husbandry:

➤ **Seasonal to Inter-annual Prediction and Livestock Early Warning system (SPLEWS)**

- The current livestock sector is based on the traditional nomadic pasture system and is highly dependent on and influenced by weather and climate.

- SPLEWS integrates main components such as risk knowledge, monitoring and predicting, disseminating information and response.

- Precise seasonal prediction and proper preparation for *zud* would result in saving about 80 % of animals' losses every winter.

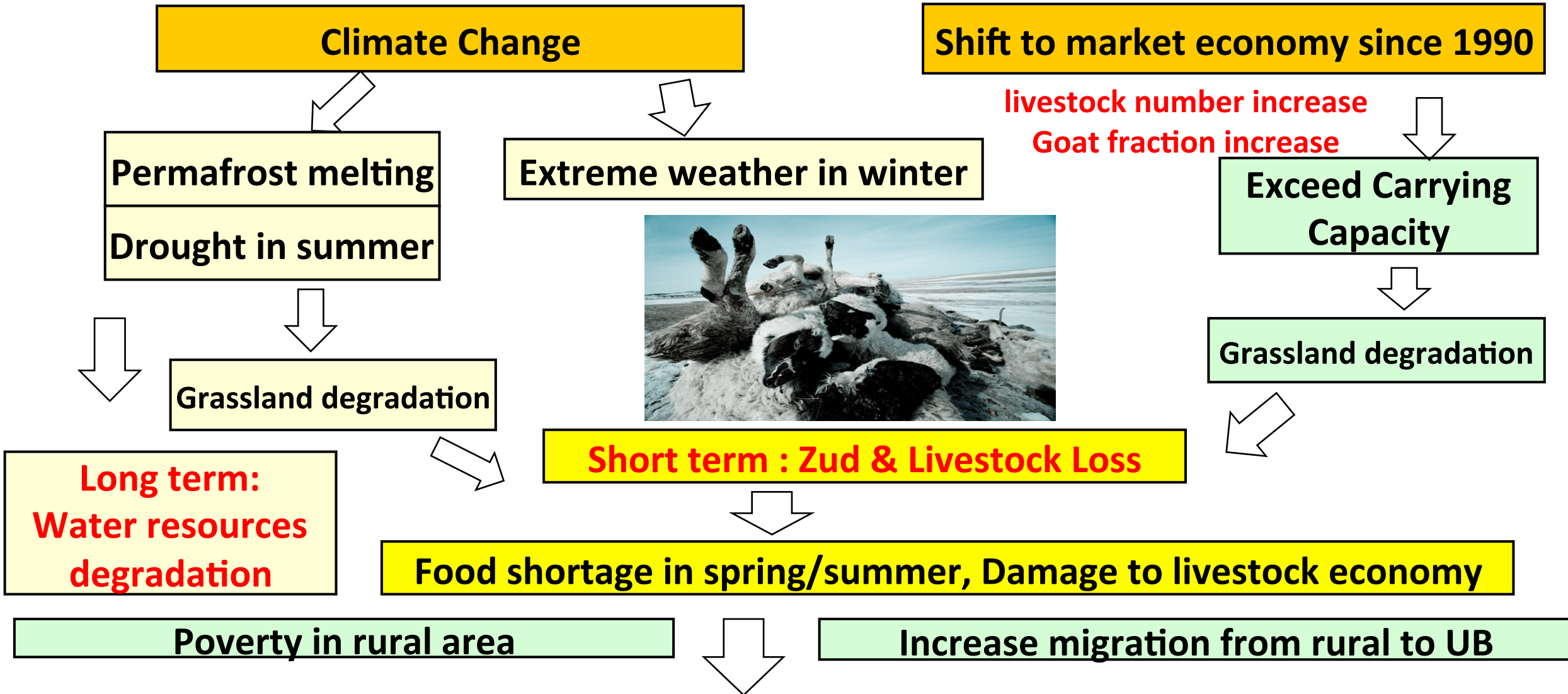
➤ **Sustainable Pasture Management (SPM)**

- Pasture degradation and desertification are among the most serious environmental problems.

- Comprehensive sustainable pasture management will conserve natural resources and thereby increase livestock productivity.

