



Supporting Global Livestock Advocacy for Development (GLAD project)

An analysis of the range, frequency and sentiment of coverage of the livestock for development sector in selected media sources, April 2017 to April 2019

Marchmont Communications

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Executive summary

Marchmont Communications carried out an audit of 36 media outlets, including those with a global reach as well as publications with specific regional focus, to analyse the range, frequency and sentiment of coverage of global livestock development issues since 2017¹. The aim of this exercise was to assess how coverage of global livestock issues, particularly those relevant to developing countries, may have changed since the last media audit, and to identify new or emerging opportunities for engaging with media to add context to issues already being covered. The three key issues analysed for each outlet were:

- Livestock's role in supporting livelihoods/economic growth in the developing world;
- Livestock's role in health and nutrition in the developing world;
- Livestock's contribution/impact on climate (mitigation and adaptation) and environment.

The same global top tier and regional media outlets were selected for the audit to allow comparisons to be drawn between coverage. In addition, African outlets were audited as a distinct category with relevant publications identified based on their reach, reputation and relevance to the dialogue around livestock for development.

Desk research by publication was conducted to search for articles that covered key livestock issues within the last year in each media outlet. Search terms such as "livestock", "meat industry", "climate change", "animal agriculture" and "animal health" were used to identify relevant stories which were then analysed in the table below. Coverage was assessed according to frequency, with top-level observations regarding tone and sentiment, for example, nuance around pro-poor livestock issues versus generalisations across the wider livestock sector.

Analysis showed that the most frequently reported aspect of livestock was its contribution to greenhouse gases, featuring regularly in almost all international outlets surveyed and in 75 per cent of all outlets. This indicates that the environmental impact of livestock continues to be a predominant concern. Thereafter, global media devoted a similar amount of space to health and nutrition, climate mitigation and incomes in developing countries. Among African outlets, the balance of coverage fell more towards livestock's roles in income generation and nutrition, with few publications focusing on climate change and greenhouse gas emissions.

Since 2017, global media has continued to prioritise livestock's role in climate change and greenhouse gas emissions, but is increasingly covering health-related issues such as antimicrobial resistance and overconsumption of animal-source foods. Emerging topics of interest include lab-grown meat and other alternatives, sustainable diets, and innovations for more sustainable food production. Meanwhile, there has been a decline in coverage of livestock's contribution to livelihoods and incomes across global media, particularly as regards developing countries, as the livestock sector overall faces ongoing scrutiny from the developed world.

¹ An earlier audit of top tier and regional media was carried out in late 2016.

Analysis of Coverage

The following table shows the breakdown of coverage between April 2017 and April 2019 by global, regional and specifically African media according to the key themes of income generation, nutrition, greenhouse gas emissions and climate change mitigation. The table shows the number of outlets that covered significantly each key theme, which is also expressed as a percentage of the total number of outlets assessed.

2017-2019 Tally of global, regional, and African news outlets	Significant coverage of livestock's role in:			
	Developing world income generation	Developing world nutrition	Greenhouse gas emissions	Climate change mitigation
Global Top-Tier Outlets (18) (%)	5 27.8%	4 22.2%	17 94.4%	5 27.8%
Non-African Regional Outlets (8) (%)	3 37.5%	4 50.0%	7 87.5%	2 25.0%
African Outlets (10) (%)	10 100.0%	10 100.0%	3 30.0%	3 30.0%
Total (36) (%)	18 50.0%	18 50.0%	27 75.0%	10 27.8%

For reference and comparison, the breakdown of coverage from 2016-2017 is shown below. African media is included with other regional outlets:

2016-2017 Tally of global, regional, and African news outlets	Significant coverage of livestock's role in:			
	Developing world income generation	Developing world nutrition	Greenhouse gas emissions	Climate change mitigation
Global Top-Tier Outlets (18) (%)	7 38.8%	1 5.5%	17 94.4%	5 27.8%
Regional Outlets (11) (%)	5 45.5%	1 9%	6 54.5%	1 9%
Total (29) (%)	12 41.4%	2 6.9%	23 79.3%	6 20.7%

Between 2016 and 2017, the most frequently reported aspect of livestock across all media was its contribution to greenhouse gases, which has remained the same between 2017 and 2019 (94%).

Between 2016 and 2017, coverage of livestock's role in nutrition lagged furthest behind, but this has levelled out and is covered as much as livestock's role in income generation (c. 50% overall). Coverage of livestock's contribution to climate mitigation remains stable with coverage in around a third of the media audited.

Key findings

The key findings of the global audit are summarized in the table below:

	1. Livelihoods & economic growth	2. Health and nutrition	3. Climate & environment
Summary	<p>Coverage of livestock's role in income generation has decreased in the past two years with less than a third of publications audited covering the topic.</p> <p>Most frequently, livestock's contribution to livelihoods is linked to disasters, conflicts and losses, highlighting the risks and challenges of livestock production.</p> <p>Among African media, income generation was among the most covered aspects of livestock.</p>	<p>Health and nutrition has become a widely covered aspect of livestock but this focus has mostly fallen on the context in developing countries, particularly on antimicrobial resistance and arguments for reducing consumption of animal-source foods.</p> <p>Lab-grown meat, plant-based alternatives and genetic solutions are also an emerging topic in global media.</p> <p>Among African media, health and nutrition was among the most covered aspects of livestock.</p>	<p>The impact of livestock on the environment and its contribution to climate change continues to be the most extensively covered aspect of the sector among global and regional media, covered by almost every global outlet audited.</p> <p>However, with few exceptions, the focus tends to be the level of emissions rather than opportunities within livestock for climate mitigation.</p> <p>Among African media, livestock's environmental impact is the least covered of the key themes.</p>
Issues most covered:	<ul style="list-style-type: none"> • Losses linked to disasters or conflict; • Livestock/insurance as a safety net (including ILRI work); • Poverty reduction. 	<ul style="list-style-type: none"> • Health risks of red meat; • Dietary trends and alternatives; • Livestock's contribution to antimicrobial resistance. 	<ul style="list-style-type: none"> • Livestock's contribution to greenhouse gas emissions (including coverage of ILRI's feed trials at the Mazingira Centre); • Impact of climate change on livestock; • Spread of animal disease.
Issues overlooked:	<ul style="list-style-type: none"> • Gender equality/empowering women; • Livestock as a contributor to GDP; • Barriers to trade/access to markets. 	<ul style="list-style-type: none"> • Animal-source foods' potential for addressing global malnutrition; • Importance of animal health to human health (zoonoses and food safety); • Role of livestock in improving incomes to afford better diets. 	<ul style="list-style-type: none"> • Opportunities for livestock to support climate mitigation; • Restoration of degraded land/sustainable and managed grazing; • One Health connections between animal and environmental health.
Sentiment:	<p>The sentiment towards livestock as a means of income generation is varied.</p> <ul style="list-style-type: none"> • Negative: 	<ul style="list-style-type: none"> • Mostly negative: With some exceptions, coverage generally focuses on the health 	<ul style="list-style-type: none"> • Mostly negative: The focus tends to be on livestock as a contributor of

