Making the Case for Livestock:

CLIMATE & ENVIRONMENT

Livestock systems vary greatly around the world and can **enhance or harm the environment** depending on how they are managed. Livestock and environment interactions include **climate change**, **water and land use**, **nutrient recycling** and **biodiversity**. Livestock play a key role in the **bio-economy** by increasing the value of crop residues and agricultural by-products. Context-specific livestock production practices can be developed to maximize the synergies between livestock and the environment.

CLIMATE CHANGE ADAPTATION

- **Livestock production is an effective way to help farmers adapt to climate change and the drier conditions that may occur.**
- **After a climate shock, livestock are often the only asset that people have to help them recover.**

Climate change adaptation policies and investment should not discourage ownership of livestock. Rather, policies should facilitate the use of livestock as a climate change adaptation strategy; for example, targeted livestock off-take organized by governments can enable livestock keepers to cope better with droughts.

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CLIMATE CHANGE MITIGATION

- **Feeding animals better and enhancing rangeland productivity through better pasture management along with other interventions to improve productivity can significantly reduce unit emissions.**

Large scope to reduce greenhouse gas emissions exists through increased livestock productivity (measured per unit of livestock product). Enhancing rangeland productivity through better pasture management and use of higher productivity

animals can significantly reduce unit emissions. Climate change mitigation policies should aim to enhance the efficiency of livestock production. Funding should be channeled to the livestock sector to facilitate adoption of appropriate productivity-increasing technologies.

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COMPETITION FOR LAND AND WATER

➢ **The demand by livestock for feed and land does not necessarily compete with the food needs of people.**

To avoid competing with food crops, forages can be grown beside hedges or as strip crops that help prevent soil erosion. Manure from animals fed on crop residues can be used to fertilize soil and enhance crop productivity. Policies that aim to enhance agricultural productivity should incorporate both livestock and crops and promoted integrated solutions that maximise the use of human inedible feed resources.

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SUSTAINABLE RESOURCE MANAGEMENT

➢ **Well-managed livestock can ensure sustainable land and water management. Livestock manure is a ready source of natural fertilizer for crops, providing 12% of the nitrogen used for crop production globally, rising to 23% in mixed crop livestock systems. Livestock can also help restore degraded land; and in rangelands, livestock keeping can contribute to the biodiversity of plants, soils and animals.**

It is critical to have policies that encourage and incentivize livestock-crop interactions for optimal resource use; these should include supporting markets for crop residues (such as maize stover and rice straw) and manure. Government programs that aim to increase agricultural productivity should be broad-based to cover both crops and livestock and their interaction.

In mixed crop-livestock systems, forage production can contribute to sustainable land and water management, by for example, preventing erosion and enhancing soil fertility through nitrogen fixation. Policies and investments should support these innovations.

Equitable and guaranteed land access is crucial for livestock keepers in extensive systems. Better land use planning and land management incentives can encourage more sustainable livestock production.

Sustained livestock mobility that is critical to ensure sustainable livestock keeping in extensive systems requires appropriate land use mapping and planning policies. Livestock movement corridors should be protected and assured in land use plans and supported with infrastructure.

Increasing rangeland productivity by providing the right community decision-making incentives and mechanisms is critical for sustainable land management.

Optimal approaches to restore degraded lands include enhancing livestock productivity, promoting community range management and enhancing insurance schemes to relieve livestock keepers of the need to keep many livestock for insurance purposes.

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