



Animal Markets and Zoonotic Disease in Israel

COUNTRY SUMMARY: ISRAEL

CULTURAL CONTEXT

Israel, located in the Middle East at the eastern end of the Mediterranean Sea, is home to over nine million people, 74% of whom are Jewish and 21% Arab. Internal strife and violence continue to shape the reality of the region, including its trade. There is an underlying assumption in the country that religion and state cannot be separated (supported by the fact that the country has no constitutional obligation to separate them) the two). As a result, even secular leaders understand they must act with some deference towards religion, in some cases leading the government to turn a blind eye to religious practices with high public health risks. The threat of zoonotic disease is present throughout the country. In the last three months of 2021, more than a million chickens in 20 facilities were culled as a result of the spread of avian influenza. Brucellosis, a disease contracted mainly through the ingestion of unpasteurized milk and undercooked meat is the most prevalent mammal zoonotic disease in Israel, infecting over 1,800 people in the country in 2014 and 2015, with over 95% of the cases impacting Arab Israelis.

ANIMAL MARKETS

Israel's animal markets are primarily related to domestic livestock animals intensively produced and sold for food at markets such as the open-air Kafr Qasim Bird Market near Tel Aviv. These animals are often held in crowded, unsanitary, stressful conditions, with little veterinary care available. Some of the livestock animals produced in Israel, particularly chickens, are used for religious ceremonies such as Kapparot, the annual atonement ceremony celebrated among Jewish orthodox communities. Despite the presence of concentrated high-volume production of animals in the country, Israel relies heavily on importation of animals, meat, and animal feed (up to 80% of red meat is imported), an industry with little monitoring and regulation. The state has increased its subsidies and regulation to support local beef, egg, and poultry producers.

DRIVERS OF ZOOONOTIC DISEASE RISKS

Zoonotic disease risk in Israel stems in a large part from a significant volume of animals who are slaughtered outside of licensed facilities, either for religious ceremonies or for food, which happens frequently, particularly in Arab communities. Over 500,000 sheep are illegally slaughtered every year, often without veterinary oversight and where substandard practices are embraced, creating conditions that may facilitate zoonotic disease spread. These risks are complemented by untreated and illegal waste at livestock production sites, and a subsidized livestock industry that relies on unregulated use of antibiotics.

RISK MITIGATION AND RELEVANT CHALLENGES

The Israeli government has been reluctant to enforce existing regulations, laws, to avoid scrutiny for alleged violations of religious freedom, even where practices may run contrary to public health interests. This is especially true when practices involve a minority group, such as the Jewish-Orthodox community and the Bedouin and Arab populations, with regulators typically choosing not to confront these communities on certain practices. At the Kafr Qasim Bird Market on land deeded for agricultural, not commercial, purposes, thus making the market essentially illegal, supervision and enforcement of existing laws are nearly absent. And despite the Ministry of Agriculture being aware of the widespread illegal slaughter occurring throughout the country, penalties for being caught are low, creating little disincentive and the scope of illicit practice still remains alarmingly high. And a robust industrial animal agriculture exists that is heavily subsidized by the government despite these concerns.

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INTRODUCTION

This paper aims to examine issues concerning animal markets in Israel from social, cultural, and legal perspectives. These, in conjunction with geographic, geopolitical, and other factors noted below, may constitute risks of outbreak and transmission of zoonotic diseases, which may develop into a larger regional or global threat. In fact, according to a CDC report from 1997, the unique epizootiological, climatic, and ecological circumstances in the country and, more generally, in the geographical region, may contribute to a distinctive dangerous veterinary public health condition. These include the need for better veterinary infrastructure and collaboration between countries in the region, and in Israel specifically also nomadism, pervasiveness of disease carriers, proximity of exotic breeds to disease-endemic breeds, and overpopulated protected wildlife.¹

Israel is located in the Middle East, Western Asia, at the eastern end of the Mediterranean Sea. It borders Egypt, Jordan, Syria, and Lebanon as well as the Palestinian territories in the West Bank and the Gaza Strip. By the end of 2020, the population in Israel/Palestine was comprised of 9,291,000 people, of them 74% Jewish, 21% Arab (Muslim, Christian, and Druze), and 5% other (mostly unclassified populations and non-Arab Christians).²

A conflict exists between Israel and some states in the area. However, Israel maintains peace agreements with Egypt (1979) and Jordan (1994), and cooperation agreements with the Palestinian Authority in different fields such as customs, labor, agriculture, industry, and tourism (1994). As part of the latter agreements, trade between Israel and the Palestinian Authority also includes livestock, feed, and animal products, of which the vast majority are exported from Israel to the West Bank, with some export from the West Bank to Israel and to the Gaza Strip.³ Additional unreported trade and transportation of goods is recognized to be common, through regular shopping of the Palestinian population in Israel when visiting the West Bank,⁴ as well as cross-border smuggling, which partly relies on the geographical conditions including virtually open boundaries between the Negev and the West Bank, and partly maintains traditional commerce routes which preceded the current border.⁵ A State Comptroller report indicates that in 2018 smuggling constituted approximately 22% of transferred goods between Israel and the West Bank and is composed mainly of cigarettes and tobacco.⁶ Agricultural produce, predominantly fruits and vegetables, is also smuggled, as are significant amounts of livestock and meat.⁷ Official

1. Annon Shimshony, "Epidemiology of Emerging Zoonoses in Israel," *Emerging Infectious Diseases* 3(2) (April 1997): 229-238, https://wwwnc.cdc.gov/eid/article/3/2/97-0221_article.
2. "Population of Israel on the Eve of 2020," Central Bureau of Statistics, assessed on October 15, 2021, www.cbs.gov.il/en/mediarelease/Pages/2019/Population-of-Israel-on-the-Eve-of-2020.aspx.
3. "לארשי לומל יאלקה רחס יקשממ ש'וואב תיניטלפה תואלקחה" also "תיניטלפה תושרל רקב קוויש תריצע רבשמ - ידעום רימט" [The Palestinian Agriculture in Judea and Samaria – Interfaces of Agricultural Trade with Israel], Samir Moadi, The Ministry of Agriculture and Rural Development and the Civil Administration in the West Bank, assessed on October 15, 2021 <https://www.mop-zafon.org.il/sites/default/files/uploads/pdf-files/articles/%D7%A1%D7%9E%D7%99%D7%A8%D7%9E%D7%95%D7%A2%D7%93%D7%99%20-%D7%9E%D7%A9%D7%91%D7%A8%20%D7%A2%D7%A6%D7%99%D7%A8%D7%AA%20%D7%A9%D7%99%D7%95%D7%95%D7%A7%20%D7%91%D7%A7%D7%A8%20%D7%9C%D7%A8%D7%A9%D7%95%D7%AA%20%D7%94%D7%A4%D7%9C%D7%A1%D7%98%D7%99%D7%A0%D7%99%D7%AA.pdf>.
4. This applies to Palestinian citizens of Israel (also referred to as Israeli Arabs) and Palestinians in East Jerusalem – an area annexed to Israel and whose population was given a status of permanent residents.
5. Barak Hermesh, Anat Rosenthal, Nadav Davidovitch, "Rethinking 'One Health' Through Brucellosis: Ethics, Boundaries and Politics," *Monash Bioethics Review* 37, (June 2018): 22–37, <https://doi.org/10.1007/s40592-018-0079-9>.
6. "הנידמה רקבמ" | הנידמה רקבמ חוד | תנש תרוקוב חוד" [State Comptroller Annual Audit Report 70C], Israel Tax Authority, assessed October 15, 2021, <https://www.mevaker.gov.il/sites/DigitalLibrary/Documents/2020/70c/2020-70c-202-Maavarim.pdf>.
7. "מיחטשהמ נאצ ירדעלש החרבה תוריבעל מידקת רסח רסאמ שנוע" [An Unprecedented Prison Sentence for Smuggling Offenses of Flocks of Sheep From the Territories], Ministry of Agriculture and Rural Development, assessed October 15, 2021, <https://www.gov.il/he/Departments/news/psak-din-zon>; Ora Coren and JTA, "Police Bust Israeli-Palestinian Meat-smuggling Operation," *Haaretz*, April 5, 2016, www.haaretz.com/israel-news/police-bust-israeli-palestinian-meat-smuggling-operation-1.5427371.

estimations show that 20%-25% of the agricultural produce is smuggled from the West Bank to Israel, whereas up to 80% of such goods are smuggled in the opposite direction.⁸ Government reports show that between 2014 and 2016, 729 tons of agricultural produce was smuggled into and out of Israel.⁹ Financially, Israel currently relies mostly on a knowledge economy. However, for the Zionist founders, settling and working the land were essential to their mission of establishing a state for the Jewish people, in historical Palestine or the Holy Land.¹⁰ Agricultural settlements, and specifically animal-based agriculture, were significant means by which to realize this vision.¹¹ In addition, agriculture served the ethos, which the Zionist movement strove to nurture and assimilate, of an ideal laboring man who produces his food independently and is connected to the land which he nurtures. Despite the decline in the status of agriculture in Israel's economy, it still enjoys much recognition and significance for its pivotal contribution to fulfilling the Zionist movement's vision and goals.^{12 13}

The local agricultural tradition intersects with the country's entrepreneurial nature, which has frequently been dubbed a "start-up nation."¹⁴ For instance, Israel claims the highest milk yield per cow in the world, at nearly 12,000 liters annually, as a result of intensified industrial livestock methods.¹⁵

While the Israeli market is generally self-sufficient in the production of fruits and vegetables, and despite concentrated high-volume production of animals, it relies heavily on the importation of animals, meat, and animal feed to sustain its livestock industries.¹⁶ At the same time, the state has increased its subsidies and regulation to support the local industries (e.g. doubling the financial allocation to the beef industry). Israel also grants meaningful financial benefits to egg and poultry producers in the northern periphery of Israel. Special statutory boards regulate the dairy and egg industries. These influential protectionist bodies are remnants of the state's historical agricultural identity, while a transition to free trade is currently being reexamined, at least in the egg industry.

Significant political, economic, and social aspects in Israel relate to the multiplicity of cultures and religions and its constitutional definition as Jewish and democratic. Consequently, Arabs in Israel, who comprise about one fifth of the state's population, are structurally marginalized and disenfranchised. This is manifested, for example, in planning and regulatory aspects, as illustrated in the existence of dozens

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8. "לארשי לומל יאלקח רחס יקשממ-ש" ויאב תיניטסלפה תואלקחה" also "תיניטסלפה תושרל רקב קוויש תריצע רבשמ - ידעומ רימס" [The Palestinian Agriculture in Judea and Samaria – Interfaces of Agricultural Trade with Israel], Samir Moadi, The Ministry of Agriculture and Rural Development and the Civil Administration in the West Bank, assessed on October 15, 2021 <https://www.mop-zafon.org.il/sites/default/files/uploads/pdf-files/articles/%D7%A1%D7%9E%D7%99%D7%A8%20%D7%9E%D7%95%D7%A2%D7%93%D7%99%20-%D7%9E%D7%A9%D7%91%D7%A8%20%D7%A2%D7%A6%D7%99%D7%A8%D7%AA%20%D7%A9%D7%99%D7%95%D7%95%D7%A7%20%D7%91%D7%A7%D7%A8%20%D7%9C%D7%A8%D7%A9%D7%95%D7%AA%20%D7%94%D7%A4%D7%9C%D7%A1%D7%98%D7%99%D7%A0%D7%99%D7%AA.pdf>.
9. Barak Hermesh., Anat Rosenthal, Nadav Davidovitch, "Rethinking 'One Health' Through Brucellosis: Ethics, Boundaries and Politics," *Monash Bioethics Review* 37, (June 2018): 22–37, <https://doi.org/10.1007/s40592-018-0079-9>.
10. Alfred Crosby, *Ecological Imperialism: The Biological Expansion of Europe 900-1900*, (Cambridge: Cambridge University Press, 2004); Tiago Saraiva, *Fascist Pigs: Technoscientific Organisms and the History of Fascism* (Cambridge: MIT Press Limited, 2016).
11. "Israel, Agriculture Policy Monitoring and Evaluation," Organization for Economic Cooperation and Development, 2020, https://www.oecd-ilibrary.org/agriculture-and-food/agricultural-policy-monitoring-and-evaluation-2020_928181a8-en.
12. Alon Tal, "Enduring Technological Optimism: Zionism's Environmental Ethic and Its Influence on Israel's Environmental History," *Environmental History* 13, no. 2 (April 2008): 275-305.
13. This was manifested among others in the commercial success of "Jaffa Oranges," which were initially cultivated by Palestinian farmers in the city of Jaffa, and later adopted by Jewish farmers and landowners to become the most famous export of the State of Israel in its early days.
14. Dan Senor and Saul Singer, *Start-up nation: the story of Israel's economic miracle* (Toronto: McClelland & Stewart, 2011).
15. In comparison to approximately 10,000 liters in the United States and 8,000 liters in Europe. See: Ari Rabinowitz, "How Start Up Nation Built a Better Milk Cow" *Forward*, *Forward*, May 19, 2015, forward.com/news/breaking-news/308473/how-start-up-nation-built-worlds-best-milk-cow; Sara Toth Stub, "Israeli Cows are Taking Over the World," *The Tower*, October 2016, www.thetower.org/article/israeli-cows-are-taking-over-the-world.
16. According to OECD data, Israel is the world's largest consumer of poultry meat per capita and fourth largest consumer of beef per capita. See: "Meat consumption", OECD data, assessed October 15, 2021, <https://data.oecd.org/agroutput/meat-consumption.htm>. In addition, Israel produces only 20% of its national calorie intake. See: "תל ארשיה תואלקחה לש הדיקפת המו תיגטרסטא תונידמל דוסייה ילוקישו תונורקעה מרמ?" [What are the principles and basic considerations for strategic policy and what is the role of Israeli agriculture?], Liron Amdor, assessed October 15, 2021, www.yfpp.org.il/article/69.

of unrecognized Bedouin villages— communities that maintain a nomadic lifestyle and keep animal herds—primarily in the Negev Desert in the south of Israel. These communities are subjected to an “avoidance and containment” regime.¹⁷ On the one hand, they are denied access to basic infrastructure and services, consequently leading to the facilitation of an informal and unsupervised economy, which applies also to animal trade. On the other hand, they are widely condemned and stigmatized for different practices, including illegal animal slaughter.