➤ **High quality livestock (HQL) through selective breeding and animal disease management**

Climate Change Adaptation in Mongolia



Livestock number control within carrying capacity and early harvest with innovative meat storage system are key adaptation measures

Development of Innovative Adaptation System and MRV Method for JCM in Mongolia

Project funded by **Ministry of Environment, Japan**

Project period : **2014.8.5 - 2020.3.31**

Chuo University

National Institute for Environmental Studies

Hitachi, Ltd

The Japan Research Institute, Ltd

Overseas Environmental Cooperation Center, Japan

Keio University

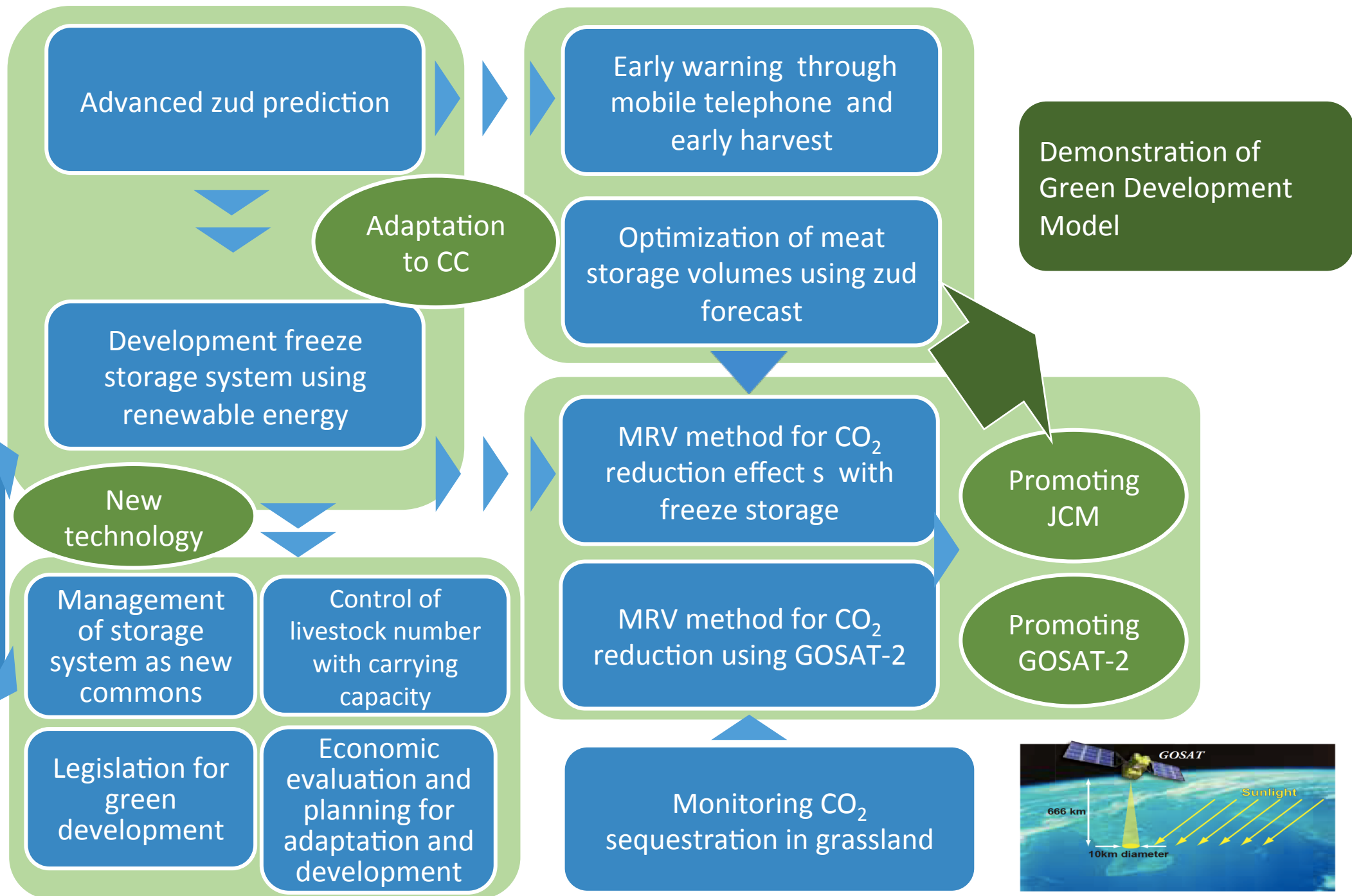
National University of Mongolia, Institute for Sustainable Development

