

Livestock



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Introduction

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Two questions were at the origin of this book. Firstly, why should animal breeding face severe bashing for its environmental impacts since the beginning of the millennium and for its inhuman animal-human partnership, above all from the veganism, after it has withstood decades of criticisms for its negative social effects and its part in food safety crises, among others? Secondly, why do public policies appear as the main drivers and factors of change in the animal production sector, especially in the past decades with the demands from the environmental lobby?

To understand better the processes that have occurred in the livestock sector and to sketch out evolutionary scenarios for the future, established experts have described and explained the breeding history for their respective regions trying to identify the main phases and factors of change, on the long term, for more than fifty years. Twenty-two study regions were selected in twenty countries, reflecting the wide diversity of agricultural potentials at a global scale. Each chapter covers one region whose location is shown in a world map (see next page).

Crossing the information from the twenty-two case studies revealed three main findings. Firstly, public policies have been essential drivers of the dynamics of the livestock sector in almost all the cases, both in the past and today. Secondly, the same four to five main phases have been identified in nearly all the regions, showing the long history and relevancy of common processes at a global scale. Understandably, the factors of change are more or less the same, above all those acting at a global scale. Thirdly, there has been an increasing number of stakeholders, policy-makers and levels of governance influencing the livestock issues as in other sectors.

Importance of public policies on the trajectories and dynamics of livestock

The diachronic analysis shows the importance of public policies in the livestock sector. It is a major finding shared among stakeholders in all the research sites; hence,

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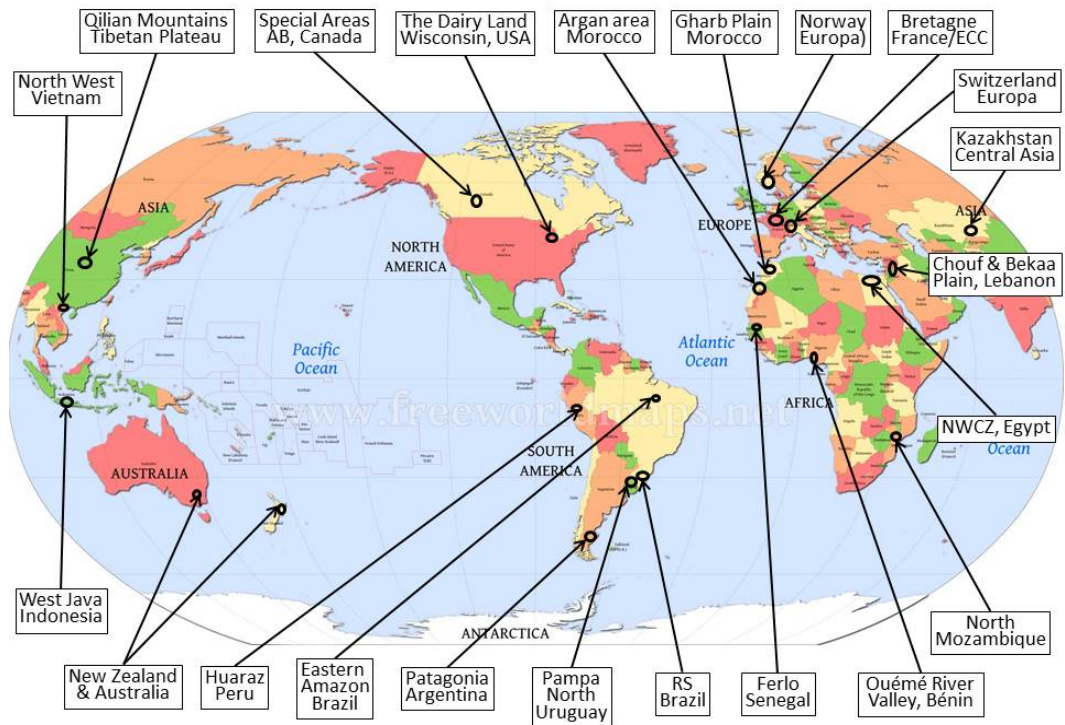
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The 22 Livestock Policy research sites



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the local livestock history can be described using the successive public policies at the local and national scales. Furthermore, almost all of the stakeholders think the future of livestock depends on the current and future policies.

This result is not surprising in the areas where livestock development has been initiated by public policies, as in the agricultural frontiers described in the case study of Canada in the first half of the 20th century, earlier in Argentinian Patagonia, Australia and New Zealand, and more recently in the Brazilian Amazonia during the 1960s. In these regions, the history of livestock has been planned by public policies, which have defined the milestones of the trajectories and dynamics of the livestock sector. Some of these policies have been directly linked to livestock production development, for instance through facilitating the purchase and import of animals and inputs, national and local plans to control diseases, special equipment for processing and marketing animal products. Other policies focused more on the improvement of pioneers' livelihood, such as transport infrastructures, access to energy and water supply, social services, development agencies. In addition, it was found that, in order to reduce the vulnerability of the livestock sector, policies have consistently considered the availability of natural resources, especially water and forage, because of the strong dependence of livestock production on these resources, as shown in the case studies of dry Southern Patagonia and Western Canada, and in other arid areas

such as Egypt, Lebanon, the Gharb Plain of Morocco, Senegal. The situation is similar in North Vietnam and Indonesia where the development of animal production resulted from a national policy aiming at reducing the cost of animal product imports.