In a different aspect of Israel as a Jewish state, most of the meat consumed, and hence animal slaughter, is kosher (that is, food that conforms to Jewish dietary laws). Though the Israeli law does not usually require that only kosher food be sold, there is regulation that applies to food products sold as kosher. These Jewish laws are accompanied by state regulations and laws that supervise various industries. In Arab towns and villages, slaughter is often governed by Halal, or Islamic regulations. However, a significant portion of the meat that is deemed not kosher due to strict Jewish slaughter rules is not prohibited by Islamic regulation, and thus is transferred to the non-kosher meat market, which also serves the Arab community. This, among others, demonstrates the profound effect religious tradition and laws have on regulation and policy in Israel. It is also an indication for the political power the Ultra-Orthodox Jewish community has in Israel, and its far-reaching institutional influence in comparison to other minority groups.

Besides animals in the food industry, there is a large and growing companion animal population. This also generates a market for animal breeding and trade.

Israel is also a habitat for many species of wild animals, which live in nature reserves as well as natural habitats which are dwindling in number and becoming increasingly fragmented. These habitats are deeply affected by human activity and development pressures throughout the country. According to Israel’s State of Nature Assessment Program (HaMaarag) “the rate of land-cover conversion between 2014–2017 was the highest in the last 20 years, during which, approximately 55 km² were converted from open landscapes into built-up areas. Another 53 km² were converted from natural landscapes and planted forests into agricultural lands.”¹⁸ Such anthropocentric expansion, as well as improper sanitation in agricultural farms and dump sites, is accompanied by the expansion of commensal mammals, including the golden jackal and red fox, which are the most common vectors of rabies in Israel. In the past decade, an average of 33 laboratory-confirmed rabies cases were diagnosed annually.¹⁹ Several large outbreaks were recorded in recent years, attributed among others to geopolitical factors, such as conflicts in the region, leading to displacement of animals and the hindering of control measures.²⁰ It should be noted however that Israel monitors this disease closely and that human rabies has rarely

17. Oren Yiftachel, *Ethnocracy: Land and Identity Politics in Israel/Palestine*, (Philadelphia: University of Pennsylvania Press, 2006),192.

18. “2018 לארשי עבטה בצמ ח’וד” [Israel Nature Status Report 2018], Hamaarag.org, assessed October 24, 2021, www.hamaarag.org.il/sites/default/files/media/file/report/field_report_report_file/%D7%93%D7%95%D7%97%D7%9E%D7%A6%D7%91%D7%94%D7%98%D7%91%D7%A2%202018.pdf.

19. See: “2021 תנשב לארשיב תבלכה תלחמ יעוריא” [Events of Rabies in Israel], Ministry of Agriculture and Rural Affairs, assessed on October 24, 2021, https://archive.moag.gov.il/vet/Yechidot/Machon/maabada_kalevet/airueim%20kalevet/Pages/default.aspx. See also: Veterinary Services Annual Report (2019).[Note by MH: please provide the source of this report.]

20. Hossein Bannazadeh Baghi, Farbod Alinezhad, Ivan Kuzmin, and Charles E. Rupprecht, “A Perspective on Rabies in the Middle East-Beyond Neglect,” *Veterinary Science* 5, no.3 (July 2018):67. With regards to the impacts of armed conflicts in the region on the prevalence of rabies, see: “Human rabies control in Lebanon: a call for action.Epidemiology and Infection,” Cambridge University Press, assessed on October 24, 2021, <https://www.cambridge.org/core/journals/epidemiology-and-infection/article/human-rabies-control-in-lebanon-a-call-for-action/A2B503C231A949708FB53CCD60987F23>.

occurred in the country in past decades, with the last known case to be in 2003. In addition, Israel and Jordan collaborate on distributing oral vaccines along the border between the two countries.²¹

Animal testing and experimentation in Israel is quite extensive. In 2019, over 400,000 animals were experimented on, most of which were mice and rats (68%) and cold-blooded animals (25%, mostly fish).²² Also, despite the increase of meat consumption in Israel, the past decade also marked a momentous expansion of veganism and vegan movements in the country. Israel has recently been dubbed “Vegan Nation,”²³ and Tel Aviv “the vegan capital of the world.”²⁴

Regulatory Background

Israel is a parliamentary democracy with a multi-party system. Legislative power is vested in the parliament (Knesset). Executive power is exercised by the government, which is headed by the prime minister. The Judiciary is independent of the other authorities. Israel has no unified written constitution, but most of the constitutional rules are set out in thirteen Basic Laws, which have a supreme legal status over ordinary parliamentary acts²⁵

The three ministries of Health, Agriculture and Rural Development, and Environmental Protection are responsible for preventing and controlling zoonotic risks on a national level. In order to do so, they hold powers to inspect, investigate, and prosecute.²⁶ Veterinary Services and Animal Health, a division within the Ministry of Agriculture and Rural Development, plays a key role in preventing animal diseases and diseases common to humans and animals. It also is responsible for controlling the import and export of animals, regulating slaughterhouses, licensing veterinarians, and supervising processed animal foods.²⁷

Israel also consists of locally elected municipalities.²⁸ These bodies hold various powers for preventing and controlling zoonotic risks within their jurisdiction, including responsibilities for waste disposal, planning, public health, and veterinary supervision. Among others, they are authorized to enact by-laws, enforce environmental legislation and help regulate the sale of animal products.

In terms of existing law, Israel has vast regulation and procedures in place with regard to wildlife protection as well as the rearing of animals, transportation, slaughter, marketing of meat, and disposal of waste and carcasses.

21. Bannazadeh Baghi, “Perspective on Rabies.” See also: “נופצב תבלכה תוצרפתהל הביסה זו: מיומוג” [Experts: This Is the Reason for the Rabies Outbreak in the North of the country], Ynet.co.il, assessed on October 24, 2021, www.ynet.co.il/articles/0,7340,L-5062716,00.html.

22. “נתנת” 2019 [Data on Animal Research for the Year of 2019], Ministry of Health, published on May 11, 2020, www.health.gov.il/NewsAndEvents/SpokemanMessegas/Pages/11052020_03.aspx.

23. “Vegan Nation: How Israel Earned Its Newest Nickname,” The Culture Trip, published on January 30, 2019, www.theculturetrip.com/middle-east/israel/articles/israel-s-booming-vegan-culture/.

24. “How Tel Aviv Became the Vegan Capital of the World,” Independent, published on November 6, 2017, www.independent.co.uk/travel/middle-east/vegan-food-tel-aviv-best-restaurants-israel-vegetarian-friendly-port-capital-meshek-barzilay-orna-a8036081.html.

25. “Israeli Democracy: How does it Work?” Israeli Ministry of Foreign Affairs, assessed on October 25, 2021, www.mfa.gov.il/mfa/aboutisrael/state/democracy/pages/israeli%20democracy%20-%20how%20does%20it%20work.aspx#local.

26. The Ministry of Agriculture’s Central Investigation and Enforcement Unit: www.moag.gov.il/en/Ministrys%20Units/Central%20Investigation%20and%20Enforcement%20Unit/Pages/default.aspx. The Ministry of Environmental Protection’s enforcement unit is the Green Police. In addition to enforcing environmental laws, it is also involved in monitoring and enforcing violations of planning and building laws in rural areas, which affect mostly the Arab Palestinian minority. See: “Green Police” Ministry of Environmental Protection, assessed on October 25, 2021, www.gov.il/en/departments/units/green_police_dept.

27. Among others, the Veterinary Services are responsible to prevent diseases among animals and zoonotic diseases, as well as handle outbreaks of such events. For more information and a full list of areas of activities see: <https://www.gov.il/en/departments/Units/2vet>.

28. Seventy-seven municipalities (urban towns with population over 20,000); 124 local councils (smaller towns with urban or rural characteristics, with a population under 20,000); and 54 regional councils, each of which comprised several rural villages.

In 1955 Israel legislated the Wildlife Protection Act,²⁹ based on the British Mandatory Game Preservation Ordinance (1924).³⁰ Under this Act, all wildlife is protected unless otherwise stated. Such exceptions are actually fairly common, and include hunting, culling, trade, and keeping (including both exhibitions such as petting zoos as well as private ownership), which are subject to permits granted by the Nature and Parks Authority, as well as preventing human and animal health hazards and damage to agriculture.³¹ Wildlife is also protected under the National Parks, Nature Reserves, National Sites, and Memorial Sites Act (1998).³² In June of 2021, Israel became the first country in the world to ban the sale of any kind of fur, with an exception for religious purposes.³³

In 1994, the CITES Convention was implemented as part of the Wildlife Protection Regulations (1976) under the mandate of the Nature and Parks Authority. Since then, the authority has begun enforcing animal trade laws and preventing illegal trade. A team of inspectors was established to supervise shipments of animals entering and exiting the country, alongside customs and the Veterinary Services division of the Ministry of Agriculture and Rural Development. This division works closely with the exchange of information from Interpol and enforcement agencies around the world as part of the international effort to prevent the illegal trade in animals. At the same time, illegal trade to Israel, as well as the rest of the world, is nevertheless increasing.³⁴

Animal rearing and slaughter is subject to the Animal Diseases Ordinance [New Version] (1985)³⁵ and its regulations, which are supervised by the Veterinary Services in the Ministry of Agriculture. This legislation grants the Chief Veterinary Officer vast authority to prevent and manage animal hazards, based on suspicion for occurrence of any of dozens of listed animal diseases. Such authority includes far-reaching administrative and penal measures to ensure public health and food safety, including the seizure of animals, halting the activity of slaughterhouses and processing plants, and ordering the culling of animals (the latter is subject to mandatory compensations to farmers).

Animal transportation is subject to both animal disease regulations and animal welfare regulations, and subject to a particular permit issued by the Veterinary Services. The slaughtering and distribution of meat are also supervised by the rather new Veterinary Inspection Authority, a governmental statutory agency established in 2015 as part of a comprehensive food law legislation, and integrates the Ministry of Health and Ministry of Agriculture.³⁶ Waste disposal is also subjected to

29. Unofficial translation: www.gov.il/BlobFolder/legalinfo/wildlife_protection_law_1955/en/animals_wildlife_protection_law_1955_unofficial_eng_translation.pdf.

30. "Official Gazette of the Government of Palenstine," Nevo.co.il, published on April 1, 1924, www.nevo.co.il/law_html/law21/pg-e-0112.pdf.

31. "Wildlife Protection Law, 1955," Ministry of Environmental Protection, last modified December 23, 2019, https://www.gov.il/en/departments/legalInfo/wildlife_protection_law_1955.

32. For unofficial English translation, see: "National Parks, Nature Reserves, National Sites and Memorial Sites Law," Gov.il, assessed on October 25, 2021, www.gov.il/BlobFolder/guide/natl_parks_nature_reserves_council/en/open_area_natl_parks__nature_reserves_natl_sites_and_memorial_sites_law_1998_eng.pdf

33. "Ban on Animal Fur Sales! Minister of Environmental Protection Gila Gamliel Signs Regulations Forbidding Trade in Usage of Furs for Fashion Industry in Israel," Ministry of Environmental Protection, published on June 9, 2021, www.gov.il/en/departments/news/fur_trade_is_prohibited.

34. Elias N.Handal, Zuhair S.Amr, Walid S.Basha, and Mazin B.Qumsiyeha, "Illegal trade in wildlife vertebrate species in the West Bank, Palestine," *Journal of Asia-Pacific Biodiversity* 14, no. 4 (December 2021): 636-639, <https://doi.org/10.1016/j.japb.2021.07.004>.

35. This stands in contrast to the lack of animal welfare regulations for most livestock industries. The Ordinance is rooted in the historical Animal Diseases Ordinance, issued during the British mandate in Palestine, the British colonial legislation. For an English translation of the current Ordinance, see: "Animal Diseases Ordinance (New Version) 1985," Fao.org, assessed on October 25, 2021, <http://www.fao.org/faolex/results/details/es/c/LEX-FAOC021179>. For an example of an order issued under the Ordinance during the British Mandate, see: "The Palestine Gazette," Nevo.co.il, assessed on October 25, 2021, www.nevo.co.il/law_html/law21/pg-e-0735.pdf

36. Enshrined in the Public Health Protection Law 2015 (Israel); Veterinarians Law 1991 (Israel).

environmental regulations, such as the Cleaning Act-1984.³⁷

OVERVIEW OF MARKETS

In the following overview, we elaborate on several typical cases in which a zoonotic disease hazard might exist in the context of human-animal and animal-animal interactions. We chose the case of Kapparot, the annual atonement ceremony among Jewish orthodox communities, which usually involves the on-site slaughter of chickens; the Kfar Kasem Birds Market, at which live animals from different species are sold regularly; and different aspects of the livestock industry that pose hazards and zoonotic risks including the unregulated use of antibiotics, untreated and illegal waste, and illegal slaughter.³⁸ These markets demonstrate special local characteristics in terms of the economic, cultural, and geographic aspects that shape significant questions of regulation and policy with regard to zoonotic risks in Israel.

Kapparot

Overview of Market and Risk Analysis

The kapparot market sells live chicken for a Jewish religious ceremony that is performed on location and may include the on-site slaughter of the chicken. According to official information,³⁹ In 2019 there were 22 kapparot markets in Israel in which the on-site slaughter of approximately 43,000 chickens took place. In 2020 there were 17 markets which included on-site slaughter of approximately 41,000 chickens, and 30 markets which did not include slaughter and handled approximately 32,000 chickens.