	<p>Risks/challenges of livestock production in developing countries.</p> <ul style="list-style-type: none"> • Positive: Livestock-keeping as a traditional, cultural activity, both in developed and developing countries. 	<p>risks linked to animal-source foods, and the contribution of antibiotic use in animal agriculture to AMR.</p> <ul style="list-style-type: none"> • Where coverage was positive, it typically focused on rejecting environmental arguments for reducing meat consumption. 	<p>greenhouse gas emissions and the need to reduce consumption of animal-source foods to overcome this.</p> <ul style="list-style-type: none"> • The more nuanced publications, though, do explore the interactions between animal agriculture, climate change and the environment.
Opportunities:	<ul style="list-style-type: none"> • Engage positively with media around livestock losses linked to disasters/conflicts, as an opportunity to highlight the importance of livestock as well as solutions/opportunities to build resilience and anticipate extreme events. • Position and frame livestock's economic importance within the external news agenda, for example, around issues related to female empowerment, migration, resilience (e.g. importance of livestock in South Sudan). • Build on previous positive coverage of livestock for development to extend pro-poor narratives around livestock, showcasing case studies via media visits. 	<ul style="list-style-type: none"> • Differentiate health and dietary challenges in developing countries from those in developed countries, including issues of food safety and quality. • Harness interest in new scientific solutions and innovations, such as lab-grown meat, by offering broad perspective and then pivoting into specific livestock interventions and offering alternative and/or more nuanced views. • Capitalise on new centres of expertise such as the Antimicrobial Resistance Hub to demonstrate efforts to address AMR with a "One Health" approach. This could involve a media visit to the site, or press conferences/events hosted at the Hub. 	<ul style="list-style-type: none"> • Leverage the profile and expertise around livestock for development at research institutes such as the Mazingira Centre for case studies demonstrating the potential for livestock to support climate mitigation; • Challenge narratives such as the EAT-Lancet report by differentiating the environmental impact of livestock across regions; • Make use of livestock for development assets such as Why Livestock Matter website, investment cases and case studies when engaging on divisive issues such as climate change and livestock's greenhouse gas emissions.
Specific outlets to target:	<ul style="list-style-type: none"> • AFP • Al Jazeera • BBC • Reuters • Economist 	<ul style="list-style-type: none"> • Al Jazeera • BBC • Daily Telegraph • Economist • National Geographic • NPR • Reuters 	<ul style="list-style-type: none"> • AFP • AP • FT • National Geographic • NPR • Wall Street Journal

Further observations and recommendations

- **Developed world stories still dominate the headlines but many publications are presenting the “big picture”:** Longform articles or special reports are increasingly being used by outlets to present livestock within the broader context of global food security and climate change. From the BBC’s [“Big Idea: A World Without Livestock?”](#) to National Geographic’s [“The Future of Livestock Farming”](#), publications are trying to help their audience answer big questions. ILRI and partners could capitalise on this by offering topline commentary on these broad issues.
- **Positive livestock stories tend to focus on the romantic aspect of farming heritage:** Case studies from [Mongolia](#) and [Spain](#), for example, highlight the emotive, human element of livestock-keeping and the traditions that can help tackle challenges such as food security and climate change. This trend presents an opportunity to tell the story of livestock through livestock keepers in developing countries.
- **Lab-grown meat is an emerging topic among global media:** Coverage of meat alternatives in top tier media has grown along with the advances in genetic technologies. For the most part, this was used to support arguments for reducing consumption ([The Times](#): “Scientists test taste for gene-edited meat”; [Wall Street Journal](#): “Startup Producing Cell-Grown Meat Raises New Funding”) but in some cases, scientific advances were seen as a means to address poverty through livestock ([BBC](#): “Gene-edited animal plan to relieve poverty in Africa”).
- **Coverage of livestock’s role in antimicrobial resistance is growing:** Antibiotic resistance is one of the emerging health topics linked to livestock with coverage including [“Your burger may be increasing antibiotic resistance”](#) (Mail Online) and [“Revealed: world’s largest animal drugs company sells antibiotics to Indian farms to fatten livestock despite superbug risk”](#) (Telegraph). There is an opportunity here to re-frame the discussion by highlighting regional variations and challenges within animal health.