In the pastoral sites, where animal breeding had been the pillar of human societies for a very long time, public policies aimed at adapting the livestock activity to the changes of the bioclimatic and socioeconomic context. This is the case in Africa (Senegal, Mozambique), the Mediterranean (Egypt, Argan ecosystem in Morocco, Lebanon), Central Asia (Kazakhstan, Tibetan Plateau), South America (Pampa in Uruguay and Brazil). In North Senegal for example, specific measures were implemented in the 1950s to secure water supply for humans and herds, and to enable the permanent settlement of Peul families. More recently, similar measures have been applied in the 1990s to enable Bedouin breeders to settle down, through the development of wadi irrigation as an alternative to drought. Similarly, during the 1980s, the Chinese national policy for the rangelands aimed at improving the livelihoods of breeders in order to reduce differences with other regions and to support them in adopting sustainable rangeland management. Therefore, livestock policies are key factors that help pastoral societies monitor trajectories and support the dynamics of the livestock sector.

The situation is a little different in the sites with crop-livestock integration farming systems, such as in Morocco's Gharb Plain, Benin, Europe (Norway, Switzerland and France), Southeast Australia, the Midwest of the United States of America, and the Andean Peru, where livestock is a component of the farming systems, and sometimes the main one. In these areas, policies usually targeted households and communities. However, livestock was also targeted because of its multiple functions in the farming systems, and because it strongly and directly depends on the applied measures. In the Gharb Plain (North Morocco), for example, the development of an irrigation scheme for cash crops led the farmers to grow fodder crops more frequently in order to control diseases and improve soil fertility. Since forages are used to feed animals, especially dairy cattle, the Gharb Plain has thus become a major dairy land at national level, mainly because of the development of the cash-crop policy. Similarly, the successive USA policies targeting the market of grains and commodities at international level have directly impacted the dairy production which is also linked to the share of grain production in land use and farming systems. In the same way, European breeders received significant subsidies, according to the size of their herds to maintain rural settlement. Therefore, even though the policies did not directly focus on livestock activities, they affected them because of the function of livestock in the farming systems, in land use and in local development.

The four phases of livestock policies

The long-term analysis of livestock sector dynamics at the local scales shows four main phases. Firstly, until World War II around 70–80 years ago, livestock policies

mainly addressed local issues strongly linked to the local context in relation in some case studies with a long history, in other cases with the recent settlement of breeders. For example, a slaughterhouse, a dairy factory, or a group of small workshops would bring about a local policy in partnership with local stakeholders and representatives. It was the 'Local' phase. Secondly, after World War II until the 1960–1970s, livestock policies mainly depended on national decisions, which usually focused on rural development related to food security or exports. Some countries chose to reinforce their livestock sector to improve their exports when others preferred to open the borders and meet the local demand in animal products by massive imports. It was the 'Import-Export' phase. Thirdly, in the 1970–1980s, policy-makers usually tried to adapt their national agricultural sectors, including livestock production, to the market demand. Hence, the market progressively became the main driver of livestock dynamics and policy in the 1990s, especially focusing on food quality and safety. During this period, the reference to globalization became more frequent. It was the 'Market' phase. Fourthly, in the late 1990s and at the beginning of the new millennium, the environmental issues emerged and have gradually become the main factors of policy making and legislation; they even strongly affected the market demand. Consequently, today, as previously mentioned, the livestock policy at the local and national scales takes into account the environmental norms that are defined at a global scale. It is the 'Environment' phase.

Increasing the number of stakeholders, policymakers and levels of governance

Simultaneously with the active norm-building process and norm integration in policy making, the diachronic analysis shows a significant change in the governance of this policy making. Decades ago, and during the Local, and Import-Export phases, the governance revolved around a few entities, usually directly linked to the government, at the local, regional and national scales, such as a few representatives of public institutions and managers of private companies or cooperatives. For example, in pastoral areas, tribe leaders and local government representatives participated in the local governance. In the case of agricultural frontiers, leaders of pioneer communities and local government representatives managed the local governance. In the third (Market) and fourth (Environment) phases, more stakeholders participated in the local governance. For example, in North Senegal, representatives of rural communities, politicians, local councilors of rural and urban areas, leaders of associations, small agribusiness managers, women's groups and young people are involved in the local governance along with the tribe leaders and government representatives. Above all, the decisions are usually debated in the various bodies of society with eventual consequences until the next elections.