According to official information, kapparot markets take place in about a dozen municipalities, most of them in Jerusalem. These markets are located mainly in areas of ultra-orthodox Jews, in a market area inside the city. The kapparot markets are located in accessible places that participants can easily approach with their families. They are also usually not sealed off from the outside which also allows for other free-roaming species, such as pigeons and cats, to interact with the market animals. Following Covid-19 and subsequent lockdowns and changes, an option to operate the kapparot from afar, via the internet, was put forward.⁴⁰ However, kapparot markets continued even under lockdown⁴¹ The practice of Kapparot takes place once a year over the course of several days. The ceremony is habitually practiced on the eve of Yom Kippur, the Jewish day of atonement, but also during the preceding 10 days and beginning with Rosh Hashana, the Jewish New Year. These days are also referred to as the ten days of atonement. The practice is part of the larger set of traditions that take place on Yom Kippur, during which observant Jews fast and ask for atonement from God, following the biblical commandment to torture one's soul. An additional ritual includes an animal offering, a sacrificial

37. See: "Maintenance of Cleanliness Law- 1984," Mfa.gov, assessed on October 25, 2021, <https://mfa.gov.il/MFA/PressRoom/1998/Pages/Maintenance%20of%20Cleanliness%20Law-%201984.aspx>.

38. Some other relevant issues remained beyond the scope of this report, such as hunting, rabies, companion animals trade, the importation of live animals to Israel, and further implications of climate change. We recommend these matters to be examined in further research.

39. Data was provided by the Ministry of Agriculture through a freedom of information request, no. 2945, dated August 27th, 2020, and May 4th, 2021.

40. See: "טנרטינאה תועצמאב תורפכ נידפ" [Redemption of Atonement through the Internet], Chabadcyprus.com, assessed on October 25, 2021, https://www.chabadcyprus.com/templates/articlecco_cdo/aid/3796578/lang/he.

41. For example, "תליע רתיבב תורפכה גהנמ: תוכסמ מע" [With Masks: the Custom of the Villages in Beitar Illit], Kikar.co.il, assessed on October 25, 2021, www.kikar.co.il/374980.html

ceremony that was originally conducted at the temple. Since the destruction of the temple, the sacrifice is no longer considered obligatory, but it has remained a custom. Alternative forms of atonement besides animal sacrifice do exist, such as donations of money to the poor.

In the areas where this ceremony is performed, thousands of chickens are crowded in cages where they wait overnight for the following day's ceremony. Nearby, there is a table where the monetary transaction takes place. People buy as many chickens as they need (one for each family member; a hen for women/girls, and a rooster for men/boys). They perform the ceremony themselves, swinging the chicken overhead while reciting a short prayer, then they approach the nearby area where the slaughterer awaits, and hand over the chicken to be slaughtered. After the slaughter, if the buyer chooses to donate or consume the meat, the carcass is returned to the buyer, who proceeds to the examiner stand where aspects of kashrut (Jewish dietary laws) are inspected, and forwarded to the butcher stand, where the carcass is plucked and eviscerated, and finally taken home and consumed.

There are two main ways to perform the ceremony: the first is to perform the ceremony and then to send all the chickens to a registered slaughterhouse to be slaughtered. The other is to perform the slaughter itself at the same site as the ceremony. We will elaborate on the second option.

The age-old technique of Jewish slaughter follows religious law that requires, among other things, that the animal's throat be slit while fully conscious. Other requirements refer to the slaughterer's professionalism and religious piety; to the five slaughter laws; the sharpness and smoothness of the knife; and various procedures concerning the animals' health and the kosher aspects of the meat.⁴²

The animals slaughtered in the practice of kapparot are not recommended by the authorities for consumption due to inconsistent care of these chickens, yet as a part of tradition the meat is often given to the poor or, alternatively, consumed before the beginning of the fast. According to regulations, carcasses must be taken to a designated disposal site, but many carcasses are often left for the day at the site of slaughter, whether dressed and drawn (backbone removed and its body stretched apart so that the entire fowl lies in a flattened position) or intact. The markets where chickens are sold for these ceremonies are intended to be composed of only humans and chickens, but cats can often be found wandering around and sanitation aspects of the ceremony are questionable. Once the chickens reach the market, it is the responsibility of the local authority to supervise the market's activity, yet no special measures seem to be taken to minimize diseases and other hazards.

Market Functions

In general, the slaughter of animals outside of slaughterhouses is prohibited. According to official procedures issued by the Ministry of Agriculture, it was nevertheless decided to permit the practice, "due to sensitivity to the needs of certain communities in the Jewish population, to slaughter animals on-site as part of this custom."⁴³ Decisions regarding the slaughter of poultry are also under the jurisdiction of the municipalities. While some municipalities such as Tel-Aviv forbid this form of slaughter, others permit it, especially if there is a large percentage of Jewish orthodox population — such as Jerusalem — that

42. D. Cohn-Sherbok, "Hope for the Animal Kingdom," in *A Communion of Subjects: Animals in Religion, Science, and Ethics*, ed. Paul Waldau, and Kimberley Patton (New York: Columbia University Press, 2009), 85-86.

43. "Kapparot Procedure," Ministry of Agriculture, assessed on November 11, 2022, https://www.gov.il/BlobFolder/policy/moag-pro-131/he/procedure_nohal-kaparot-2022.pdf.

requests it. This issue has political implications, since kapparot is a religious ritual, and the government is not interested in restricting religious practices and does not want to be subject to scrutiny for alleged violations of freedom of religion. In general, tensions exist between secular and religious populations in Israel surrounding many issues. For example, orthodox people are often subsidized by the government for their religious studies and may be exempted from mandatory army service. The orthodox population has been described as “parasites” by some portions of the secular population and are very sensitive to religious-based restrictions.⁴⁴

Market Supply Chains and Transport

The birds used for kapparot are bought from certified chicken vendors and would otherwise be sent to the slaughterhouse for their meat. In other words, the birds are part of the larger industrial agricultural food system. Instead of being slaughtered to be marketed throughout the country, they are sold to be used in Kapparot ceremony. The Ministry of Agriculture has expressed concerns about whether animals slaughtered on-site and out of approved slaughterhouse facilities are suitable for human consumption. The chickens are brought to the market by truck and the suppliers are required to meet standard animal transportation regulations.⁴⁵ The cages with the chickens stay on the premises until the ritual is performed. In markets with on-site slaughter, some people take the chickens home to be consumed, while most carcasses are disposed of. In rare instances, animal activists manage to rescue a few chickens, which are transferred to sanctuaries and activists’ private houses.

Stakeholders

The people of interest are the suppliers of chickens (factory farm owners and vendors); the local municipality (which supports the market following public demand and approval by the mayor); and the owner of the market’s premises. There are no particular competitors in each locality. Financially, the kapparot market has a marginal significance, but people do pay money for the chicken, the slaughter fee, and in certain cases, a fee for the butcher. None of the stakeholders consider it a primary source of income. The kapparot market, rather, bears cultural significance.

Currently, the ritual is faced with growing opposition, mainly from animal protection organizations and Veterinary Services, but increasingly also from rabbis who recommend the alternative option of donating money to the poor.^{46 47 48} The market exists solely to comply with (ultra-orthodox) public demand. The activists are not usually present at these areas at the time of the ritual. There have,

44. This relates to publicly disputed issues such as exemption from military service and allocation of stipends. See: Pnina Shukrun-Nagar, “The Construction of Paradoxes in News Discourse: The Coverage of the Israeli Haredi Community as a Case in Point,” *Discourse Studies* 15, no.4 (August 2013): 463-480.

45. Animal protection regulations are meant to “reduce the suffering of the chicken while being transported, taking into account the agricultural needs”. They elaborate on the maximum length of transportation (4 to 6 hours, depending on the hour of transportation, for temperature reasons); food and water supply at the pick-up point and destination point; condition of cages (in any case the chicken should be able to sit down comfortably); environmental conditions (e.g. access to air); and waiting period until slaughter (8 hours max, depending on the temperature and other conditions). The Animal Welfare (Animal Protection) Law, 1994, last updated April 22, 2020, https://www.gov.il/en/departments/legalInfo/animal_protection_law_1994.

46. The Ministry of Agriculture call the public to refrain from kapparot due to public health and animal welfare hazards, and encourage them to perform the kapparot custom through donation of money to the poor. See: <https://www.gov.il/he/Departments/news/kaparot2/>.

47. “Ministry Calls on Public Not to Use Chickens for Kapparot Tradition this Yom Kippur Eve,” Gov.il, assessed on October 26, 2021, www.gov.il/en/departments/news/kippur_day_moep_call_avoiding_use_of_chickens.

48. “Chief rabbis urged not to harm animals in Kapparot custom,” Ynetnews.com, published on September 23, 2009, www.ynetnews.com/articles/0,7340,L-3780402,00.html.

however, been some protests nearby. In one of these instances, protesters were injured following an attack by the owner of the premises.

Risk Analysis

The Ministry of Agriculture highly recommends conducting the ceremony using money instead of chickens. In case the ritual of kapparot is still performed using chickens, it is recommended by the Ministry of Agriculture that the flesh be not consumed if the chicken was slaughtered on-site. There are also regulations regarding hygiene and sanitation. For example, animal carcasses should be put in a designated sealed container and removed to a designated disposal site once a day.⁴⁹

Landscape of Existing Regulation and Where it Fails

This kapparot practice is subject to animal slaughter and transportation regulation, as well as a specific procedure issued by the Ministry of Agriculture. In order to conduct the kapparot ceremony, the owner of the location needs to submit a written request to the Veterinary Services at the Ministry of Agriculture. The request must also be approved by the mayor of the city where the ceremony takes place, as well as by the municipal veterinarian. These authorities are also responsible for supervising the markets and enforcing the regulations, in terms of verifying that markets operate under the proper regulatory and permit requirements. Local authorities are obligated to report violations and hazards to the Ministry of Agriculture.⁵⁰

Proposed Reforms

The *kapparot* is a large-scale religious ritual. Change may be facilitated through Jewish orthodox leaders along with the state. On-site slaughter could be completely omitted and could be transformed into a slaughter-free ceremony. The living chickens would instead be transferred to the slaughterhouse following the ceremony, as is indeed done in several cases. This could reduce, but not eliminate, the risk for zoonotic disease. Another alternative would be to persuade more rabbis to support the elimination of the aspect of animal sacrifice from the ritual and replace it with monetary donations.

Kafr Qasim Bird Market

Overview of Market⁵¹

The Kafr Qasim Bird Market is located in an industrial zone in Kafr Qasim,⁵² a city approximately 25 km north of Tel-Aviv which is mainly populated by Palestinian citizens of Israel. The land on which

49. We have requested data regarding the implementation of these regulations but have not received it yet.

50. In the freedom of information request submitted we have asked for information on the municipalities' supervision of kapparot markets, but it was not provided to this point.

51. We would like to thank Dr. Azri Amram for allowing us to use the valuable information he has collected and interpreted while conducting his ethnographic research in Kafr Qasim. Azri Amram, "The roots of Palestinian-Israeli cuisine: food, culture and identity in Kafr Qasim," PhD diss., (Ben Gurion University of the Negev, 2021). [in Hebrew].

52. A few months prior to the COVID-19 outbreak the market moved to another location a few hundred meters from the original place.

the market exists is the private property of a local businessman, a Palestinian resident of Kafr Qasim. He states that it would have been easier for him to rent out this location for real estate or industrial purposes, but his priority is to provide opportunities for the families of the merchants.⁵³ It has operated for over twenty years and is also known as the “Bird Market” on account of the multiple stands where hundreds of domesticated and wild animals are sold. Though the market originally started out as a bird-only market, today, it offers many different species. The market is now mostly composed of pigeons, parrots, and other poultry (geese, ducks, chicken, etc.) but also includes snakes, turtles, rabbits, dogs, fish, and rodents. Animals are also sold for consumption at the market, such as chickens and lambs as well as wild quails. Larger farm animals are not sold at the market. Animals are not slaughtered on site. In addition to animals, this market sells home décor, clothes, toys, food products and supplies, as well as ready-to-eat food.

According to PTROA, an animal rights organization that conducted a year-long undercover investigation in the market in 2012,⁵⁴ merchants at this market often keep the animals under harsh conditions, conditions that do not meet minimum standards the law prescribes.⁵⁵ For example, the animals have been found to be transported in unauthorized vehicles (vehicles must have a special permit to transport animals) that include unsuited cages. When the animals arrive at the market, they have been known to receive inappropriate care (such as forcefully throwing cages with live animals onto the floor or catching animals in the neck and swinging them in the air, and duct-taping poultry’s legs together). They are also known to be kept in bad conditions throughout the day, without proper shelter or shade to protect them from hot or cold weather; with no food and water available at all times; in cages smaller than the minimum size demanded by law; and caged with many other animals so that movement is nearly impossible. The animals are denied other basic needs apart from food, water, and appropriate shelter. For example, cats are denied access to litter boxes and a scratching device for their nails; geese are denied water pools to stay in; and rodents are denied burrows – all mandatory according to regulations.⁵⁶ Some animals arrive at the scene already dead due to harsh transportation conditions. Some arrive at the scene with their legs tied up, or wrapped inside a sack, both practices against regulations. In addition, these animals are exposed to constant noise, human movement and disturbances (touching, moving or picking up), and the smells and sounds of other frightened animals. Moreover, sick or injured animals are not provided with medical care, nor are they separated from the other animals or denied contact with human visitors. Similar conditions were also documented in the market in subsequent years.⁵⁷ Such market practices can create health hazards for both animals and humans when cages are stacked above one another in stressful conditions and without proper sanitation. In addition, animals are constantly handled and touched by vendors and visitors. These conditions increase the risk of disease

53. Information provided through an interview with Dr. Azri Amram. Although there are claims of regular veterinarian inspection that is aimed at prevention of such cases of animal maltreatment (information obtained and published in an in-depth newspaper article, presented as an appendix in the petition), there seems to be a constant breach of animal protection regulations.