African media

Key takeaways from African media analysis:

- **Regional African media prioritised coverage of livestock losses to disasters and climate events:** Media with a broader focus (such as All Africa, and Quartz Africa) tended to focus on the impact of climate events or conflict on livestock, while national media (such as the Standard, New Vision, etc) focused more on specific trade and health issues.
- **The overall tone tends to be positive towards livestock:** The focus of much of the coverage tended to highlight the positive contribution of a healthy livestock sector to income generation and nutrition. There was less focus on environmental issues.
- **Coverage of livestock issues was shared between national and regional media:** While national media such as The Standard relied heavily on news agencies such as AFP, national coverage also inspired more regional coverage, for example, CNBC's report on [livestock becoming collateral in Zimbabwe](#) was also subsequently covered by [Quartz Africa](#).
- **After trade, animal health issues were the most covered:** This included not only disease outbreaks but also access to veterinarians and the proper use of animal medicines, for example, "[Call for change in antibiotic use to reduce drug resistance](#)" (Daily Nation) and "[Managing livestock and disease burden in Karamoja](#)" (Daily Monitor).
- Outlets to be targeted as a priority:
 - Reuters Africa
 - Quartz Africa
 - CNBC Africa

Other regional media

Key takeaways from regional media analysis:

- **Regional media continues to prioritise regional trade and industry challenges**, in particular, technology and innovations helping to make the sector more sustainable (e.g. "[Colombian dairy farm goes high tech, ups production](#)" and "[Mobile vets come to the aid of Malawian farmers](#)").
- **Regional responses to climate change have come into focus, specifically the challenge of a sustainable diet.** A number of outlets highlighted livestock in the context of regional responses to the Paris Agreement, including [South China Morning Post](#), [Folha de São Paulo](#) and [EFE](#).
- **Opportunity to pitch locally appropriate case studies that speak to wider global issues:** this could involve highlighting the regional variations between a sustainable diet, and the different responses needed to climate change.
- Outlets to be targeted as a priority:
 - Deutsche Welle
 - EFE
 - Times of India

Annex 1: Detailed Analysis

Sub-Annex A: Global Outlets

Outlet	Examples of Recent Coverage	Analysis	Observations since 2017
Agence France Presse	<p>15/03/2019 – Cattle thieves kill 17 in NW Nigeria: police</p> <p>12/12/2018 – Raising cattle a risky business for Venezuela ranchers</p> <p>26/11/2018 – No, your heart won't look like this from simply eating pork</p> <p>10/10/2018 - World must slash meat consumption to save climate: study</p> <p>29/09/2017 – Planet-warming methane from livestock underestimated: study</p>	<ul style="list-style-type: none"> • Broad range of livestock issues covered, including the environmental impact of livestock, health-related issues and opportunity for income generation in developing countries. • Coverage is typically nuanced and contextualised according to the region. • Less focus on livestock sector's contribution to nutrition and climate mitigation. 	<ul style="list-style-type: none"> • Coverage of livestock in the developing world continues to be mostly linked to disasters and conflict. • Less attention on nutritional value of livestock or how the sector is working to mitigate climate change.
Al Jazeera	<p>07/12/2018 – Denmark mulls labelling food based on its environmental impact</p> <p>10/08/2018 – In Mongolia, using new science to preserve traditional lifestyles</p> <p>04/08/2018 – How Spain's traditional grazing methods prevent wildfires</p> <p>01/05/2018 – Navigating drought: The app saving Kenya's herders</p> <p>13/11/2017 – Meat the future: Dutch scientist creates beef in laboratory</p> <p>03/06/2017 – Beyond meat: The end of food as we know it?</p>	<ul style="list-style-type: none"> • Regular reporting on livestock issues in both developed and developing countries. • More recent coverage of importance of livestock to developing countries (see Mongolia and Kenya pieces). • Emphasis is still on livestock's contribution to greenhouse gas emissions, with focus on consumer-end solutions. 	<ul style="list-style-type: none"> • Growing level of coverage around the economic importance of livestock in the developing world. • Continues to be little focus on the nutritional value of livestock or how the sector can mitigate climate change. • More focus on meat alternatives and arguments around reducing consumption.
Associated Press	<p>20/03/2019 – Floodwaters threaten millions in crop and livestock losses</p> <p>30/09/2018 – Gassy cows are bad for the planet; could seaweed diet help?</p>	<ul style="list-style-type: none"> • Consistent coverage of US livestock issues, with focus on environmental impact of livestock. • Some focus on livestock's role in 	<ul style="list-style-type: none"> • Slight increase in coverage of livestock's contribution to climate mitigation. • Less focus on developing world

	06/08/2018 – Romania reports 500 outbreaks of African swine fever in pigs	<p>climate change mitigation (see Seaweed diet piece).</p> <ul style="list-style-type: none"> • Less coverage of livestock in developing countries, except disaster-related stories. 	or its livestock context.
BBC	<p>19/03/2019 – Artificial meat: UK scientists growing 'bacon' in labs</p> <p>15/02/2019 – Gene-edited animal plan to relieve poverty in Africa</p> <p>28/11/2018 – Cow burps, food miles and climate change</p> <p>08/10/2018 – Would you give up beef to help the planet?</p> <p>03/06/2018 – The Big Idea: A World Without Livestock?</p> <p>19/02/2017 – In pictures: Kenyans share their dinner to save livestock</p>	<ul style="list-style-type: none"> • Primary focus remains on British livestock industry. • Strong focus on global livestock issues, including nutrition and livelihoods. • Heavy emphasis on livestock's environmental impact, with food calculators and articles covering emissions linked to meat consumption. 	<ul style="list-style-type: none"> • Increased focus on global livestock issues, especially regarding nutrition and income generation. • Surge in focus in lab-grown and alt-meat technologies to reduce livestock consumption.
CNN	<p>27/03/2019 - The Midwest flooding has killed livestock, ruined harvests and has farmers worried for their future</p> <p>10/03/2019 - How climate change is fueling extremism</p> <p>12/12/2018 - The beef with beef</p> <p>01/06/2018 - Experts say algae is the food of the future. Here's why.</p> <p>01/03/2017 - Protein Challenge 2040: How can we feed 9 billion people?</p>	<ul style="list-style-type: none"> • Strong focus on the negative aspects of the meat industry, greenhouse gas emissions, and human health. • Less focus on developing world issues of livelihoods and nutrition. • Advocates moving away from livestock in many developing nations (see "Fueling Extremism" piece). 	<ul style="list-style-type: none"> • Coverage continues to lean towards livestock industry in developed countries. • Focus falls on greenhouse gas emissions (see "Beef with Beef" piece).
Daily Telegraph	<p>25/02/2019 – Meet the beef and dairy farmer who turned vegan – and gave his cows to an animal sanctuary</p> <p>12/10/2018 – Revealed: world's largest animal drugs company sells antibiotics to Indian farms to fatten livestock despite superbug risk</p> <p>29/08/2018 – Farmers should 'smile' at their livestock to</p>	<ul style="list-style-type: none"> • Much of the focus on livestock falls on animal health and welfare in the context of consumer concerns around antibiotic resistance. • Coverage of livestock issues in developing countries tend to be photo opportunities. • There is little coverage of 	<ul style="list-style-type: none"> • Increased focus on health and animal welfare issues, primarily AMR. • Coverage from a developing world angle continues to be minimal and linked to major news stories such as drought and conflict.

