

Deborah A Klopp 03/25/2008 09:15:16 AM From DB/Inbox: Deborah A Klopp

Cable Text:

UNCLAS ULAANBAATAR 00129

CXULA:

ACTION: AMB

INFO: AID ECON POL DCM

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INFO: PC

DISSEMINATION: AMB /1

CHARGE: PROG

APPROVED: DCM:BGOLDBECK;

DRAFTED: AID:BPRIMM;

CLEARED: E/P:GWIEGAND; E/C:PHERMAN

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FM AMEMBASSY ULAANBAATAR

TO RUEHC/SECSTATE WASHDC 2000

INFO RUEHBJ/AMEMBASSY BEIJING 6055

RUEHMO/AMEMBASSY MOSCOW 2152

RUEHKO/AMEMBASSY TOKYO 2933

RUEHUL/AMEMBASSY SEOUL 3248

RUEHML/AMEMBASSY MANILA 1674

RUEHBK/AMEMBASSY BANGKOK 1749

RUEHLO/AMEMBASSY LONDON 0295

RUEHLMC/MILLENNIUM CHALLENGE CORP WASHINGTON DC

RUEATRS/DEPT OF TREASURY WASHINGTON DC

RUEHRC/DEPT OF AGRICULTURE WASHINGTON DC

RUCPDOC/DEPT OF COMMERCE WASHINGTON DC

RHEHNSC/NSC WASHINGTON DC

RUEKJCS/SECDEF WASHINGTON DC

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UNCLAS SECTION 01 OF 03 ULAANBAATAR 000129

STATE PASS TO PEACE CORPS

STATE FOR EAP/CM AND DRL

USAID FOR ANE FOR D. WINSTON

BEIJING FOR AGATT

BANGKOK FOR USAID

TREASURY PLEASE PASS USEDS TO WORLD BANK, IMF

MANILA AND LONDON FOR ADB, EBRD USEDS

E.O. 12958: N/A

TAGS: EAGR, EAID, PGOV, SOCI, MG

SUBJECT: LIVESTOCK FORAGE PREDICTION IN MONGOLIA TRANSFORMED THANKS TO USG ASSISTANCE

1. SUMMARY: USAID's Gobi Forage Project was launched in May 2004 in response to the catastrophic effects of severe drought and harsh winter conditions that devastated livestock herds in Mongolia early this decade. Using satellite imagery and highly sophisticated computer modeling, this cutting-edge project has established a forage monitoring and forecasting service that regularly delivers map information to pastoral communities, policymakers and administrators responsible for agriculture and rural development. These maps enhance the resilience of herders to severe climatic conditions through risk forecasting, in turn improving contingency planning and the sustainability of rangeland management practices. Simply put, this system enables herders to know and go where there is forage, avoid areas where it isn't, and enable local governments to anticipate and manage this process. One provincial governor described how the system helped him manage the influx of some 50,000 herders and their families from a neighboring drought-stricken province and prevent conflict with local herders.

2. With operational forage forecasting, outreach and delivery services well-established and well-received, this on-going project continues to evolve. USAID funding is scheduled to end in April 2008, and the project is now poised to embark on the next phase of its development: institutionalization within a national government agency and expansion of its geographic range. Successful implementation of this next phase will allow the project to continue

Read

DCM/AID

*Wonderful
Success story.
Thanks,
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delivering critical forage monitoring and early warning services to the pastoral communities of Mongolia. END SUMMARY.

MONGOLIA'S PASTURELANDS AT RISK: ARID, DEPLETED, DEGRADED, DESSERTIFYING -----

3. Harsh winter conditions early this decade, and severe droughts in the years since then, have put increasing pressure on Mongolia's livestock and pastureland. (Note: Mongolians know these as black and white "dzuds," white when there's too much snow and black if there's too little; both typically result in her losses of 30% or more.) Roughly 40% of Mongolia's territory currently consists of arid or desert terrain. Scientists estimate that 70% of existing pastureland has been degraded and depleted over the last 30 years, and that some 70-80% of the country is vulnerable to further degradation. Comprehensible, reliable and timely geospatial forecasts of pastureland forage capacity give pastoralists and policy-makers the information they need to reduce losses due to extreme weather events, and to make good decisions on current pastureland use.

CAUSE FOR CONCERN -----

4. About 48% of Mongolia's population depends on livestock and livestock production is heavily influenced by the weather. Traditional systems have evolved by which herders respond to the environment around them, becoming part of the ecosystem and living within it as best as they can. Animal husbandry employs an estimated 48% of the population (about 1.4 million Mongolians), accounts for 35% of agricultural gross production (US\$660 million), and is responsible for 30% of the country's exports. Overuse of degraded pasturelands threatens forage yields, livestock productivity and, ultimately, local and national food production capacity. Intensified droughts and severe winters are inflicting serious damage, not only on the livestock sector, but also on the national economy.