54. “מייח ילעבב רחט” [Animal Trade], Ptroa.org, assessed on October 26, 2021, <https://ptroa.org.il/%d7%a1%d7%97%d7%a8-%d7%91%d7%91%d7%a2%d7%9c%d7%99-%d7%97%d7%99%d7%99%d7%9d/>

55. “Animal Welfare Regulations (Protection of Animals) (Possession for Non-Agricultural Purposes),” no 2807, August 31, 2009, Sections 3 (appropriate conditions of keeping an animal, e.g., air-conditioning, climate conditions, cage size and condition, food and water supply); 4 (cage/compound size); 5 (poultry compound size), <http://extwprlegs1.fao.org/docs/pdf/isr204541E.pdf> .

56. “Animal Welfare Regulations (Protection of Animals) (Possession for Non-Agricultural Purposes),” no 2807, August 31, 2009, Sections 3 (appropriate conditions of keeping an animal, e.g., air-conditioning, climate conditions, cage size and condition, food and water supply); 4 (cage/compound size), <http://extwprlegs1.fao.org/docs/pdf/isr204541E.pdf> .

57. See a video news report from 2017: “לוישכע מסאק רפכ קוש תא רוגסל” [Close Kfar Qassem Market now!], Let the Animals Live - The Official Page, assessed on October 26, 2021, www.facebook.com/watch/?extid=SEO----&v=2205168569509276

spread. The observing veterinarian also noted that during a visit to the market he witnessed a man purchasing live poultry (ducks) for self-consumption. His observations also suggest that it is unlikely many of the animals sold at market were properly vaccinated as demanded by law.

Market Functions

Thousands of people visit this market every Saturday, including Jews, Palestinians from both Israel and Palestine, and migrant workers. It is a place where people from differing backgrounds can meet, speak to each other, and eat together. While there are plenty of regulated and inspected markets in Israel that offer similar products, such as food, clothes, and sweets, only a few sell live animals and unauthorized or expired food supplies as they do in Kafr Qasim market.

This market was established in a way that demonstrates the reactions and objections to what Palestinians perceive as discrimination against them when it comes to construction and city planning issues, and the market operates in a similar manner. Often, Palestinians prefer to reside as a large family in proximity to each other, adding floors to existing houses for the grown-up children to reside, often without proper authorizations that require a long bureaucratic process. This situation has caused neighborhoods to be densely populated, and illegal construction has turned into a custom.⁵⁸

A central characteristic of the market is a lack of organization, order, and tidiness, all likely stemming from the lack of regulation, as well as the absence of supervision and enforcement of the laws that exist. Visitors to the market often perceive this lack of order as a part of the market's charm, as authenticity, as a space that developed naturally, in contrast to other spaces that are perceived as artificial or even fake.⁵⁹ Ethnographer James Scott also claimed that minor breaches of law that go unnoticed are ways in which weak groups in society manifest their objection towards the regime.^{60 61} The lack of order in the market and the objection to the social-political order are a crucial part of the economic system, and authorities often turn a blind eye instead of finding ways to regulate the market. The market is frequented by disadvantaged populations, and is positioned in the gray area between official and unofficial, legal and illegal.

Market Supply Chains

Animals, both domestic and wildlife, are brought to the market by dozens of private traders who raise the animals themselves or capture them, and they then bring them to the market to be sold as merchandise. Some of the animals are born on the farms of the merchants, while some, primarily snakes and birds, are captured in the wild. Since the vendors at the market usually sell only on a small scale, they transport animals to market using their own private transportation. Hundreds of animals are

58. For elaborated discussion on the social causes of Palestinian forms of settlement, see: Yousef Omar, "Jerusalem: Palestinian Space, Behaviors and Attitudes," *Palestine-Israel Journal of Politics, Economics & Culture* 17, no. ½ (2011): 43-53.

59. It is argued that such unregulated illegal actions in the market such as selling unauthorized goods constitute a manifestation of the social-political order in Israel as everyday practices that challenge the regime, as demonstrated by Michel De Certeau. Michel de Certeau, "General Presentation," in *L'invention du Quotidien* Torn. 1, *Arts de Faire* (Paris: Union Generale, 1980), 9-29. As further elaborated by Azri Amram "The roots of Palestinian-Israeli cuisine: food, culture and identity in Kafr Qasim," PhD diss., (Ben Gurion University of the Negev, 2021). [in Hebrew]. pp. 46-70.

60. James. C. Scott, *Weapons of the Weak: Everyday Forms of Peasant Resistance* (New Haven: Yale University Press, 1985),

61. Although ineffective in terms of a long-term solution that requires a change in political and social attitudes towards Palestinians that reside in Israel, these minor breaches may help these groups deal with oppression and daily reality in the short-term. For elaboration see Azri Amram "The roots of Palestinian-Israeli cuisine: food, culture and identity in Kafr Qasim," PhD diss., (Ben Gurion University of the Negev, 2021). [in Hebrew]. pp. 46-70.

estimated to be sold every Saturday in this section of the market, which generates sales of ILS 2 to 3 million a year (\$620,000-\$900,000). The prices of animals sold in this market are considered relatively low (compared to pet-shops), hence attracting many potential buyers.

Sale

Some animals are bought by individuals who intend to keep them and use them for eggs and other byproducts or to slaughter them and consume their meat. These buyers also include migrant workers, mainly from Asia, who buy chickens for individual consumption. They generally work in agriculture and live in rural areas where they can kill the animals and cook them. Other buyers keep the animals they buy as pets, especially the dogs, pigeons, and parrots. Buyers in this market are often poor, disadvantaged, and willing to risk buying unsupervised food for financial reasons. In addition, the selling of live animals distinguishes the market from others, enhancing its appeal to tourists and people looking to spend some time on their weekends.

Stakeholders

The Kafr Qasim market has existed since 1998. The owner rents out more than 100 stands to different merchants: Palestinian residents of Kafr Qasim, Jews, and some Palestinians from the West Bank. The merchants, most of whom are “regulars” who return each week, can additionally be seen as stakeholders. They rent out a “cube,” which is a small area in the market, and pay ILS 250 (about US\$75) in cash for it. For many merchants, this job is an additional source of income and not their main occupation. The market is covertly supported by the municipality of Kafr Qasim. Although there are other Arab-owned markets nearby, such as in the city of Tira, they generally are not viewed as real competition.⁶² While the animals sold in the market are often a main attraction for visitors, they also generate condemnation from animal rights organizations that oppose the conditions the animals are kept in, including the small and unfit cages; lack of access to food and water; sanitation conditions; and stress-inducing conditions in general. Despite that, as far as we know, there are no organized protests of pro-animal activists near the market, and the objection is manifested mainly through social media, undercover investigations like that of PTROA, and official legal actions through complaints and petitions. The merchants, on the other hand, are rather indifferent to these accusations, often rejecting them by claiming that they provide a solution for problems that the state does not deal with, a claim that was also stated by the market’s owner. For example, the claim that puppies are sold in the market who would otherwise die in shelters. However, PTROA activists stated at least once that they were threatened by a merchant whom they tried to follow, and who also identified one of them later in the market and threatened to hurt him. There are no special objectors apart from animal rights advocates.

Risk Analysis

No measures are taken at Kafr Qasim market to prevent zoonotic disease. This also speaks to a

62. Information provided through an interview with Dr. Azri Amram.

larger lack of national plans, strategy, and laws that specifically address zoonotic disease prevention.⁶³ A petition submitted to the High Court of Justice in 2017 included the expert opinion of the chief of the department of exotic animals in the veterinary hospital at The Hebrew University.⁶⁴ According to his assessment, beyond the stress the animals themselves are exposed to in the market, there are potential health risks including various diseases, stemming from the way in which the animals are kept and physical contact between the market visitors and the animals. The petition called for additional enforcement by the Ministry of Agriculture of existing animal protection regulations,⁶⁵ and to impose fines on those who violate it. The petition was eventually withdrawn by the Appellants after the ministry presented evidence of low-scale enforcement measures deemed sufficient enough to reject judicial intervention. In its response to court, the Ministry of Agriculture stated that enforcement activity related to care of animals is performed once in a two-month period, and that between 2012-2017 there were 108 enforcement activities, from which 19 legal cases were initiated, followed by casting 14 fines summing up to ILS 80,750 (approximately US\$25,000); two prosecutions were made, and 624 poultry and 56 other animals confiscated. The ministry claimed the above activity was sufficient, and hence no additional judicial intervention is needed. The petitioner, in turn, has claimed that there was no confiscation of equipment that was used in these offenses (e.g. damaged cages), and that no data was provided as to the actual results of the two prosecutions or the collection of the fines. The petitioner also claimed that according to the evidence, there were actually less enforcement activities than those stated by the ministry, and that the inspectors sent to the market are not knowledgeable enough with the regulations.

Landscape of Existing Regulations

There are general regulations this market has to adhere to, which are no different from those of other markets. In addition, merchants have to comply with animal welfare laws, such as those pertaining to the size of cages, adequate supply of food, water and shelter, etc. Animals must be transported according to ordinary animal transportation regulations. In addition, some of these species are classified as wildlife (such as quails, turtles, snakes, and some kinds of birds), hence their keeping and trade require a permit.⁶⁶

Where Regulation Fails

The Ministry of Agriculture is solely responsible for the enforcement of the regulations, since local municipalities, as for now, have no authorization to supervise animal regulations. The local municipality is responsible for issues related to human public health. However, these are not enforced. In the previously mentioned petition to the High Court of Justice, it has been claimed that the inspections of the Ministry of Agriculture are ineffective as they were random and inspectors were not well-acquainted with the relevant

63. "Israel: Global Health and Security Index," GHSI Index, 2021, <https://www.ghsindex.org/wp-content/uploads/2021/12/Israel.pdf>.

64. *Let the Animals Live v. The Ministry of Agriculture and Rural Development*, HCJ 8572/17.

65. "Animal Welfare Regulations (Protection of Animals) (Possession for Non-Agricultural Purposes)," no 2807, August 31, 2009, Sections 3 (appropriate conditions of keeping an animal, e.g., air-conditioning, climate conditions, cage size and condition, food and water supply); 4 (cage/compound size); 5 (poultry compound size), <http://extwprlegs1.fao.org/docs/pdf/isr204541E.pdf>

66. Quails, some types of birds like parrots and pigeons, and snakes.

laws. It also seems that the Nature and Parks Authority, which is responsible for enforcement of wildlife protection, does not invest much effort into enforcing legislation in the market.

Analysis of Application - Efficacy

A response to the petition, submitted by the Ministry of Agriculture, stated that, in a period of 11 years, 13 fines have been issued, and two people were prosecuted. The petitioner claimed that these numbers are low with regards to the scope of violations occurring at the market and added that the Ministry of Agriculture does not exert its authority to seize animals suspected of being abused. For example, a report from April 2018 describes an inspection in which animals, mainly poultry (ducks, chicklets, turkeys), but also wildlife (quails) and rodents (rabbits) were kept without proper supply of food and water, and tightly confined in generally poor conditions.⁶⁷ Three dead carcasses of poultry were found on the scene in a separate box. The report elaborated on the number of animals confiscated that did not match the number reported separately by the veterinarian authorities.⁶⁸ Nowhere written in the report is the lack of license to sell wildlife. The confiscated animals were returned to the suspect, who was questioned and released. There is no mention of a fine or other measures taken against him.

Even though the petition was withdrawn, its filing pressured the Ministry of Agriculture to increase its enforcement activities in the market. Enforcement also sometimes involves other authorities. For instance, in 2019, a joint enforcement operation was carried out by the Ministry of Agriculture, Natural and Parks Authority, the Green Police, and the Ministry of Health veterinarians. Thirty domestic and wild animals were seized after being held in harsh conditions and without a wildlife keeping permit.⁶⁹

Extra-legal Activities

The designation of the land is for agricultural purposes and not commercial ones, meaning that the use of the area for the market is essentially illegal. In general, regulated markets in Israel do not sell live animals. One can often purchase food products (e.g. fresh fruit and vegetables, pastries, pickles, spices, and even meat and cheese in designated compounds) and other products (e.g. clothes, jewelry, and art), but animal markets are rather rare. Kafr Qasim market is largely unsupervised, and authorities often turn a blind eye to its illegal operations.

Prospective Reform

The COVID-19 outbreak could encourage the government to be less forgiving when it comes to matters of public health, and therefore engender change. For the time being, it does not seem that COVID-19 has changed the way the market operates. It has been suggested that increased

67. Kfar Qassem inspection report by the Ministry of Agriculture, April 28, 2018.

68. The number reported by the inspector was as follows: 18 quails, 12 ducklings, 100 chicklets. The number reported by the veterinarian services was: 36 ducks, 20 quails, 150 chicklets, 22 rabbits, 2 turkeys.

69. "לעב תקזחא ויגב סידושח 7 ורצענ: מסאק רפכ" [Kfar Qassem: 7 Suspects Were Arrested for Keeping Animals in Violation of the Law], Maariv.co.il, assessed on October 26, 2021, www.maariv.co.il/breaking-news/Article-722160.

law enforcement may simply drive illegal operations in the market underground.⁷⁰ From the state's perspective, there is also a recognition that shutting down the animal market will drive merchants to trade animals clandestinely. Hence, there is a preference to leave things the way they are and try to promote regulated activity.⁷¹ It is worth mentioning, however, that following the data we obtained, it seems that the authorities, as well as the public, are more concerned about animal welfare than health risks in relation to this case of Kafr Qasim market.⁷²

An optional solution could be to help merchants selling live animals to transition to other types of sales and sources of income. Promoting educational programs on animal welfare and the zoonotic risks involved with the market—including the trade and consumption of wild animals—could be advantageous as well. Promoting alternative income sources for vendors alongside increased public awareness of zoonotic risks may prove more effective than the current random and infrequent enforcement.