	<p>produce better meat</p> <p>26/02/2018 – Farmers are putting coats on calves to cut down on antibiotic use, vet reveals</p>	<p>nutritional benefits of animal-source food.</p> <ul style="list-style-type: none"> • New section on “global health security” presents an opportunity for more nuanced coverage of livestock in developing countries. 	
Financial Times	<p>11/03/2019 - Why we need to talk about a healthier way of feeding the world</p> <p>19/02/2019 - Farming and food groups warned of ‘burping cow’ risks</p> <p>18/01/2019 – How to change your diet to save the planet</p> <p>15/10/2018 - New tools enable farmers to cut cows’ greenhouse gas emissions</p> <p>26/10/2017 - Meet the “connected cow”</p>	<ul style="list-style-type: none"> • Coverage recognises livestock’s contribution to greenhouse gas emissions and advances in livestock sector within developed countries. • Less attention was given to livestock’s importance for developing and rural communities, livestock’s nutritional value, or how the sector is mitigating climate change. • FT’s Emerging Market desk offers an opportunity to cut through with stories from developing countries. 	<ul style="list-style-type: none"> • Continued strong focus on livestock’s contributions to greenhouse gas emissions. • Growing recognition of how the sector is mitigating environmental impact, although focus remains on reducing meat/dairy consumption. • Limited coverage of livestock’s importance in the developing world in nutrition/income generation.
Fox News	<p>17/01/2019 - Less beef, more beans: Experts say world needs new diet</p> <p>08/07/2018 - Dairy farmers hit hard by declining milk demand</p> <p>27/04/2017 - The burger of the future comes from crickets, not cows</p>	<ul style="list-style-type: none"> • Predominantly developed world coverage of livestock issues (eg, antibiotic use). • Less coverage of developing world livestock issues with the exception of disaster coverage. 	<ul style="list-style-type: none"> • Increased focus on environmental impact of livestock, although little corresponding mitigation coverage (other than encouraging reducing consumption). • Continued focus on developed world livestock issues, primarily on nutrition and economic importance.
Mail Online	<p>13/03/2019 - ‘Tax red MEAT to save the planet’: UN report claims hiking price could reduce greenhouse gas emissions and combat wildlife habitat loss by encouraging people towards a plant-based diet</p>	<ul style="list-style-type: none"> • Coverage recognises contribution of livestock to greenhouse gas emissions alongside mitigation stories. • Developing world 	<ul style="list-style-type: none"> • Continued focus on dietary trends in developed countries, particularly on challenging arguments around

	<p>27/11/2018 – Veganism alone CAN'T stop global warming: If everyone on Earth gave up eating meat and dairy we would STILL be less than half way to reaching climate targets</p> <p>17/10/2018 – Your burger may be increasing antibiotic resistance: Almost every chain except for Shake Shack is slammed for failing to cut out medicated livestock</p> <p>3/10/2018 – Coming up trumps! Swiss cow feed fights global warming by cutting flatulence in livestock, dropping cattle CO2 emissions by 10%</p> <p>18/07/2018 - Meat and dairy industry is on course to contribute more to global pollution than OIL companies by 2050, damning new report claims</p>	<p>stories came from wires (Reuters, AFP).</p>	<p>reducing consumption of animal-source foods.</p> <ul style="list-style-type: none"> • Greater focus on the environmental impact from livestock.
<p>National Geographic</p>	<p>18/03/2019 – The future of livestock farming</p> <p>17/01/2019 – Eating meat has 'dire' consequences for the planet, claims British report</p> <p>18/12/2018 – How cattle can help save the birds of the Great Plains</p> <p>01/05/2018 – The Dangers of the Dzud, Mongolia's Lethal Winters</p> <p>02/04/2018 – Meet the maker – José Gordón, the Spanish ox farmer</p>	<ul style="list-style-type: none"> • The “future of livestock farming” piece was produced as part of NatGeo’s “Questions for a Better Life” and addressed nuances of sustainable livestock production. • Coverage typically looks at the interaction between livestock and the environment and is relatively balanced in tone. • Coverage included the conclusions of the EAT-Lancet report in terms of eating animal-source foods. • Articles generally focused on the US market, less on the developing world. 	<ul style="list-style-type: none"> • Coverage continues to be nuanced, exploring the interaction between livestock, the environment and nutritional needs, erring towards issues in developed countries.
<p>New York Times</p>	<p>07/09/2018 - Why Aren't We Eating More Insects?</p> <p>25/05/2018 - Antibiotics in Meat Could Be Damaging Our Guts</p>	<ul style="list-style-type: none"> • Focus on livestock in developed countries, particularly around contribution to greenhouse gas 	<ul style="list-style-type: none"> • More focus on health issues, such as AMR. • Less focus on livestock’s role in