Institute of Meteorology and Hydrology

National Development Institute

Mongolian Academy of Science

Project overview



Goal of the project : Establish the Model of Sustainable Green Development

Development of freezer storage system with renewable energy

Early warning through mobile telephone and early harvest

Advanced zud prediction

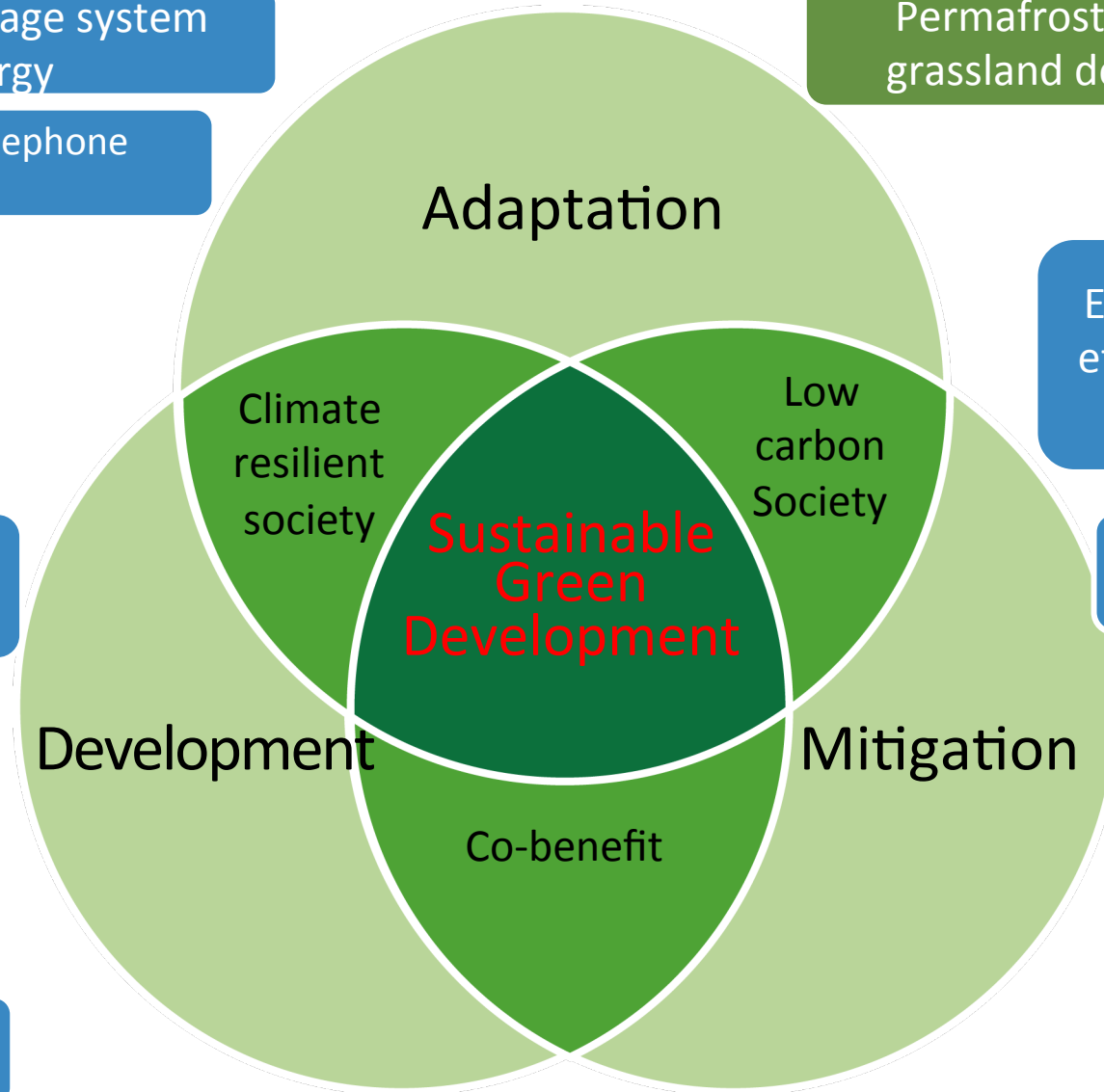
Optimization of meat storage volume using zud forecast