Other solutions may include: permanent on-site inspectors by the local municipality; an animal welfare monitor appointed by the market and shifting away from wildlife trade. These might not go together with the informal aspects of the market but may be more willingly accepted following COVID-19 and growing public understanding of the risks.

Illegal Slaughter

Overview

Another area of major concern for zoonotic risk in Israel is the illegal and unsupervised slaughter of animals, mostly sheep.⁷³ This phenomenon exists in both the Jewish and the Muslim Arab communities as part of ritual slaughter for holiday, such as Passover and Id Al-Adha, and in celebrations such as Arab weddings. However, it is more common in Arab communities, such as among Bedouins, due to traditional agricultural methods, preference for sheep meat, and structural reasons that often marginalize Arab communities in Israel.^{74 75}

According to Veterinary Services, there are around 1,000 commercial sheep and goat farms in Israel. Larger facilities often hold sheep imported from Australia and Europe (mostly Portugal). The market also consists of over 2,000 small herds comprising less than 100 mature animals, most of which are held by Bedouin communities in the Negev Desert. The market size is estimated by the Veterinary Services to be approximately 1 million animals, based on the number of foot and mouth vaccinations administered annually to sheep and goats in farms and herds from the age of two months.⁷⁶ The Veterinary Services further estimate that of those, 360,000 die in the rearing process or are transferred

70. This suggestion comes from personal correspondence with Azri Amram who researched this market in 2016-2019 and had conversations with the owner of the market as well as some of the merchants.

71. The Knesset, Transcript of Internal Affairs and Environmental Protection Committee Discussion, May 6, 2012.

72. This is also evident in other cases where animals are involved, such as the Kapparot case.

73. Illegal slaughter of chickens is discussed in the previous section on Kapparot.

74. Thirty-eight percent of all sheep in Israel are reared in the Negev district, in which less than 10% of the inhabitants in Israel live. See: "2019 נתוני תוצרת" [The State of Sheep and Goats Production (2019)], the Ministry of Agriculture, assessed on October 26, 2021, <http://2019.kenesbakar.co.il/Portals/138/24.pdf>.

75. Allan Degen, "Traditional Livestock Production among Bedouin in the Negev Desert," in *International Handbook of Research on Indigenous Entrepreneurship*, ed. Léo-Paul Dana (Cheltenham: Edward Elgar Publishing, 2007), 115-136.

76. Data provided by the Ministry of Agriculture through a freedom of information request, no. 3000, dated November 25, 2020.

to the Palestinian Authority, mainly the West Bank.⁷⁷ Nonetheless, the official number of sheep and goats that were slaughtered in regulated slaughterhouses in Israel was between 240,000-290,000 in 2017-2019.⁷⁸ Even if considering that not all remaining animals are slaughtered annually, this points to an unbridgeable and unexplained gap of hundreds of thousands of animals, between those officially vaccinated and those officially slaughtered, meaning that significant numbers are slaughtered outside of regulated slaughterhouses.

This phenomenon has clear public health implications. Brucellosis, a disease contracted mainly through the ingestion of unpasteurized milk and undercooked meat, is the most prevalent mammal zoonotic disease in Israel, and can be seen as a litmus test of the relation between zoonotic spillover and sociopolitical conditions. Brucellosis has been found in the Bedouin Arab population of the Negev in Israel at rates as high as 150 patients per 100,000 people per year.⁷⁹ As will be discussed below, the Ministry of Agriculture had put efforts into tackling brucellosis in the Negev by increasing the scope of vaccinations, yet these interventions resulted in limited effectiveness, in part, due to lack of trust, and were later ceased due to budget problems. Several concerns contributed to this lack of success, suggesting that a One Health approach should be applied, one that accounts for competing social and ethical perspectives.⁸⁰

Supply Chains and Stakeholders

The source of animals that comprise what we refer to in this paper as the “illegal slaughter market” is the livestock industry, as well as herds of Bedouin communities. While the exact number of sheep and goats that are slaughtered annually without supervision is not published, its scope is overwhelming. An economist of the Dairy Board estimated in 2019 that this practice consisted of as much as 63% of sheep and goats in Israel, which amounts to approximately 500,000 animals.⁸¹ Even more conservative estimations indicate hundreds of thousands of animals annually. It should be mentioned that since 2016 only one regulated slaughterhouse for sheep and goats operated in the south of Israel. It was located in the Bedouin city of Rahat, where merely 200-2,000 sheep and goats were slaughtered between 2015-2019, respectively.⁸² This facility was closed down by the Ministry of Agriculture in 2021 due to suspicion of animal cruelty and poor sanitary conditions.⁸³

The scope of activity, in which the majority of animals in this sector are slaughtered without veterinary supervision, is obviously not limited to the slaughter segment itself. It must rely on a large-

77. Letter of Dr. Tamir Goshen, Chief Veterinary Officer (Acting) to the Environmental Justice and Protection of Animal Rights Clinic, Response of the Israeli CVO to the Clinic, August 11, 2021, p.18. It should be noted that the number of officially transferred animals was provided via freedom of information request, and stands between 65,000 in 2017 to 135,000 in 2021. Mortality rates estimation vary according to age.

78. “מיירינטו מיתוריש 2019 תנשל ח'וד” [Report for 2019 Veterinary Services], Israeli Veterinary Services, accessed on [], https://www.gov.il/BlobFolder/reports/annual-report-veterinary-services/he/animals_health_doch_shnati_2019.pdf. Data provided by the Ministry of Agriculture through freedom of information request, August 22, 2021.

79. Barak Hermesh, Anat Rosenthal, Nadav Davidovitch, “Rethinking ‘One Health’ Through Brucellosis: Ethics, Boundaries and Politics,” *Monash Bioethics Review* 37, (June 2018): 22–37, <https://doi.org/10.1007/s40592-018-0079-9>.

80. Barak Hermesh, Anat Rosenthal, and Nadav Davidovitch, “Rethinking ‘One Health’ through Brucellosis: Ethics, Boundaries and Politics,” *Monash Bioethics Review* 37 (2019): 22-37.

81. Liron Tamir, Israeli Dairy Board, “The State of Small Ruminants Sectors in Israel and Abroad in Israel and Abroad,” *Ambar Conference* (2020): 34.

82. Veterinary Services Annual Report 2019, 217. As indicated there, another facility, in the southern city of Be'er Sheva ceased to operate in 2015, and in the five years prior to that slaughtered approximately 1,500-2,000 sheep and goats a year.

83. Ministry of Agriculture, Due to suspicion of animal cruelty violations and poor sanitary conditions, the veterinary services of the Ministry of Agriculture closed down a slaughterhouse in Rahat, December 28, 2021: www.gov.il/en/departments/news/ministry_of_agriculture_closed_a_slaughterhouse_in_rahata,

scale infrastructure to support it throughout the supply chain: from trade and transport; through the slaughter, processing, and distribution of meat to the public; to the disposal of waste and carcasses. This often leads to the application of illegal and low standards in each segment, increasing the risk to public health, the animals, and the environment throughout the supply chain.

News articles and publications by the Ministry of Agriculture indicate large-scale organized operations of unregulated slaughter facilities, at times using fabricated veterinary authorization stamps, and transporting and distributing meat in unsanitary conditions. An undercover investigation carried out by animal rights NGO Animals-Now in 2017 at a factory farm in a kibbutz in northern Israel shed some light on such practices. Among others, it revealed that sick sheep were routinely sold and at times slaughtered on-site without veterinary supervision. The live or dead sheep were then transported in a private car, sometimes in the vehicle's trunk.⁸⁴

Another common form of illegal slaughter and distribution of sheep and goat meat is done in a private manner, such as during traditional religious events and celebrations.⁸⁵ The practice is carried out by both Jewish and Arab communities, yet more common in the latter. It should also be mentioned that the practice of slaughtering and consuming animal flesh on-site on holidays and celebrations relates also to the traditional customs common in rural settings in which animals constitute an integral part of community life.

There is a formal procedure for such rites and events, which applies to any slaughter of sheep or goats performed outside a licensed slaughterhouse. However, requests are scarcely filed. According to data obtained through a freedom of information request, only 16 requests were filed between 2017 and 2020, comprising 1,015 animals altogether. Requests were filed only by Jewish communities, mostly before Passover and the Jewish new year.⁸⁶

Risk Analysis

According to the Ministry of Agriculture, in 2014-2016, as little as 3-5% of sheep and goat meat was sold in supermarkets. Distributing this meat in other sectors such as butcheries, restaurants, and catering services means that consumers are often not aware of the source, process, or risks of disease transmission involved with consumption of such meat.

Presumably, the vast majority of sheep and goats, even in rural communities, are vaccinated against foot and mouth disease.⁸⁷ However, foot and mouth disease continues to cause problems in Israel and outbreaks occur annually.⁸⁸ By contrast, vaccination rates are much lower for brucellosis, which is the most prevalent mammal zoonotic disease in Israel. The World Health Organization includes

84. "מישבכה ריד להנמ לע ורזגנ יפסכ סנקו יאנת לע רסאמ: עבג צוביקב תוללעתהה" [The Abuse at Kibbutz Geva: A Suspended Sentence and a Fine Were Imposed on the Director of the Sheepfold], Kan.org.il, assessed on October 28, 2021, <https://www.kan.org.il/item/?itemid=107131>; Indictment in criminal file no. 24123-09-18.

85. This refers to the venue and legality of events which include unregulated animal slaughter, and not to the method of slaughter, which is done in accordance with religious rules.

86. These filed requests are separate from activities associated with the practice of Kapparot and the days of atonement.

87. Foot and Mouth vaccinations are mandatory and used to estimate the number of animals in this market. The Veterinary Services instruct to vaccinate all sheep, goats, cows and pigs. Local sheep and goats are generally vaccinated at the age of two months, whereas imported sheep are vaccinated within 48 hours of arrival, see: www.gov.il/BlobFolder/reports/vaccination-cattle-sheep-pigs-foot-and-mouth/he/animals_health_mouth_and_paws_hisun_bakar_tzon_20.pdf.

88. Ehud Elnekave, Keesvan Maanen, Hila Shilo, et al., "Prevalence and Risk Factors for Foot and Mouth Disease Infection in Cattle in Israel," *Preventive Veterinary Medicine* 130 (August 1, 2016): 51-59, <https://doi.org/10.1016/j.prevetmed.2016.05.013>.

brucellosis in its list of Neglected Zoonotic Diseases, stating: “the term `neglected` highlights that diseases affect mainly poor and marginalized populations in low-resource settings.”⁸⁹ Epidemiological data corroborates this description, indicating that the disease is more common within the Arab population, and most notably in the Bedouin community in the Negev Desert. In 2019, 56 of 88 cases of brucellosis-melitensis infected herds of sheep and goats in Israel were in the Negev, as well as 39 of 112 cases of human contractions.⁹⁰ Other predominant districts where human contraction was noted were East Jerusalem (31) and the Western Galilee (28), accumulating to 88% of occurrences in Arab (or dominantly Arab) populated areas.

Regulatory Approaches

The Animal Diseases Regulations (Animal Slaughter, 1964) prohibit the slaughter of animals outside a licensed slaughterhouse. Exceptions to this rule are limited strictly to sheep and goats slaughtered at traditional celebrations, popular customs or rituals, under a specific procedure in this matter,⁹¹ as well as urgent situations in which the killing of an animal is essential to eliminate the animal’s suffering or necessary to prevent the risk of spreading a disease. Poultry is also an exception to this law, where local authorities decide on the matter as seen with the kapparot discussion earlier.

The aforementioned procedure for slaughter for consumption requires on-site veterinary supervision, traceability of the animals and distributed meat (when distributed), proper waste disposal, and some animal welfare measures. It applies the general animal transport regulation on disease prevention and animal welfare. In a recent update to the procedure, the requester of a permit is obligated to accept full responsibility for the slaughter and its consequences if the procedures’ instructions are not met.

While the procedure provides a legal framework for this practice, permit requests are scarcely filed, as indicated above. Over a three-year period, all requests were approved, one of them after an initial rejection recommendation by a district veterinarian, due to animal health concerns at the market source, which was overruled by a superior veterinarian. The procedure does not refer to how to apply the ministry’s discretion for such requests, i.e., what constitutes a “traditional celebration, popular custom or ritual” to which this exception may be applied.

Despite extensive existing regulation, illegal slaughter is a widespread phenomenon in Israel and something the Veterinary Service is aware of.⁹² While much effort has been invested to significantly reduce the scope of such practice, particularly with regard to calves (estimated by the Ministry of

89. “Control of Neglected Tropical Diseases,” World Health Organization, assessed on October 28, 2021, www.who.int/teams/control-of-neglected-tropical-diseases/neglected-zoonotic-diseases. See also: K. A. Franc, R. C. Krecek, B. N. Häslar, and A. M. Arenas-Gamboa, “Brucellosis Remains a Neglected Disease in the Developing World: a Call for Interdisciplinary Action,” *BMC Public Health* 18, no. 1 (January 2018): 125, <https://doi.org/10.1186/s12889-017-5016-y>.

90. These figures represent a decline since 2015, where human infection was as high as 258 (“Veterinary Services 2019 Report,” 88). It should be noted that the figures in the Ministry of Health’s epidemiological reports are substantially higher: 411 cases in 2015 and 452 cases in 2016. See: “Weekly Epidemiological Report Week No. 52,” Gov.il, assessed on October 28, 2021, www.gov.il/BlobFolder/dynamiccollectorresultitem/iwer-52-2016/he/files_weekly-epidemiology_2016_IWER52_2016.xlsx.

91. “Slaughtering of Small Ruminants Outside a Slaughterhouse for a Traditional Celebration, Popular Custom or Ritual”, Gov.il, accessed on [], www.gov.il/BlobFolder/policy/nohal_shlita_pulhanit/he/procedure_nohal_shlita_pulhanit.pdf.

92. Letters by CVO (Acting) Dr. Tamir Goshen to the Environmental Justice and Protection of Animal Rights Clinic at Tel Aviv University, Israeli CVO response to the Clinic, March 11, 2021, p. 21 and August 11, 2021, p. 18.