	<p>17/03/2018 - The Case for a Carbon Tax on Beef</p> <p>05/12/2017 - Six Ways We Can Adapt to Climate Change</p> <p>15/06/2017 - India, Stung by Backlash, Plans to Roll Back Restrictions on Cattle Slaughter</p>	<p>emissions and antibiotic resistance.</p> <ul style="list-style-type: none"> • Less focus on supply-side climate mitigation. • Coverage recognises importance of livestock to rural income generation and nutrition. • Little focus on developing world issues or livestock's role in income generation. 	<p>the developing world and in income generation.</p> <ul style="list-style-type: none"> • Less focus on livestock's role in climate change mitigation.
NPR	<p>02/04/2019 – Some In The Beef Industry Are Bucking The Widespread Use Of Antibiotics. Here's How</p> <p>11/03/2019 – It's 2050 And This Is How We Stopped Climate Change</p> <p>10/02/2019 – How To Get Meat Eaters To Eat More Plant-Based Foods? Make Their Mouths Water</p> <p>27/01/2019 – This Diet Is Better For the Planet. But Is It Better For You, Too?</p> <p>29/05/2018 – How Scientists In Kenya Are Trying To Understand Cow Emissions</p> <p>04/12/2017 – Across The World, If You Eat For Your Health, You'll Help The Planet</p> <p>22/04/2017 – Chew On This For Earth Day: How Our Diets Impact The Planet</p>	<ul style="list-style-type: none"> • Coverage is largely US-focused or broadly global, less on specific developing world issues relating to livestock. • Coverage features ILRI's work on regional differences in livestock's environmental impact. • Little emphasis on nutritional value or economic importance of livestock in developing world. • Environmental focus is on greenhouse gas emissions from livestock, and mitigation features consumption reduction and plant-based alternatives. 	<ul style="list-style-type: none"> • Slightly greater focus on developing world issues, including, livestock health issues. • More focus on livestock's role in climate change, less accompanying focus on industry-side mitigation.
Reuters	<p>10/03/2019 – Dairy firm Arla plans to cut carbon emission by 30 percent over the next decade</p> <p>12/02/2019 – In Ethiopia, climate change leads herders to retrain as farmers</p> <p>16/10/2018 – Rich nations must eat less meat to tackle climate change – campaigners</p> <p>22/08/2018 – Flock on - Mongolia</p>	<ul style="list-style-type: none"> • Global livestock issues are reported regularly, both in developed and developing world. • Remains a strong focus on livestock's contribution to greenhouse gas emissions and environmental impact. • Regular coverage of 	<ul style="list-style-type: none"> • Strong focus on livestock's contribution to greenhouse gas emissions, less focus on mitigation. • Increased focus on how to mitigate livestock-induced climate change, primarily through reducing meat consumption.

	<p>meat exporters turn to Iran's halal markets</p> <p>07/08/2018 – In Mogadishu, imported dairy cows jumpstart local milk industry</p> <p>19/07/2018 - Fighting global warming, one cow belch at a time</p> <p>26/01/2018 – Do-good meat: are investors only after their pound of flesh?</p> <p>25/05/2017 - Can we protect livestock as a lifeline for the most vulnerable?</p> <p>04/09/2017 – Meaty challenge: What's on the menu for future cities?</p>	<p>the role of livestock in the developing world and in income generation.</p>	<ul style="list-style-type: none"> • Slight uptick in coverage of supply-side livestock environmental mitigation measures (see Arla piece).
The Economist	<p>05/03/2019 – Davos 2019 Highlights Importance of Food Sustainability for Addressing Top Global Risks</p> <p>13/12/2018 – In Africa, agricultural insurance often falls on stony ground</p> <p>03/12/2017 – Food for Thought in the US</p> <p>09/11/2017 – African herders have been pushed into destitution and crime</p> <p>30/11/2017 – What's in New Zealand's water?</p> <p>31/08/2017 – How to provide a protein-rich diet to a growing population</p> <p>06/03/2017 – One Bite-Sized Solution to our Biggest Health Threats</p>	<ul style="list-style-type: none"> • Featured articles on greenhouse gas emissions and mitigation, the role of livestock on income generation in the developing world. • Advocates a nuanced, “modest meat” diet among developed nations. • Advocates for improvements to the livestock sector via widespread improvement to existing feeding, health and husbandry practices rather than reducing consumption. 	<ul style="list-style-type: none"> • Continued coverage of importance of livestock for nutrition and income in the developing world. • Increased focus on mitigation measures through building environmental and climate costs of livestock products into prices to moderate consumption.
The Guardian	<p>29/03/2019 – Can the world quench China's bottomless thirst for milk?</p> <p>16/03/2019 - Have we hit 'peak beef'?</p> <p>10/10/2018 – Huge reduction in meat-eating 'essential' to avoid climate breakdown</p>	<ul style="list-style-type: none"> • New section called “Animals Farmed” with a heavy focus on animal health and welfare. • Less focus on developing world issues related to livestock beyond 	<ul style="list-style-type: none"> • Reduction in focus on developing world livestock issues. • Increase in coverage of environmental impact and greenhouse gas

