CLS
COLLECTE LOCALISATION SATELLITES

Smart Herding
Manage Livestock
Sustainably

Data driven insights for
sustainable herd management

Tackling Livestock
Management Challenges

Livestock management is facing growing pressures, especially regarding endangered species protection, grazing effciency, and water use. These issues are intensifying with climate change, making traditional methods increasingly inadequate.

Herders and conservationists must now balance practical livestock needs with environmental protection. To meet this challenge, CLS has developed an innovative solution offering real-time, actionable insights to optimize both livestock and conservation efforts.

Our solution is built on three key pillars:

Satellite Connectivity: Enables reliable, near real-time tracking even in remote regions.

Satellite Collars: Affordable, long-lasting collars for livestock and wildlife track movement, behavior, and environmental impact.

A Dedicated Platform and App: A userfriendly interface to map grazing land, monitor pasture health, analyze water use, and manage herd distribution.

Together, these tools empower users to improve grazing practices, manage resources sustainably, and protect biodiversity, paving the way for smarter, more resilient livestock management.

Key Benefits **of Our Solution**

Our innovative solution provides more than just tracking, it empowers users with data-driven insights that drive realworld impact. By leveraging cutting-edge technology, it offers several key benefits:

Optimized Herd Management

By tracking livestock movements in near real-time, our system enables herders to make smarter decisions on grazing patterns, preventing overgrazing and ensuring healthier pastures for both livestock and wildlife.

Animal Conservation & Monitoring

By monitoring large groups of animals, we help better understand their behavior and ensure their protection and successful reintroduction into the wild.

Efficient Water Resource Management

With access to near real-time data on herd behavior and water usage, users can optimize water distribution, reducing waste and ensuring a sustainable supply in drought-prone regions.

Sustainable Land Use via Pasture Data:

Combining GPS tracking with in-depth data on pasture health, our solution offers a comprehensive view of the environment, allowing for better land management and sustainable resource use.

CLS
COLLECTE LOCALISATION SATELLITES

Satellite-Driven Land & Livestock Management

Argos Services, powered by CLS, combines satellite connectivity, via a European constellation, and Earth Observation data to support livestock tracking, pasture monitoring, and water resource management, all in one reliable solution.

KEY FEATURES

• **Global Coverage:** including the most remote areas

• **Accurate Tracking:** GNSS positioning

• **EO Monitoring:** Earth Observation data (Imagery & Altimetry) tracks pasture health and water availability

• **Low Power Transmission:** our solution operates using the most performant satellite transmission system for animal tracking

• **Security & Reliability:** We ensure secure data transmission with high-security processing and dedicated data centers

With Argos Services, manage land and livestock sustainably, anywhere, anytime.

Reliable Satellite Collars
for Livestock and Wildlife

The CLS Satellite Collar ensures long-term, low maintenance tracking in even the most remote areas, supporting sustainable herd and wildlife management:

• **Multi-GNSS Tracking:** Accurate positioning, via GPS, GALILEO, GLONASS, BEIDOU and QZSS.

• **Kinéis Connectivity:** Seam less satellite transmission, even in isolated regions.

• **Long Battery Life:** Up to 4 years of autonomous operation.

• **Rugged & Simple:** Durable design with no buttons or solar panels.

• **Geofencing Alerts:** Notifcations when animals cross set boundaries.

• **Smart Behavior Insights:** Integrated accelerometer for movement and activity analysis + alerting.

TECHNICAL FEATURES:

Box Dimensions: 145 x 78 x 50 mm

Total Weight: < 500g

Adaptable Collar: wide range of colors and sizes, depending on your animal.

Battery Replacement: Easy-to-replace battery system

CLS
COLLECTE LOCALISATION SATELLITES

Track your herds: Monitor the location
& health of your livestock in near real-time

View your data in near real-time and access locations,
messages and key stats

Smart Herding Platform

Monitoring and surveillance

Our integrated platform brings together multiple data sources into one powerful tool. By combining contextual information and on-the-ground data (such as weather stations and feld reports) with advanced tracking and analytics, it offers tailored features for a wide range of users through custom interfaces.

HERDERS

• **Track Your Herds:** Monitor the location and health of livestock in near real-time.

• **Set Zones and Alerts:** Define grazing areas and receive alerts for boundary crossings or other key events.

• **Stay Informed:** Get immediate alerts about hazards such as extreme weather or security threats.

AUTHORITIES

• **Manage Risks Effectively:** Observe and respond to environmental hazards as they occur.

• **Send Emergency Alerts:** Quickly notify herders or conservation teams during urgent situations.

• **Up-to-Date Statistics:** Access near real-time data: View current statistics on herd movements, grazing trends, and water usage to support policy and planning.