Agriculture to be less than 1% of all calf slaughter in 2018),⁹³ the scope of illegal slaughter of sheep and goats still remains high and alarming.

In terms of brucellosis mitigation, the Animal Disease Regulations (Elimination of Brucellosis Disease in Sheeps) 1989 includes provisions compelling owners of herds to notify a government veterinarian of the number of sheep as well as requirements to vaccinate them. It also authorizes governmental veterinarians to impose examinations of herds and sets instructions in case of infected herds or areas. In the 1990s the Ministry of Agriculture began its efforts to decrease infection rates, yet the program was prematurely terminated due to budget restrictions.⁹⁴ In 2014, a time in which only 30% of herds in the Negev Desert were vaccinated, human infection peaked and infections were also noted in commercial dairy farms in nearby Jewish settlements. As a result, efforts in this field resumed. The Veterinary Services declared a five year plan to eliminate the disease, allocating ILS 50 million (US\$15.6 million) to its implementation in the Negev region, applying a test-and-slaughter strategy, as well as educational programs for disease prevention. However, this program was halted in 2017 following a workplace dispute within the Ministry of Agriculture after hiring external service providers.⁹⁵

Where Regulation Fails

In a recent response to a media article covering the issue of illegal slaughter, the Ministry of Agriculture claimed that “unfortunately, this is a common way, mostly in the Arab society, in which most consumption is done in a private or family manner, around holidays or religious events.”⁹⁶ While it is easy for the regulator to portray a minority group as responsible for this phenomenon, as indicated above, such practices also exist in the Jewish population. Countrywide cross-sector infrastructure throughout the chain of production is needed to bring all slaughter into legal slaughterhouses.

The reference to the traditional customs and informal mechanisms of disenfranchised communities ignores the sociopolitical conditions they face and furthermore represents their institutionalized marginalization and avoidance. It also ignores the economic interests and industrial characteristics which are essential for this phenomenon to thrive at the expense of food and public safety and animal welfare. The lack of formal slaughter infrastructure in Israel’s southern district is similarly overlooked.

The Ministry of Agriculture routinely addresses illegal slaughter in its annual work plan. However, the implemented measures in this field are insufficient and ineffective. The ministry claims it is difficult to eliminate, and that it lacks the budget and manpower to do so.

Enforcement efforts focus mostly on specific cases and media work, which are only able to touch

93. The Ministry of Agriculture Workplan for 2018, data referring to 2017, p. 253 www.gov.il/BlobFolder/reports/work_plan2018/he/plan_work/plan2018.pdf.

94. Hermesh, “Rethinking ‘One Health’ Through Brucellosis.”

95. Ibid.; “דרשמ תואלקחה חותיפו רפכה” [Handling of Cattle and Small Ruminants Diseases], State Comptroller Report 68C, 931-984, assessed on October 28, 2021, www.mevaker.gov.il/he/Reports/Report_627/30563de5-1ba7-4b7b-b53a-70a2677e5991/213-mahalot.pdf.

96. “75% of the Sheep Meat in Israel Undergoes a ‘Black’ Slaughter and Endangers the Public”, Globes.co.il, assessed on October 28, 2021, <https://www.globes.co.il/news/article.aspx?did=1001359198>.

the tip of the iceberg, rather than addressing root causes and additional solutions.⁹⁷ Each year 24 tonnes of meat sourced in illegal slaughter are confiscated a year, yet the total market size of sheep and goats locally slaughtered for meat is over 17,000 tonnes, of which approximately 7,000 tonnes are sourced in supervised slaughter. This indicates that the market of illegal slaughter is over 10,000 tonnes annually.⁹⁸ Offenders know that their risk of being caught is slim to none, and even when one is caught, the common penalty is a small administrative fine, which is imposed in a very slow and cumbersome process.⁹⁹

In contrast to case-specific efforts, substantial market policy measures have not been properly implemented. In 2014, a State Comptroller report found that the Ministry of Agriculture did not monitor the slaughter of sheep, goats, and pigs, and had no knowledge of whether these animals were slaughtered in accordance with slaughterhouse transport permits. It also criticized the lack of supervision by municipal veterinarians, who are associated with the national Veterinary Services and bear responsibility to implement regulation for inspecting animal products distributed in their locality. It also pointed to the lack of coordination between different local authorities which contribute to market conditions that allow the illegal and unsupervised trade of meat to flourish.¹⁰⁰ Another State Comptroller report from 2018 indicated that the Veterinary Services did not properly monitor sheep and goat herds in the Negev Desert in terms of herd sizes, brucellosis infection rates, and regulation enforcement including vaccinations, all of which the report said lead to substantial outbreaks and spillover to commercial farms.

Illegal and unregulated slaughter, as well as informal trade and rearing practices are all related to brucellosis. This disease can be mitigated by increasing the extent of vaccinated herds. The above-mentioned efforts to do this have moderately improved the situation, but they were still deemed insufficient for numerous factors.¹⁰¹ For example, in terms of a geographical boundary, the Negev is in the vicinity of the West Bank and is part of a traditional commerce route. This is manifested by cross-border smuggling of livestock and animal products, influenced by the significant prevalence of brucellosis in the West Bank.¹⁰² Other examples are political, including Bedouin herders' reluctance to cooperate with regulation enforcement by the Veterinary Services, when house demolitions and sheepfold demolition policies simultaneously took place in their villages by the Israeli Land Authority. The Ministry of Agriculture later initiated periodic "round table" meetings in order to involve additional stakeholders. However besides this being a non-decision making forum, substantial stakeholders, including representatives of the ministries such as Environmental Protection, Education and Finance,

97. See example press releases by the Ministry of Agriculture: "Just in Time for the Festivals' Ministry of Agriculture Inspectors seized 1,860 kg. of illegally slaughtered meat destined for market" March 22, 2021 https://www.gov.il/en/departments/news/for_the_holidays. The 2019 Governmental Work Plan includes a plan for two "publicized enforcement operations of meat which was illegally slaughtered, reached the stores and its sale was prevented", p. 260: www.gov.il/BlobFolder/reports/plan_2019/he/plan_workPlan2019.pdf

98. Estimation included in a presentation by the Dairy Board economist. Liron Tamir, Israeli Dairy Board, "The State of Small Ruminants Sectors in Israel and Abroad in Israel and Abroad," Ambar Conference (2020): 34.

99. According to information provided by the Ministry of Agriculture through a freedom of information request, in 2017-2020 its Enforcement and Investigations Unit opened 265 cases, which led to as few as 8 indictments. 14 files were closed, some on the grounds of lack of public interest. In 2018-2020 the ministry imposed 187 fines for illegal slaughter of sheep, goats and chicken, and 87 fines for illegal meat transport. The sum was not provided.

100. "64ג' יתנש חוד" [State Comptroller Report 64C], 999-1038, mevaker.gov.il, assessed on October 28, 2021, www.mevaker.gov.il/he/Reports/Report_248/c6607a4a-319b-4214-8943-0ac3587071c0/226-ver-4.pdf.

101. Hermesh, "Rethinking 'One Health' Through Brucellosis."

See also: "תולחמ תעינמו אופסמ, הנקמ אובי מוחרב רפכה חותיפו תואלקחה דרשמ לש חוקיפרו לוחינה" [The Management and Inspection by the Ministry of Agriculture and Rural Development on the field of Livestock Importation, Feed and Disease Prevention] mevaker.gov.il, assessed on October 28, 2021, www.mevaker.gov.il/sites/DigitalLibrary/Documents/2020/70b/2020-70b-211-Agriculture.pdf.

102. Ahmad Amro, Badeeha Mansoor, Omar Hamarsheh, and Diaa Hjajja, "Recent trends in human brucellosis in the West Bank, Palestine," *International Journal of Infectious Diseases* 106, (April 2021): 308-313, [www.ijidonline.com/article/S1201-9712\(21\)00348-9/fulltext](http://www.ijidonline.com/article/S1201-9712(21)00348-9/fulltext).

Bedouin herders, and NGO representatives were nearly absent from these meetings and did not have their voices heard.¹⁰³

Prospective Reform

This condition in which the supervised slaughter of sheep and goats has become an exception poses a great risk to public health and animal welfare. The lack of veterinary checks, lack of traceability of the animals and distributed meat, lack of proper waste disposal, and lack of animal welfare measures in these illegal slaughterhouses creates an environment ripe for zoonotic disease spread, and a profound paradigm shift is necessary to tackle this phenomenon. This requires both significant improvements in monitoring and enforcement and in the change of social attitude towards the practice to account for the public health risks. Measures should also tackle the financial interests and structural elements which have turned illegal slaughter into another form of agribusiness. For instance, in the example given above, a commercial farm routinely sold sick sheep for illegal slaughter driven by profit motives at the expense of public health.

Such measures for the traceability and monitoring of illegal sheep and goat slaughter should include the implementation of the above-mentioned recommendations by the State Comptroller, as well as regulatory methods that were successfully used by the Ministry of Agriculture to reduce the illegal slaughter of calves to 1%. Digital monitoring and reporting tools introduced by the ministry could be valuable to tackle illegal slaughter of animals. In addition, the Veterinary Inspection Authority should get involved, integrating also the Ministry of Health's perspective, and municipalities should increase the supervision on sold meat in their locality.

Additionally, on the social and cultural level, a more inclusive One Health approach should be implemented to take into consideration the structural marginalization and disenfranchising of communities that enables a “neglected zoonotic disease” such as brucellosis to thrive. Among others, this includes taking substantial measures to inform the public and those working in this field of the risks involved with illegal slaughter and its meat consumption and reintroducing mitigation efforts such as vaccinating herds. Learning from past experience, these measures should be done in a manner that restores trust and coordination with local communities, herders and civil society. While it is still unclear how COVID-19 affected the market for meat and especially animals slaughtered outside of official slaughter houses, the public itself is much more informed on the risks of zoonotic disease, and it can be fairly estimated that essential measures to tackle this phenomenon could now be more easily and cooperatively introduced.

Livestock Production

Background and Zoonotic Risk Analysis

Israel's livestock production is mostly intensive and industrialized. Most of the production is poultry, beef, eggs, and dairy. There is also a small production output of pigs, sheep, and goats. The

103. Hermesh, “Rethinking ‘One Health’ Through Brucellosis.”

scope of the livestock industry in Israel in 2020 is approximately 270 million animals, as follows:

| | Farm type | Number of farms (as of September 2020) ¹⁰⁴ | Number of animals ¹⁰⁵ |
|--|---|--|---|
| Chickens | Broilers | 2,253 | 248,722,000 |
| | Eggs | 1,942 | 8,920,031 |
| | Turkeys | 664 | 7,243,000 |
| Cows (dairy) | Dairy | 700 | 115,431 |
| Cows (meat) | Imported calves (intensive farms) | 200 | 333,567 |
| | Extensive farms | 200 | 34,500 |
| Cows (sold to the Palestinian Authority) | | | (126,021) |
| Fish | Mostly inland fisheries | 120 | 33,000 tonnes (2019) |
| Pigs | Meat | 25 | 200,000 |
| Sheep and goats | Meat and milk, including importation | 3,000 | 1,100,000 |
| Sheep and goats (sold to the Palestinian Authority) | | | (95,542) |
| Total | | 9,104 | 266,446,966 (fish omitted) |

Excluding live importation of calves and sheep from Australia and Europe, most of the animals are born and bred locally, whereas animal feed is almost entirely imported. Jewish rural communities dominate most of the production, with the largest farms being run by kibbutzim, alongside smaller family farms in moshavim, Israeli settlements.¹⁰⁶

Israel is a member of the World Organization for Animal Health (OIE) and reports occurrences of OIE-listed diseases.¹⁰⁷ The Veterinary Services' Annual Report for 2019 ("2019 Report") includes epidemiological data and risk analysis for outbreaks of diseases including the livestock sector, which are attributed to geographic, geopolitical and climate factors.¹⁰⁸

104. Amount of farms was provided by the Veterinary Services. Tali Berman, "Promoting Smart Use of Antibiotics in Livestock: Improving Regulation on Veterinary Use" Policy paper submitted to the Ministry of Health (2020); 22, https://www.gov.il/BlobFolder/reports/strengthening-regulation-on-veterinary-preparations/he/files_publications_drugs_Strengthening-regulation-on-veterinary-preparations.pdf.

105. Sources: chicken - Egg Board – 2020 industry overview and freedom of information; cows - Dairy Board 2020 Annual Report, Veterinary Services data on importation; Fish – Ministry of Agriculture, industry overview 2019; Pigs - Veterinary Services Acting CVO Dr. Tamir Goshen, Parliament Committee of Internal Affairs and Environmental Protection discussion October 28, 2020; Sheep and Goats – Ministry of Agriculture, freedom of information. According to OECD meat consumption data, the number of animals reared for meat may be higher.

106. OECD, Agricultural Policy Monitoring and Evaluation 2020 (Paris: OECD Publishing, 2020), 309-11.

107. Reporting is done in the OIE World Animal Health Information System (OIE-WHAIS). Examples include: "Follow-Up Report No. 11," Report reference: H5N8, Reference OIE : 37313, December 27, 2020 https://www.gov.il/BlobFolder/reports/h5n8-oie-27-12-20/en/animals_health_avian-influenza_11H5N8%2027-12-20.pdf, and Follow-Up Report No.4," Report reference: FMD north, Reference OIE : 38229, February 13, 2021, https://www.gov.il/BlobFolder/reports/report-4-oie-mouth-paws/he/animals_health_mouth_and_paws_pe_tafaim_%2013-02-21.pdf.