The increase in stakeholders, policymakers and levels of governance is similar at the regional, national and global scales. For example, in each country of our sample study sites, representatives of Greenpeace, World Wildlife and International Union

for Conservation of Nature have regular contacts with the secretaries of the ministries of agriculture and environment. They finance their own research programs, generally in partnership with national research institutes. They promote and disseminate results at different levels of society, usually with an aggressive communication strategy. Moreover, they rely on local environmental associations to strengthen their bases, develop specific actions and show their local attachment. Livestock lobbies such as cattlemen's associations, national and international agribusiness, representatives of livestock sectors usually act with similar objectives and strategies. The leaders of two competing lobbies often share the same academic background, and may even have graduated from the same universities. Even lobbies have short-term challenges; but above all, they have medium- and long-term objectives which define their strategies and actions. In comparison, governments usually have short- and medium-term objectives and strategies, and in some developing countries, they do not have the funds to compete with the lobbies.

In conclusion, at both local and global scales, the governance is shared between diverse stakeholders who represent different points of view, hopes and fears, which should be balanced against one another during the policy-making process. Whereas in the past the governance depended on the decisions of a few stakeholders, today it has become a consensus of many different lobbies at all scales.

Besides these three main generic results, the twenty-two case studies show cultural permanence as a key factor in livestock policy, a subject worth investigating in the future. There is surprising similarity within the livestock policies of the case studies of Britannic origin (USA, Canada, New Zealand, and Australia) on one hand, and within those of the case studies of South American origin (Argentina, Uruguay, Brazil, and Peru) on the other hand. In the same way, certainly because of geographic and cultural proximity, there is strong resemblance between European public policies, whether inside the European Union (presented by the French case study) or outside (Norwegian and Swiss case studies). Moreover, in the last three decades, the Chinese livestock policy appears similar to that of the European Union, especially regarding subsidies and the family focus. In Moroccan case studies, the livestock policy appears very similar to that of the European Union since foreign settlers and experts had designed its main goals during the colonial era. A research question could be the role of cultural permanence in livestock policy making. In addition, in some case studies the sequences in the breeding policies are not clear. However, it should be considered that not making a policy is also a policy.

Two other points need to be detailed. The first one is the weight of globalization in the livestock sectors. The second one concerns the effect of recent human consumption behaviors (most of all the vegan concept) on the animal production sector, which, since animal domestication, could deal a major blow to the recent dynamics.

Globalization is moving forward

As already mentioned, one major result of the diachronic analysis is the gradual emergence of the market as a key factor of livestock production by the end of the 1980s, especially through the setting of norms in terms of quality, and environmental issues. The case-by-case analysis shows that the importance of the market goes back much earlier than during the 1980s. Indeed, at the local scale, markets have strongly interacted with livestock production in defining the level of demand, the prices of products, and the opportunity to sell to neighboring countries. For example, in all the case studies the development of urban centers created a new local demand for livestock products, which benefited the surrounding rural areas as they could sell their production. Similarly, the building of a road opened new marketing options to the areas along that road, providing access to the regional market.

More specifically, at the end of the 19th century, the development of transportation by steamers, followed by the adoption of refrigerating processes completely changed the international meat and dairy markets, opening new options for exports, especially for countries in the Southern hemisphere, far from big consumers' areas, such as Argentina, Uruguay, South Africa, Australia and New Zealand. Conversely, the south of Patagonia, which was a key place for transoceanic transportation, became an isolated region with the opening of Panama Canal at the beginning of the 20th century.

Globalization appears as the most significant factor of change because it mainly affects the market at the global, national and even local scales, but also the information and technology fluxes, consumers' behavior, the social and cultural bases of societies. Through national policies and tax levies, countries try to control import costs, at least to adapt their production to the global norms and thus face the competition, or to find alternatives, such as the niche markets in Europe for example.

New human-animal relationship based on animal welfare

Because of the successive food safety crises since the 1990s, part of the consumers either stopped eating meat and dairy products, or at least reduced their meat consumption and have been more careful about the origin and quality of the animal products they purchase. By the mid-1990s, during the bovine spongiform encephalopathy outbreak in Europe, a research showed that around 40% of young English people were ready to stop eating meat. Until now, this reduction has not impacted the meat market because consumption increases in other parts of the world, especially in emerging and pre-emerging countries where people have recently reached the middle-class status. Furthermore, a significant part of the world population (around 10–12%) does not eat meat for cultural or religious reasons: mainly in India, at least 500 million people in Asia, around 25 million in the USA, 8 million in Germany and 6 million in Italy. Several lobbies act against meat consumption; they finance

studies showing the incoherence and the danger of intensive livestock farming systems, including fish production, on human health and the environment. They rely on formal and informal networks, which usually act in environmental domains. In addition, research institutes are currently working on new forms of proteins as alternatives to meat proteins. In this new context, some stakeholders suggest changing the human-animal relationship based on old mental models founded on animal slaughter. Hence, the future would be the emergence of animal welfare issues in human societies and their consequences on rationalizing livestock activities and decreasing animal suffering.

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