THE GOBI FORAGE PROJECT -----

5. In response to the catastrophic effects of the severe drought and harsh winter conditions that ravaged Mongolia at the start of this decade, USAID launched the Gobi Forage project in May 2004. This cutting-edge project employs imagery and analysis from remote sensing satellites and was adapted from a USAID forage monitoring project in east Africa -- the Livestock Early Warning System (LEWS). The project is carried out under the auspices of USAID's Global Livestock Collaborative Research and Support Program (GL-CRSP). The four-year project, currently managed by Mercy Corps in partnership with Texas A&M University, is due to end on April 30, 2008.

EARLY WARNING THROUGH FORAGE FORECASTING -----

6. At its inception, the project set itself the ambitious goal of establishing a forage monitoring and forecasting service that could regularly deliver visual information in the form of forage maps to pastoral communities and policymakers in Mongolia. The intent was to mitigate risks to pastoral livelihoods in Mongolia from severe climatic conditions, and to improve the sustainability of rangeland management.

7. The project has developed a forage-monitoring system that provides near-real-time spatial and temporal assessments of current and forecasted forage conditions for Mongolian livestock producers. It delivers this information to herders and local-government officials to help them make timely decisions on livestock and pastureland management issues.

8. This was accomplished by the adaptation to Mongolian conditions of remote sensing technology and modeling systems first developed in Africa. The success of the project derives from its ability to successfully carry out four complementary activities: adapting the technology for measuring forage quantity to local conditions; conducting detailed field measurements of forage quality; information outreach; and linking information with herder alliances.

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MARRYING SATELLITE TO FIELD DATA

9. The Gobi Forage Project collects and analyzes field and satellite data covering sites across eight provinces in Mongolia. To produce forage maps, data are analyzed using an innovative combination of geostatistical processing methods, and PHYGROW modeling methods with Normalized Difference Vegetation Index (NDVI) information from a US National Oceanic and Atmospheric Administration (NOAA) satellite.

10. The technologies applied by the project, including the use of the PHYGROW forage simulation model using near-real-time rainfall data, have been successful in generating predictions of standing forage that are now about 80% reliable. More importantly, the technologies have been successful in combining NDVI satellite information with other related data to produce forage-prediction maps that can be easily used and understood by a layperson or herder.

DRAMATIC RESULTS

11. The impact has been dramatic. During project design in 2004, herders, provincial administrators and technical specialists throughout the Gobi region were highly skeptical of the notion that maps could be generated at all (much less in semi-real time) showing how much forage was going to be available in the future. The ability of the project to deliver on that promise, and to produce current and accurate maps showing forage conditions 30 and 60 days into the future, has proven exceptionally valuable to herders and those with a stake in rangeland management. It has also had a transformational impact on the thinking of Mongolian Government Ministries and donors working in the rural development sector. (Note: A scientific paper describing the technological methods and innovations developed by the project is to be presented at an International Grasslands Conference in Hoh Hot, China, in June. End Note.)

DELIVERING ACCESSIBLE, PRACTICAL INFORMATION

12. The project has produced maps on a monthly basis at the Mercy Corps office in Mongolia since November 2007, delivering field-tested forage monitoring and forecast information to herders and government officials in the Gobi region of Mongolia.

13. Reports are broadcast regularly by the project via Mongolian National Public radio, and data are also published as forage maps including information such as 60-day forecasts of forage availability (kg/ha). These maps are posted monthly to 135 sub-provinces and can be downloaded free of charge at the project website (<http://glews.tamu.edu/mongolia>).

14. The project has been exceedingly well received at the local level, with over 70% of herders and more than 60% of officials claiming some degree of familiarity with Gobi Forage products. Indeed, respondents to a recent evaluation survey said that based on information from these maps, they had identified that they had moved livestock (51.3%); provided supplementary feed to their livestock (49.6%); or changed their rotational grazing strategy (40%).

BUILDING CONFIDENCE, MANAGING UNCERTAINTY, AND AVOIDING CONFLICT

15. An increasing number of government officials are using Gobi Forage radio broadcasts to obtain information about pasture conditions and to guide their recommendations on livestock movements. Some 93% of government officials who use Gobi Forage products now indicate that those products are "very useful" for their work. One provincial governor described how the system helped him manage the influx of some 50,000 herders and their families from a neighboring drought-stricken province and prevent conflict with local herders. While perceptions of the accuracy of the forage information vary widely among herders themselves, use of the technology is increasing, with almost 50% of herders claiming to that the data had informed their decision-making.

FUTURE STEPS

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16. Important progress has also been made toward adding value to the information already generated through the project by delivering additional forage quality and livestock nutrition information using NIRS/NUTBAL technology in collaboration with the Mongolian Research Institute of Animal Husbandry. While this is of significant potential value to pastoralists, additional work remains to be done before this technology can be made readily accessible to laypersons.

17. The Gobi Forage project is now engaging in an institutionalization process that will see it managed as part of a national government agency. The success of the project has sparked interest among other donors working on rural development, and discussions with the World Bank about picking up financing for the project are well advanced. World Bank funding would allow expansion of the geographic scope of the project beyond the eight Gobi provinces, and successful institutionalization would ensure the ability of the project to sustainably deliver what are now seen as critical forage monitoring and early warning services to the pastoral communities of Mongolia well into the future.

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