108. "ת"ת 2019" [Annual Report for 2019], Moag.gov.il, assessed November 11, 2021, https://archive.moag.gov.il/vet/dochot-shnatiim/Documents/doch-shnati_2019.pdf; https://archive.moag.gov.il/vet/Yechidot/Apidmology/mahalot_baaley_haim/Pages/default.aspx

The 2019 Report indicates that livestock in the Middle East amounts to approximately 30 million cows and 120 million sheep and goats. The 2019 Report claims slaughter in neighboring countries to be mostly ritual slaughter and sometimes accompanied by improper sanitary conditions present in many animal markets. Additional risk factors indicated are lack of vaccines and sanitation management; low-cost importation of animals from African countries where diseases are not controlled; and lack of reports on disease outbreaks to the OIE. The 2019 Report states that the sensitive political situation does not allow cooperation and information sharing with neighboring countries.

Another zoonotic risk is associated with Israel's position on the migration routes of wild birds from Europe to Africa and back. During the migration season, approximately 500 million birds from a great variety of species pass through the country, with the potential to infect commercial poultry facilities. In the last year, approximately 8,000 cranes in Israel have been killed by an outbreak of avian influenza. Between October and December 2021, the virus spread to poultry flocks across the country and more than a million chickens in 20 facilities were culled as a result.¹⁰⁹ The Veterinary Services has since restricted access to pasture areas in the few free-range egg facilities in Israel during migration period.¹¹⁰

The 2019 Report also indicates that Israel is diverse in micro-climate areas, which are habitats for species of animals such as rodents, ticks, and insects that may potentially spread diseases. Climate changes are described to contribute to the creation of comfortable conditions for new potential vectors and the development of new diseases. Significant disease outbreaks in Israel in recent years include: Avian Influenza,¹¹¹ Salmonella,¹¹² Campylobacter,¹¹³ Foot and Mouth Disease,¹¹⁴ Lumpy Skin Disease,¹¹⁵ Sheeppox,¹¹⁶ Brucella Melitensis,¹¹⁷ Bovine Tuberculosis,¹¹⁸ and Classical Swine Fever.¹¹⁹

The main regulatory instrument to address zoonotic risks is by funding vaccinations, including Leptospirosis, foot and mouth disease, Brucellosis, Avian Influenza, and Newcastle Disease Virus (NDV). In case of disease outbreaks, animals are culled and farmers receive a partial compensation for the animals' worth.

109. Ministry of Agriculture press release January 6, 2022, www.gov.il/en/Departments/news/sikum3flu. See also a follow-up report submitted to OIE regarding wildlife January 20, 2022: www.gov.il/BlobFolder/reports/h5n1-2022/he/animals_health_newcastle-disease_h1n1-20.1.22.pdf; regarding factory farmed chickens www.gov.il/BlobFolder/reports/h1n1-8-22/he/animals_health_newcastle-disease_h1n1-8-12.1.21.pdf

110. "Bird Flu Kills Thousands of Cranes in Israel, Poultry Also Culled," Reuters, January 2, 2022, <https://www.reuters.com/markets/commodities/bird-flu-kills-thousands-cranes-israels-worst-wildlife-disaster-2021-12-27/>.

111. www.gov.il/en/departments/topics/avian-influenza/govil-landing-page In 2020, twelve cases of avian flu (H5N8) were listed in farms, mostly in northern Israel.

112. "תופעת הלנומלס תלחמי" [Salmonella disease in poultry], Gov.il, assessed on November 11, 2021, www.gov.il/he/Departments/General/salmonella-poultry. According to the Ministry of Health, the infection rates of this disease have been constantly increasing in recent years. "הלנומלס" [Salmonella], Gov.il, assessed on November 11, 2021, www.health.gov.il/Subjects/FoodAndNutrition/food/BacteriaAndFoodPoisoning/Pages/Salmonella.aspx.

113. According to the Ministry of Health, this is the main cause for infectious intestinal diseases in Israel and developed countries. "גרטקבוליפמק" [Campylobacter], Gov.il, assessed on November 11, 2021, www.health.gov.il/UnitsOffice/HD/PH/LabDept/PublicHealthLabs/jerusalem_Labs/GCL/Reference_Laboratories/Pages/Campylobacter.aspx; www.gov.il/he/Departments/publications/reports/salmonela_monitoring.

114. 28 cases of Foot and Mouth Disease were reported in 2018. "מייפלטו הפה תלחמי" [Foot and Mouth Disease], Gov.il, https://www.gov.il/he/departments/topics/mouth_and_paws/govil-landing-page

115. Deigned as potentially zoonotic. It was not prevalent any longer in Israel, and reappeared in 2019 from Syria, neighboring Israel in the north-east, causing 18 listed cases. "רועה תרטק" [Lumpy Skin Disease], Gov.il, assessed on November 11, 2021, https://www.gov.il/he/departments/topics/lumpy_skin/govil-landing-page.

116. "אצ תלחמי" [Sheeppox], Gov.il, assessed on November 11, 2021, <https://www.gov.il/he/departments/topics/sheep-pox/govil-landing-page>.

117. See more details in sections above addressing illegal slaughter of sheep and goats. See also: "סיוולצורב" [Brucella Melitensis], Gov.il, assessed on November 11, 2021, <https://www.gov.il/he/departments/topics/brucellosis2/govil-landing-page>.

118. The first case of Bovine Tuberculosis appeared in Israel in 20 years, found in a dairy farm in the north of Israel, source for infection is described to be unknown. Veterinary Service report. p.44.

119. <https://www.gov.il/he/departments/topics/swine-fever/govil-landing-page>.

It should be noted that, in 2013, Israel established a Wildlife Diseases Surveillance Program (IWDS), which monitors wildlife pathogens on the basis of the ‘One Health’ approach for human, livestock and wildlife for disease control. The Program compiled risk assessments of 51 pathogens, with brucellosis, rabies, and foot and mouth disease ranked as the highest risks.^{120 121}

COVID-19 Related Background

During the COVID-19 pandemic, operations in agricultural facilities and slaughterhouses were allowed to continue at full capacity. In times of lockdowns, such facilities and their supporting services were excluded from regulations aimed to prevent infection. Instructions issued by the Ministry of Agriculture stated merely that “in a workplace where employees regularly work in shifts, the employer will, as far as possible, schedule the same group of workers to work together in the same shifts.”¹²²

We have no official data on infection rates within the agriculture sector. However, it should be mentioned that, on April 15-25, 2020, COVID-19 spread in the village Deir Al-Asad in northern Israel, which holds one of the largest slaughterhouses in the country, “Dabbah.”¹²³ According to several media reports, employees at the facility were infected after coming in contact with a kosher supervisor who was employed by a manpower company. In a letter sent to the company’s manager on March 19, 2020, the workers’ union warned that safety instructions were not followed, thus placing the workers at risk. Among other issues, it mentioned that employees did not have their temperature taken at the entrance to the slaughterhouse and there was a lack of face masks and of social distancing.¹²⁴ As infection continued to spread, the village was placed under quarantine for a week. At the time restrictions were removed, 145 COVID-19 cases were confirmed.¹²⁵

Where Regulation Fails

We identified five main risks from zoonotic diseases originating in industrialized farms: importation of live animals to Israel; untreated waste and illegal disposal of waste; incentives to overproduce; inefficient risk management from antibiotic materials; and lack of enforcement and transparency.

120. Roi Lapid et al., “Wildlife Pathogen Surveillance in Israel to Inform Human and Animal Infectious Disease Control: a Prioritization Exercise,” *Israel Journal of Veterinary Medicine* 71, no.2 (June 2016): 33, www.ijvm.org.il/sites/default/files/lapid.pdf.

121. Arnon Shimshony, “Epidemiology of Emerging Zoonoses in Israel,” *Emerging Infectious Diseases* 3(2) (April 1997): 229-238, https://wwwnc.cdc.gov/eid/article/3/2/97-0221_article.

122. The Ministry of Agriculture and Rural Development, “Clarifications for Farmers and People Engaged in the Fields of Agriculture and Animals: Update number 1 for third closure – 08 January 2021 to 21,” Moag.gov.il, assessed on November 11, 2021, . https://archive.moag.gov.il/en/Documents/hanchayot_takanot-eng.pdf.

123. Ministry of Health, “Very High Coronavirus Morbidity Levels in Deir Al-Asad,” Gov.il, published on April 15, 2020, www.gov.il/en/departments/news/15042020_01.

124. Tali Heruti-Sover, “תורהזאמהמלעתהדסאלארידבמייחבטמהתיב תא הליעפהשןלבקה תרבח? תרתוימי הקבדה” [Unnecessary Infection? The Manpower Company which Operated Dabbah Slaughterhouse Ignored Warnings], *The Marker*, published on April 17, 2020, www.themarker.com/coronavirus/1.8776320.

125. Hassan Sha’alan, “שדוחי מא עתפונ אל: הנעבו דסאלא רידב רגסה מייחסה” [Quarantine Removed in Deir Al-Asad and Bi’ina: We will not be surprised if it will be reimposed], *Ynet News*, published on April 25, 2020, www.ynet.co.il/articles/0,7340,L-5720527,00.html.

Importation of Live Animals

Overview of Market and Risk Analysis

As indicated above, meat consumption has significantly increased in Israel throughout the years, and it is ranked fourth in the OECD for red meat consumption on a per capita basis.¹²⁶ However, Israel is a small and arid country, with climate and physical conditions unsuitable for large rearing of cattle. As the local cattle industry supplies 15-20% of the local consumption, the majority of red meat is imported.¹²⁷

The importation of live animals for meat consumption used to be a negligible phenomenon in Israel until the new millennium. Since then it increased slowly, and climbed overwhelmingly since 2015 after the tariff on the importation of calves was removed, and lowered with regard to lambs. Since then, Israel has become one of the fastest growing markets for “live exports” from Australia and Europe.¹²⁸ Between 2010 and 2020, the number of calves imported to Israel has almost more than quadrupled:¹²⁹

| Year | 2010 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|--------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Calves | 69,932 | 122,229 | 184,093 | 236,885 | 172,575 | 226,152 | 247,198 | 222,734 |
| Lambs | 48,500 | 106,482 | 105,281 | 307,142 | 206,193 | 377,769 | 334,517 | 333,567 |
| Total | 118,432 | 228,711 | 289,374 | 544,027 | 378,768 | 603,921 | 581,715 | 556,301 |

The vast majority of the imported animals are intended for the Israeli market. In a practice associated with both economic and political aspects, a very small portion of the animals are transferred to the Palestinian Authority – almost entirely to the West Bank - directly after arrival in Israel and release from quarantine, while a substantial number is exported after being fattened in intensive farms in Israel. In 2018 for instance, 1,000 calves were directly imported for the Palestinian market, whereas 129,000 were exported after being reared in intensive farms in Israel. In September 2019 during a time of political instability, the Palestinian Authority imposed a ban on the importation of calves from Israel as part of its declaration of an “economic disengagement.” This stirred a crisis which lasted until February 2020, including accusations of a “trade war,” calls for halting the importation of Palestinian agricultural products to Israel, and protests by Israeli farmers fearing great losses.¹³⁰

The removal of the importation tariff was presented to the public as a response to growing protests on the cost of living, which emerged in Israel in 2011, not long after the protests of the Arab Spring. However, a recent State Comptroller report found that since the removal of tariffs red meat

126. “Meat Consumption,” OECD Data 2022, accessed November 14, 2022, doi: <https://data.oecd.org/agroutput/meat-consumption.htm>.

127. Ministry of Agriculture and Rural Affairs, “רשבל רקב 2018” [Cattle Meat Market Review for 2018], Gov.il, assessed on November 11, 2021, www.gov.il/BlobFolder/reports/bakar-lebasar/he/prices_bakar_lebasar.pdf.

128. Mainly from Portugal. Other European exporters include Hungary, Romania, France, Lithuania, and Serbia. “Ministry of Agriculture Live Importation Report for 2020,” <https://www.gov.il/he/departments/publications/?OfficId=920e5116-ca8b-4bb5-b54c-6a518d3d94b9&topic=0d08a083-d2ec-4c88-a10c-0e7ac424f868&subTopic=4c1ec244-45ab-4b71-926c-afd8280dcbc5&limit=10&keywords=%D7%99%D7%91%D7%95%D7%90%D7%9E%D7%A7%D7%A0%D7%94&skip=0>.

129. Importation is conducted in ships. In 2019, 32% of calves and 16% of lambs were imported from Australia over a 3 week journey, whereas the rest were imported from Europe, mainly Portugal. In total 130 shipments were made to Israel in 2019. See: “State Comptroller Annual Audit Report.”

130. Haaretz, “Palestinian Meat Boycott Leaves Israeli Farmers in the Red October 18, 2019,” Haaretz.com, assessed on November 11, 2021, www.haaretz.com/israel-news/premium-palestinian-meat-boycott-leaves-israeli-farmers-in-the-red-1.8005580; “PA Removes Israeli Calf Ban, Israel Removes Palestinian Agriculture Ban,” The Jerusalem Post, published on February 20, 2020, www.jpost.com/israel-news/pa-removes-israeli-calf-ban-israel-removes-palestinian-agriculture-ban-618178.

prices have actually increased by 4.5-6%.¹³¹ In addition, this market is highly consolidated, with two large companies holding infrastructure covering the entire supply chain, from importation through intensive farming, slaughter and marketing. In 2016 the Competition Authority concluded that while there are four importers, two companies control almost 80% of the market, effectively creating a duopoly market structure.¹³² Other actors include owners of intensive farms in which the imported calves are fattened for slaughter.

Prior reports have found animal welfare violations and noncompliance with OIE and health codes with animals shipped from Australia and destined for Israel. One of these reports found: “Poor adaptation to on-board rations; heat stress from poor acclimatization during long distance transit and seasonal weather changes also kills many animals at sea every year. Disease spread from poor hygiene and loading densities exacerbates these challenges and an animal’s immune system’s ability to counter their effects.”¹³³

The Current Regulation and Where It Fails

The importation of live animals and animal products to Israel is subject to a permit by the Veterinary Services in the Ministry of Agriculture. Exporting countries are approved in accordance with a procedure laid out by the Ministry of Agriculture, which examines the country’s regulation and performance surrounding livestock production and food safety, as well as its enforcement and ability to ensure compliance with the Israeli requirements. This procedure involves a detailed questionnaire and if necessary, a visit to the country in question.¹³⁴ The animal’s health is inspected by the exporting countries and upon arrival in Israeli ports, followed by a requirement of an eight day quarantine in facilities operated by the importers and supervised by the Veterinary Services.