	<p>15/09/2018 – Europe's meat and dairy production must halve by 2050, expert warns</p> <p>08/06/2018 – The best way to save the planet? Drop meat and dairy</p> <p>31/05/2018 – Avoiding meat and dairy is 'single biggest way' to reduce your impact on Earth</p> <p>04/10/2017 – Goodbye – and good riddance – to livestock farming</p>	<p>disasters, conflicts, and weather events.</p> <ul style="list-style-type: none"> • Increased focus on environmental impact of livestock, but very little focus on mitigation from the supply-side. • Repeated calls for dramatic reduction in meat/dairy consumption. 	<p>emissions from livestock, with little on how the sector/industry may mitigate.</p> <ul style="list-style-type: none"> • Increase in coverage of arguments for reducing consumption of animal-source foods in a developed world setting.
The Times	<p>09/04/2019 – Pork prices set to rise after swine fever sweeps China</p> <p>14/03/2019 – Tax meat and eat veg to save planet, says UN</p> <p>16/02/2019 – Scientists test taste for gene-edited meat</p> <p>17/01/2019 – Cut down red meat by 90% to save the planet</p> <p>21/11/2018 – We reduce global emissions, dairy farmers claim</p>	<ul style="list-style-type: none"> • Focus of coverage tends to be domestic trade and consumer issues such as food prices, diets. • Substantial coverage of British livestock and farming with sympathy towards British farmers and livestock producers. • Focus on dietary trends to reduce livestock consumption. • Little coverage of livestock's economic value except for domestic trade. 	<ul style="list-style-type: none"> • Increased focus on dietary trends such as lab-grown/alt-meats and plant-based diets. • Less focus on developing world issues.
Wall Street Journal	<p>18/01/2019 - Farms, More Productive Than Ever, Are Poisoning Drinking Water in Rural America</p> <p>16/07/2018 - Startup Producing Cell-Grown Meat Raises New Funding</p> <p>05/01/2018 - Review: 'Clean Meat' Could Make Livestock Obsolete</p>	<ul style="list-style-type: none"> • Strong focus on environmental and health issues relating to livestock sector, including nutrition, and meat alternatives. • Less focus on nutrition or income generation potential of livestock for developing countries. 	<ul style="list-style-type: none"> • Remains focused on developed world. • Substantial increase in focus on environmental and health issues. • Decrease in focus in nutritional value of livestock.
Washington Post	<p>02/01/2019 - How we can combat climate change (Section 8: Curb the effects of meat and dairy)</p> <p>17/12/2018 - Gene-edited farm animals are coming. Will we eat them?</p>	<ul style="list-style-type: none"> • Focus on developed world livestock issues and context, particularly around climate and health. • Focus on new innovations to improve meat production. 	<ul style="list-style-type: none"> • Coverage continues to focus on the developed world. • Greater focus on climate and environmental issues, as well as health-related issues such as AMR.

	10/11/2017 - Antibiotic legislation falls short in Maryland		<ul style="list-style-type: none">• Less focus on how livestock are a means of income generation and on associated nutritional issues.• Less coverage on developing world and livestock's contribution to nutrition and income.
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Sub-Annex B: African Outlets

Outlet	Examples of Recent Coverage	Analysis
All Africa	<p>05/04/2019 - Botswana: Where's the Beef? Drought-Parched Botswana Struggles to Keep Cattle Culture Alive</p> <p>07/10/2018 - Nigeria: Billions Down the Drain As Flood Destroys Livestock, Farmlands in Bayelsa, Cross River</p> <p>19/07/2018 - Africa: Fighting Global Warming, One Cow Belch At a Time</p> <p>12/08/2017 - Ethiopia: Alarm As Drought Kills Two Million Livestock</p> <p>27/06/2017 – Ethiopia: Quality in Livestock Export to Maximize Foreign Earnings</p> <p>12/04/2017 - Zimbabwe: Rural Folks to Use Livestock As Health Cover</p>	<ul style="list-style-type: none"> • As an aggregator, features many livestock stories that appear in major news wires and African press. • Frequently shares articles that show livestock's impact on broader economies and income generation. • Many shared articles show livestock's contribution to nutrition and health. • Some shared articles discuss environmental/climatic issues from livestock, and how the sector can address these issues.
CNBC Africa	<p>04/03/2019 - How the world's first ever scientific eating plan forgot the poor</p> <p>31/08/2018 - Different approach to agriculture needed: Here's why small-scale farming should be boosted in Africa</p> <p>19/06/2018 - Op-Ed: Why livestock can't be ignored in Africa's war-torn areas</p> <p>18/04/2017 - Zimbabwe to allow cattle, goats and sheep as bank collateral</p>	<ul style="list-style-type: none"> • Strong focus on livestock issues in Africa. • Strongest focus on livestock's importance to nutrition, health issues, and income generation. • Primarily interested in continent-wide developments in the livestock industry with eye towards development. • Attention also paid to the environmental impact of livestock and how the industry/sector should mitigate it (featuring contributions from ILRI via The Conversation).
Daily Monitor (Uganda)	<p>23/03/2019 - Livestock feeding a key factor in gainful farming</p> <p>22/06/2018 - Agriculture contribution to</p>	<ul style="list-style-type: none"> • Strong focus on Ugandan livestock developments and livestock's

	<p>GDP falling - WB</p> <p>28/05/2017 - Poultry products: exporters lose billions</p> <p>16/04/2017 - Managing livestock and disease burden in Karamoja</p>	<p>contribution to income generation.</p> <ul style="list-style-type: none"> • Primary interest is in providing information to farmers, policymakers, and businesses regarding developments and tips in Uganda regarding livestock. • Focus on health and nutrition issues related to livestock. • Some focus on climate change, particularly how it impacts farmers. • Less focus on how livestock contributes to environmental and climactic issues, and how the industry/sector may mitigate.
Daily Nation (Kenya)	<p>09/04/2019 - Call for change in antibiotic use to reduce drug resistance</p> <p>16/01/2019 - The many reasons why you should keep goats</p> <p>28/12/2018 - VET ON CALL; Reflections on joy, trials of livestock agribusiness</p> <p>21/11/2018 - To attain the food security dream, everyone must do their part diligently</p> <p>10/05/2017 - Kenyans to use livestock as security against bank loans</p>	<ul style="list-style-type: none"> • Strong focus on Kenyan livestock issues, but also features news wires (mainly AFP) on global developments. • From own articles, strong focus on livestock as a means of income generation and on nutrition and health issues. • Less focus in own content from environmental/climactic issues associated with livestock or how the industry can mitigate.
Mail and Guardian (South Africa)	<p>09/11/2018 – Transforming Zimbabwe to a Private Sector-Led Economy</p> <p>04/05/2018 – Whistleblower fingers North West leaders in ‘farm scam’</p> <p>28/02/2018 – ANC reclaims its central mission — land</p> <p>02/01/2018 – More people went hungry in Africa in 2017, but new initiatives also bore fruit</p>	<ul style="list-style-type: none"> • Strong focus on livestock as a means of income generation and of wealth sequestration. • Focus primarily on micro-level economic and development issues relating to livestock – regional livestock developments. • Little focus on the