STAKEHOLDERS

• **Monitor Project Progression:** Follow the progress of livestock and conservation initiatives.

• **Evaluate Impact:** Measure results and environmental effects through detailed analytics.

• **Support Decisions:** Use data insights to adapt strategies and communicate outcomes with partners and funders.

Key Information & features

Our solution gives users full control, with easy access to near real-time data, alerts, and management tools across animals and natural resources.

KEY FEATURES

• **View Data in near real-time:** Access locations, messages, and key stats.

• **Manage Herds & Animals:** Track individual animals or groups.

• **Custom Zones & Alerts:** Define areas and receive alerts for key events.

• **Data Sharing:** Easily share information with partners and authorities.

• **Land Mapping:** Monitor vegetation, pasture health, and water reserves.

ANIMAL-RELATED ALERTS

• **Geofencing:** Alerts for boundary crossings

• **Behavior Changes:** Warnings for unusual movement or activity

• **Health Indicators:** Alerts for fever, signs of calving or illness

• **Animal Proximity:** Notifcations for unusual closeness or distance between animals.
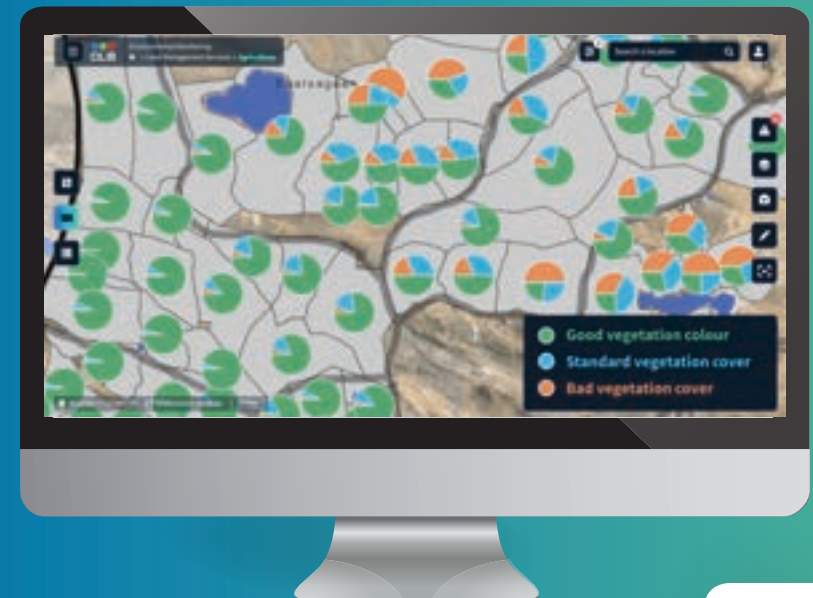
DEVICE ALERTS

• Low Battery

• Connectivity Issues

• Sensor Malfunctions

• Message and data usage tracking

ENVIRONMENT-RELATED ALERTS

• Extreme weather warnings (heat, drought, floods)

• Fire and flood risk alerts

• Alerts for vegetation or plant cover loss

Up-to-Date Statistics: View current statistics on herd movements, grazing trends, and water usage to support policy and planning.

Land Mapping: Monitor vegetation, pasture health, and water reserves

CLS
COLLECTE LOCALISATION SATELLITES

CLS

A subsidiary of CNES (34%) and CNP (66%), CLS has been a global leader in Earth observation and environmental monitoring since 1986. With deep expertise in geospatial data processing and satellite connectivity, CLS develops and delivers land use and occupation databases to support decision-making at local to international levels.

40
Years of experience in land mapping and space connectivity

150
in-house experts working together to help create prosperous and resilient communities

24/7
Operations center & Customer Service

+400,000
Animals tracked

FROM VISION TO ACTION: PROJECT SNAPSHOTS

Mongolia

In partnership with OREADE-BRECHE and AVSF, CLS developed a remote sensing tool to monitor pasture conditions in a Mongolian pilot area. Over two years, the project delivered new climate-relevant insights, strengthened local capacity through training, and evaluated the environmental impact of evolving herding practices, demonstrating the global potential of satellite-based pasture management.

SISMA: Space-Based Livestock Management for Reindeer Herders

SISMA is a satellite-enabled solution developed by CLS & ES-PAS, with support from ESA & CNES, to assist reindeer herders. By integrating GPS tracking, satellite connectivity & Earth observation, SISMA enables real-time monitoring of animal movements, pasture conditions, & environmental risks. Tailored tools support herders, veterinarians, and government agencies in improving herd management, disease detection, and land-use planning across vast, remote territories.

herding@groupcls.com

www.argos-system.org · www.cls.fr

CLS
COLLECTE LOCALISATION SATELLITES

studio ogham 05 62 71 35 35