Management of storage system as new commons

Economic evaluation and planning for adaptation and development

Green soum center

Permafrost melting, water cycle change and grassland degradation due to climate change



Evaluation of CO₂ sequestration effect in grassland conservation through carrying capacity

Inventory of CO₂/CH₄

Monitoring of CO₂ flux

MRV method using GOSAT-2

CO₂ reduction effect by freezer storage system and JCM

- ✓ **Management of intensive livestock industry and improvement of production facility in rural area is necessary for climate change adaptation**

Needs for adaptation infrastructure in Mongolia

- ✓ **weather monitoring and zud prediction**
- ✓ **management of rangeland/livestock number**
- ✓ **meat processing planning, frozen meat storage**
- ✓ **supply chain, food security**

Key points of intensive livestock production facility

- ✓ **Self-sustaining distributed social infrastructure by using renewable energy**
- ✓ **Weather monitoring, zud prediction, network of rangeland/livestock number management by using ICT**
- ✓ **Effective supply chain network consist of large scale freezers (collection center) and container-type freezers (rural area)**

Resolution #43

2014.6.13



МОНГОЛ УЛСЫН ИХ ХУРЛЫН ТОГТООЛ
2014 оны 06 сарын 13 өдөр
Дугаар 43
Ногоон хөгжлийн бодлого батлах тухай

Монгол Улсын Их Хурлын тухай хуулийн 43 дугаар зүйлийн 43.1 дэх хэсгийг үндэслэн Монгол Улсын Их Хурлаас ТОГТООХ нь:

1.“Ногоон хөгжлийн бодлого”-ыг хавсралтаар баталсугай.

2.“Ногоон хөгжлийн бодлого”-ыг хэрэгжүүлэхтэй холбогдуулан дараах арга хэмжээг авч хэрэгжүүлэхийг Монгол Улсын Засгийн газар, Тогтвортой хөгжлийн үндэсний хороо /Н.Алтанхуяг/-нд үүрэг болгосугай:

1/“Ногоон хөгжлийн бодлого”-ыг хэрэгжүүлэх үйл ажиллагааны төлөвлөгөөг баталж, улсын хөрөнгө оруулалтын хөтөлбөрт тусган хэрэгжүүлж эхлэх;

2/“Ногоон хөгжлийн бодлого”-д тусгагдсан зорилго, зорилт, хэрэгжүүлэх арга замыг үндэсний хөгжлийн бодлого, макро эдийн засгийн дунд хугацааны бодлого, чиглэлд тусган хэрэгжүүлэх;

3/“Ногоон хөгжлийн бодлого”-ын биелэлтийг жил бүр Улсын Их Хуралд танилцуулж байх.

3.Энэ тогтоолын биелэлтэд хяналт тавьж ажиллахыг Байгаль орчин, хүнс, хөдөө аж ахуйн байнгын хороо /Г.Баярсайхан/, Эдийн засгийн байнгын хороо /Б.Гарамгайбаатар/-нд тус тус даалгасугай.

Resolution #43

The criteria and indicators to measure the results of Green Development Policy Implementation

Data from 2013 will serve as the baseline quantitative indicator.

Criteria/Indicators	2020	2030
Share of renewable energy in total installed capacity of energy production	20%	30%
Reduction of building heat loss	20%	40%
Share of waste recycling	20%	40%
Share of expenditures for green development in total GDP	2%	3%
Share of expenditures for science and technology research in total GDP	2%	3%
Share of green procurement in total government procurement	20%	30%
Share of protected areas	25%	30%
Increased investments in environmental protection and restoration	20%	30%
Share of forest area	8.5%	9.0%
Percentage of population that has access to safe drinking water	80%	90%
Percentage of population connected to improved sewage or wastewater treatment systems	40%	60%
Poverty level	24%	15%
Percentage of green parks and areas in Ulaanbaatar and other urban areas	15%	30%
Share of the agriculture and manufacturing sector in total GDP	28%	30%

How to achieve sustainable green development under maintaining carrying capacity in Mongolia ?