		<p>environmental impact of livestock.</p> <ul style="list-style-type: none"> • Strong focus on the nutritional benefits of livestock and their role in development.
New Vision (Uganda)	<p>09/04/2019 - How Uganda's agricultural sector has improved</p> <p>06/03/2019 - Rabies outbreak: One dead, three admitted, livestock infected</p> <p>12/09/2017 - Teso farmers advised to take advantage of pork market</p> <p>31/08/2017 - Scarcity drives poultry price hikes in Soroti</p>	<ul style="list-style-type: none"> • Main focus on Ugandan livestock industry and local developments. • Provides tips, guidelines, information, and industry insights for Ugandans with a strong angle towards building income. • Strong focus on the role of livestock in income generation, nutrition, and health. • Little to no focus on the role of livestock in environmental and climactic damage or how the industry may mitigate.
Quartz Africa	<p>10/03/2018 - Fake processed food is becoming an epidemic in African urban life</p> <p>08/02/2018 - Cattle theft in Kenya is being tackled with remote-tracking chip technology</p> <p>06/12/2017 - Crowdfarming is being used to bring Somalia's livestock market into the digital economy</p> <p>01/05/2017 - As a cash crunch bites, Zimbabwe wants locals to use livestock as bank collateral</p>	<ul style="list-style-type: none"> • Main focus on African livestock industry and developments relating to nutrition and income generation. • Strong focus on innovations and technologies that enable livestock farmers to be more efficient and resilient. • Some focus on nutritional issues, esp. relating to March 2018 piece on processed food emulating livestock products low in nutritional content. • Less focus on livestock health issues. • Less focus on livestock's environmental impact or how the industry may mitigate said impact.
Reuters Africa	<p>10/04/2019 - South Africa reports farm outbreak of African swine fever - OIE</p>	<ul style="list-style-type: none"> • Strong focus on livestock as a means of growth and income

	<p>05/04/2019 - Where's the beef? Drought-parched Botswana struggles to keep cattle culture alive</p> <p>28/06/2018 - More parents trade girls for cows as war and climate change hit east Africa</p> <p>13/04/2017 - Zimbabwe could soon use livestock as loan security</p>	<p>generation, along with nutritional and health issues.</p> <ul style="list-style-type: none"> • Less focus on the environmental impact of livestock, or how the industry/sector can mitigate environmental or climactic damage. • Primary angle is in covering events relating to livestock around Africa, primarily natural phenomena or government changes that impact regional markets.
<p>The Reporter (Ethiopia)</p>	<p>02/02/2019 - Family Milk Introduces First Ever UHT Milk in Ethiopia</p> <p>20/10/2018 - Poultry, livestock attract foreign investors</p> <p>01/07/2017 - Importers approve Ethiopia's livestock quarantine system</p> <p>28/06/2017 - Milk strategy in the making</p> <p>24/06/2017 - Meat, dairy farmers receive grant</p>	<ul style="list-style-type: none"> • Main focus on livestock issues in Ethiopia • Emphasises new economic and income-generating opportunities within Ethiopia, primarily topics such as foreign investment, new enterprises, or regulatory changes to make production and export of livestock goods easier • Moderate focus on nutrition, especially staples such as milk. • Some focus on animal health issues, especially as insofar they hinder income generation through harming production and exports. • Some focus on how climate change may affect farming generally. • Little focus on how livestock begets environmental damage or how the sector may mitigate this.
<p>The Standard (Kenya)</p>	<p>16/09/2018 – The fight against global warming, one cow belch at a time</p>	<ul style="list-style-type: none"> • Main focus on livestock issues in

	<p>21/01/2018 - Agriculture is among sectors under economic pillar</p> <p>08/07/2017 - How dairy support programmes have liberated Kenyans</p> <p>08/06/2017 - How smallholder dairy farming is transforming rural economies</p> <p>28/04/2017 - Insurance only way to guard against weather-gone-awry phenomenon</p>	<p>Kenya.</p> <ul style="list-style-type: none"> • Emphasises livestock as a means of growth and income generation, along with its importance in nutrition and health. • Some focus on environmental and climactic issues associated with livestock, and how the industry/sector can mitigate this.
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Sub-Annex C: Other Regional Outlets

Outlet	Examples of Recent Coverage	Analysis	Observations since 2017
ABC Australia	<p>09/04/2019 - Veganism is growing in Australia, but we're still some of the world's biggest meat eaters</p> <p>31/07/2019 - Organic, grass fed and hormone-free: does this make red meat any healthier?</p> <p>22/02/2019 - Soy, almond, cow's, none? What milk should we be drinking for the planet?</p> <p>31/05/2018 - Would you go vegan to save the planet? Researchers say it might be our best option</p>	<ul style="list-style-type: none"> • Mostly covered Australian livestock industry. • Focus on industry challenges, developments, or stories about individual/exceptional animals and farmers. • More focus on the environmental impact of livestock, health issues, and livestock's nutritional value. • Less focus on the importance of livestock in the developing world, livestock's role in income generation, or how the sector is mitigating environmental damage. 	<ul style="list-style-type: none"> • Slight increase in health-related coverage. • Slight increase in nutrition-related coverage.
Agencia EFE	<p>01/05/2019 - Colombian dairy farm goes high tech, ups production</p> <p>04/09/2018 - Peru dairy companies seek to up production using Uruguayan model</p> <p>21/08/2018 - Uruguay seeks regional response to climate change</p> <p>02/08/2018 - Mexican young entrepreneurs turning seaweed into eco-friendly products</p> <p>11/07/2017 - Female vets vaccinate livestock in Somalia to help save economy</p>	<ul style="list-style-type: none"> • Extensive coverage of livestock issues, with a particular focus on health and European market issues. • Strong focus on livestock issues in the developing and developed world. • Articles cover income generation from livestock, nutrition, health, and environmental/climactic impact from livestock. • Reports on measures from livestock sector help reduce environment/climate impact. 	<ul style="list-style-type: none"> • Little change in topics or tone of coverage.
Deutsche Welle	<p>06/02/2019 - A look at how Africa is tackling foodborne illness</p> <p>16/10/2018 - Should there be a 'meat tax' to fight climate change?</p>	<ul style="list-style-type: none"> • Strong all-round focus on livestock issues in the developed and the developing world. • Recognises livestock's role in health, nutrition, food safety, and income generation in the developing world. 	<ul style="list-style-type: none"> • Coverage continues to include livestock's contribution to both developed and developing countries, highlighting most

	<p>09/10/2018 - 6 things you can do to avoid climate catastrophe</p> <p>26/09/2017 - Can less-flatulent cows help the planet?</p> <p>14/09/2017 - Your hamburger, the environmental killer</p> <p>24/07/2017 - How Mongolia's nomads are adapting to climate change</p> <p>11/04/2017 - Mobile vets come to aid of Malawian farmers</p>	<ul style="list-style-type: none"> Recognises the environmental impact of livestock, discusses both demand-side solutions (reduction in consumption) and supply-side solutions (improvements in efficiency and feed quality, e.g. 'Less-flatulent cows' piece). 	<p>aspects of sustainable livestock.</p>
Folha de Sao Paulo (in English)	<p>12/11/2018 - Amazon Deforestation Skyrocketed During The Presidential Campaign</p> <p>26/10/2017 - Brazil's Greenhouse Gas Emissions Have Biggest Hike in 13 Years</p> <p>29/03/2017 - Study Shows What Brazil Needs to Do to Comply with the Climate Agreement</p>	<ul style="list-style-type: none"> Strong focus on Brazilian livestock issues, less focus on global issues. Focuses primarily on environmental impact of livestock, especially deforestation and GHG emissions. Less focus on income generation, health, nutrition, or sector-led initiatives to reduce emissions. 	<ul style="list-style-type: none"> Continues to focus on environmental and economic concerns related to livestock in Brazil, often featuring columns by experts and politicians.
LA Times	<p>23/03/2019 - Floodwaters threaten millions in crop and livestock losses</p> <p>12/12/2018 - Don't buy Big Ag's line on methane: Rather than using factory farm waste to produce energy, how about producing less of it in the first place?</p> <p>13/07/2017 - A key component to ending poverty and hunger in developing countries? Livestock</p>	<ul style="list-style-type: none"> Coverage focused primarily on US agriculture markets, health, and disasters/conflicts. Some focus on GHG emissions from livestock . Less focus on developing world issues apart from an ILRI-contributed piece in 2017. News stories from developing countries focused on disasters. Featured an op-ed from ILRI. 	<ul style="list-style-type: none"> Less coverage on developing world issues such as nutrition and income generation.
South China Morning	<p>17/03/2019 - How to save the planet while eating meat – consume</p>	<ul style="list-style-type: none"> Focus remains primarily on China/Mongolia, predominantly on industry, and events such as 	<ul style="list-style-type: none"> Increase in focus on environmental issues.

<p>Post</p>	<p>less of it</p> <p>09/02/2019 - Can a new plant-based diet slash food wastage and feed the world?</p> <p>12/06/2018 - How Hongkongers can help save the world: go vegetarian for a day</p> <p>11/06/2018 - Chinese University teams up with University of Exeter to launch joint research project on climate change and meat eating in China</p>	<p>infections/scares/culls.</p> <ul style="list-style-type: none"> • Strong focus on environmental issues, GHG emissions, health, and nutrition. • Less focus on developing world issues, income generation from livestock, and how the sector is mitigating environmental damage. 	<ul style="list-style-type: none"> • Increase in coverage of mitigation measures, especially in demand-side via consumption reduction.
<p>Times of India</p>	<p>27/04/2018 - Doctors seek ban on drug promoting growth in livestock</p> <p>28/05/2017 - Dear beef, no, we can't imagine a life without you... Yours, Malayalis</p> <p>17/02/2017 - Livestock acts as insurance in adverse climatic conditions</p>	<ul style="list-style-type: none"> • More focus on the role of livestock in nutrition, income generation, and associated health issues. • Less focus on the role of livestock in the environment/climate, or how the industry can mitigate environmental/climate damage. • Near-exclusive Indian focus. 	<ul style="list-style-type: none"> • Increase in focus on nutrition and health-related coverage.
<p>USA Today</p>	<p>17/01/2019 - What to eat to save the planet: Report urges 'radical changes' to world's diet -- less meat, more veggies</p> <p>04/12/2018 - Massive ground beef recall expands to more than 12 million pounds</p> <p>02/11/2018 - After years of catastrophic losses, dairy farms are increasingly closing their barn doors</p> <p>15/05/2017 - American ranchers buoyed by China beef deals</p>	<ul style="list-style-type: none"> • Primary focus for US markets and consumers. • Increased emphasis on the environmental impacts of livestock, little focus on how the industry/sector may mitigate this. • Some focus on health issues relating to livestock, primarily in regard to contamination. • Less focus on nutritional value of livestock or their importance for income generation in the developing world. 	<ul style="list-style-type: none"> • Growing coverage on environmental issues, mostly followed by calls to reduce meat consumption.