Despite regulatory requirements, the importation of live animals has been and still is a source for emerging diseases that Israel was once free, or relatively free of, negatively affecting local livestock health and fertility¹³⁵ as well as creating human health hazards.¹³⁶ The above-mentioned State Comptroller report found that the Veterinary Services did not conduct routine visits to countries from which livestock is imported and instead relied heavily on health certificates from the exporting countries, which often were sent to Israel only after the vessel had departed from the exporting country and occasionally only hours before arrival in Israel.

The report indicates that in 2018 a post slaughter inspection of a calf originating from Portugal was diagnosed with Bovine Tuberculosis, and a Ministry of Interior supervisor was diagnosed with the

131. “ב70 יתגש חוד” [State Comptroller Report 70B], Mevaker.gov, www.mevaker.gov.il/sites/DigitalLibrary/Documents/2020/70b/2020-70b-211-Agriculture.pdf.

132. The Competition Authority, “רטה רקבה רשב פנע לש לש הניחב” [Examination of the Fresh Cattle Meat Market], Gov.il, assessed on November 11, 2021, www.gov.il/he/departments/publications/reports/meatmarket.

133. Lynn Simpson, “Live Animal Export Non-compliance with OIE Terrestrial Animal Health Code (2016),” *Animals Australia.org*, assessed on November 11, 2021, https://secure.animalsaustralia.org/documents/aamedia/25598_2016_Report_veterinar_Lynn_Simpson-Report_Deficiente_OIE.pdf.

134. Ministry of Agriculture, Veterinary Services, Food Safety Supervision, Procedure 0.0.1 - The Principles of Supervision on Countries which Produce Animal Products for the State of Israel, (Second Edition, 2013).

135. Yael Yair et al., “Genomics-based Epidemiology of Bovine *Mycoplasma Bovis* Strains in Israel,” *BMC Genomics* 21 (Jan. 2020): 70, <https://doi.org/10.1186/s12864-020-6460-0>; Lysnyansky, I., Mikula, I., Ozeri, R., Bellaiche, M., Nicholas, R. A. J., Straten, M. van, “*Mycoplasma Bovis* Seroprevalence in Israeli Dairy Herds, Feedlots and Imported Cattle.” (2017). *Israel Journal of Veterinary Medicine* 72(1), 13-16.

136. M. Meiry, G. Brenner, A. Markovits, E. Klement, “A Change in the Epidemiology of Bovine Cysticercosis in Israel between 1973 and 2008 Due to Import of Live Cattle,” *Transboundary and emerging diseases* 60, no.4 (May 2012): 298-302, <https://doi.org/10.1111/j.1865-1682.2012.01344.x>.

bacterium.¹³⁷ Following inquiry into the matter, the Ministry of Agriculture stated that it cannot completely eliminate the risk of Bovine Tuberculosis arriving in Israel. The State Comptroller suggested that due to the risks to both animal and human health, the Ministry of Agriculture should take “all means” to prevent similar cases in the future, including broadening its animal health requirements from the exporting countries and conducting a periodical and complete evaluation of every country approved for import in order to assess the risks involved¹³⁸

The report had also criticized the Ministry of Agriculture for inconsistent supervision of the animals upon their release from quarantine, in terms of the numbers of animals transported, their destination, health, and treatment. These inconsistencies hinder the Veterinary Services ability to prevent disease outbreaks, making the elimination of diseases “hard or impossible.”¹³⁹ In addition, the report commented that there is no formal procedure to regulate supervision of the quarantines, leading to more inconsistencies in significant public health matters between different Veterinary Services’ districts.¹⁴⁰

Following a petition submitted by animal protection organizations to stop the practice of live import based on animal welfare violations, the Ministry of Agriculture issued animal welfare instructions to importers, which were later incorporated in permit conditions.¹⁴¹ In this proceeding the Ministry of Agriculture stated that it cannot, and is not authorized to supervise animal welfare aspects at sea, before the arrival in Israeli ports. Animal welfare violations were also repeatedly documented following the introduction of the instructions, both during the transport at sea and during the disembarking from vessels. From the inspection of 48 of 180 of the Ministry of Agriculture’s supervision reports filled from early 2018 to mid-2019, and inspected by the State Comptroller, 44% of cases documented poor conditions on the ships, with animals covered in their own feces. Around 42% of forms indicated wet bedding that was not changed as frequent as necessary and empty containers for food and water; 33% described a strong smell of ammonia from overcrowding; 29% described high temperatures and humidity due to ventilation problems; and 4% indicated that force was used against the animals, occasionally with electric shocks.¹⁴² The report also indicated that importers were not sanctioned for not meeting regulation and permit requirements on animal health hazards or animal welfare. This relates to both penal and administrative measures such as imposing fines, and canceling or staying of permits.¹⁴³

Proposed Reform

While this report cannot cover all aspects of the importation of livestock to Israel, it is clear that the practice of transporting live animals across the globe in stressful conditions is associated with significant animal and human health risks.

137. The Ministry of Agriculture indicated that this might have been a false positive result, and that it could not be ruled out that the supervisor was already a carrier of the bacterium prior to the alleged exposure.

138. “State Comptroller Annual Audit Report,” 38.

139. “State Comptroller Annual Audit Report,” 51.

140. “State Comptroller Annual Audit Report,” 52.

141. HCJ 7622/15 Let the Animals Live v. The Director of the Veterinary Services in the Ministry of Agriculture and Rural Development, ruling of December 17, 2018 <https://supremedecisions.court.gov.il/Home/Download?path=HebrewVerdicts/15/220/076/k55&fileName=15076220.K55&type=4>; Veterinary Services Animal Welfare Instructions for Sea and Aerial Transport of Cattle and Small Ruminants, www.gov.il/BlobFolder/policy/moag-pro-096/he/import_hovala_yamit_avirit-horaa.pdf.

142. “Israel Live Export Footage Raises Concern About Asia Trade,” Maritime Executive, published on January 18, 2020, www.maritime-executive.com/article/israel-live-export-footage-raises-concern-about-asia-trade; “State Comptroller Pans Agriculture Ministry over Cruel Live Shipments of Animals,” The Maritime Executive, published on May 5, 2020, www.timesofisrael.com/state-comptroller-pans-agriculture-ministry-over-cruel-live-shipments-of-animals/. See also: “State Comptroller Report” 70B.

143. “State Comptroller Report” 70B. p. 39-40, 47-48.

This practice is also associated with significant economic incentives and is one that evolved quickly in Israel, creating a highly consolidated industry along the entire supply chain. Israel has also gradually increased quotas for tariff free importation of chilled meat, while also extending its shelf life. Consequently, the importation of live animals could be completely replaced with trade in chilled meat, eliminating both zoonotic risks and unnecessary suffering that stems from long-distance and cross-continental transportation. Several bills were submitted in this matter throughout the years to the Israeli parliament, seeking a moratorium on this practice over a period of three years. In 2018 such a bill cleared preliminary reading in parliament, yet the legislation process stopped after the parliament was dispersed.¹⁴⁴ A similar bill is currently pending.

Untreated Waste

According to a 2015 report by the Ministry of Agriculture and the Ministry for Environmental Protection, untreated manure from farms used to fertilize crops annually causes two deaths and 6,800 infections and hospitalizations. The source of the manure is industrialized dairy farms, calf feeding grounds, and broilers farms.¹⁴⁵ The report indicated that there were nearly 4.5 million metric tons of untreated manure created annually. Another major concern is untreated livestock carcasses in a volume of 8,000 metric tons of untreated carcass accumulated annually. Untreated waste can cause drinking water and ground water contamination. The Israel Cleaning Act (1984) allows authorities to enforce cases of untreated waste, as it is considered a criminal offense. However, this measure is currently rarely used in the context of agricultural waste. The main regulatory instrument currently in use is positive economic incentives to fund the construction of treatment facilities in farms.

Illegal Waste

Sourcing

The Israeli Cleaning Act (1984) also states that a landfill levy would be charged for landfilling. The purpose of the levy was to encourage a reduction of the waste transferred to landfills (for example, through recycling, separation, etc.). In practice, the levy has had the opposite effect, creating an economic incentive to dispose of waste on unregulated sites and open areas. The enforcement activities of the authorities have so far failed to end this dangerous phenomenon.

The majority of the illegal dumpsites—and certainly the worst of them—are located within or in close proximity to marginalized and disenfranchised Arab communities. These communities are also known for holding animals in their backyards (i.e. horses, donkeys, sheep), and for practicing illegal slaughter of animals. Unfortunately, animals' carcasses are often put in the illegal dumpsites.

144. "Knesset votes to stop live animal transports within three years," Times of Israel, published on 15 November 2018, www.timesofisrael.com/knesset-votes-to-stop-live-animal-transport-within-three-years/.

145. The Ministry of Agriculture, the Ministry of Environmental Protection and the Regional Councils Center, "Byproducts in Israeli Agriculture – Concluding Report for Determining Policies and Estimating Costs" (2015, Hebrew). See: Netta Nissim, "How Can We Control Antibiotic-Resistant Bacteria?" Zavit, published on March 18, 2021, www.zavit.org.il/intl/en/health-nutrition/how-can-we-control-antibiotic-resistant-bacteria/.

Risk Analysis & Recommendations

Left in the open air, these carcasses draw rodents and other animals. Moreover, often the dumpsites leak into groundwater and streams. In each case, the risk of disease transmission among animals and humans is grave and ill-treated.

In order to minimize the risk, different initiatives should be pursued, including:

- a. Local authorities are responsible for removing the waste. Yet, poor municipalities often cannot provide a well-managed waste removal system. Moreover, these municipalities do not have the workforce to enforce the law in cases of illegal dumping. In the long run, the answer to these issues lies in advancing distributive justice so that the government must aid these municipalities.
- b. Illegal dumpsites are regarded as the problem of local municipalities and the Ministry of Environmental Protection. Following the lessons of the COVID-19 pandemic, the Health Ministry must be involved as well.
- c. Educating the public on the dangers of illegal dumpsites.
- d. Local authorities are responsible for removing the waste. Usually, they sign a contract with a private waste disposal company based upon a public bid. Yet some of the waste companies dispose of some of the waste on unregulated sites and open areas, in order to save parts of the levy. Preventing this action at the early stage of the tender contract would be more effective. This should include threshold conditions such as requiring that the bidder have a business license to collect and transport waste, experience, and recommendations in the field. In addition, it should require GPS tracking of the transport vehicles.

Overproduction Incentives

Israel's livestock production is allocated extensive governmental funding. This funding increases livestock production without ensuring that zoonotic risks are fully mitigated and without internalizing the cost of addressing zoonotic risks.

In 2010, government subsidies covered 50% of the production cost of eggs and 68% of dairy products.¹⁴⁶ Government support in accordance to the Galilee Act (1988) (hereinafter: the Galilee Act), provides ILS 90-100 million (US\$26-29 million) output payments annually to broiler and egg producers in the rural northern area of Israel, without any environmental, welfare, or health related requirements.

The Galilee Act does not require any compliance with other legislation or regulatory requirements for a farmer to receive the support. The support is an incentive for overproduction as it is a production-based support.¹⁴⁷ Support is given based on per-unit of production, so the more the farmer produces, the higher the support he or she gets. Farmers also enjoy support for emergency feed stockpiles and compensation for increasing water prices.¹⁴⁸ Other forms of support include indirect measures such as

146. "Current Total AMS as Parentage of Value of Production," G/AG/N/ISE/48, Domestic support: Israel WTO p. 6.

147. The Galilee Law 1988, see also OECD 2020 p. 312.

148. OECD 2020, p. 316.

removing or reducing tariffs and customs on the importation of live animals and animal products.¹⁴⁹ Due to pressure from local producers, reducing trade restrictions have led to increased subsidies in direct payments to the local beef and commercial fish farms, which have significantly increased in recent years despite their negative externalities including environmental and public health hazards. Similarly to the Galilee Act, such support for the beef and fish farms is not conditioned by regulatory compliance. Support to beef producers has almost doubled in recent years, from ILS 27 million in 2015 to ILS 49 million in 2019 (US\$14.29M). From 2015-2017 it also included an annual budget of ILS 1.5 million (US\$440,000) for marketing and branding of fresh meat sales.¹⁵⁰ Support allocated to fish producers stands on ILS 30 million per year (US\$8.75M), and includes a budget of ILS 5 million (US\$1.46M) for research and development and advertising.¹⁵¹

Some supports are also aimed at reducing zoonotic risks. The government covers the cost of farmers' insurance premiums from damages caused by diseases such as Salmonella¹⁵² and Brucellosis.¹⁵³ The cover can be 35% or 80% of the policy premium. The total cost of this support was ILS 45.5 million (US\$13.27M) in 2018.¹⁵⁴ The Animal Diseases Ordinance is an additional instrument to provide compensation for culling animals that carried infectious disease or were suspected to be infected due to proximity to the infected facility. Data provided through a freedom of information request shows that at least a sum of ILS 46.3 million (US\$13.50M) was allocated to farmers in compensations for culling of animals during 2017-2019. Data obtained further shows that in 2019-2020 poultry farms culled more than 1.1 million chickens as a result of salmonella and influenza and were to be paid more than ILS 20 million (US\$5.83M) in compensation.

Reform measures for structural upgrades to improve the sanitary conditions in egg farms were subsidized by ILS 50 million (US\$14.58M).¹⁵⁵ It should be noted that, in an internal correspondence within the Ministry of Agriculture from April 23, 2020, which addressed the issue of increasing the numbers and density of hens in egg farms, the Chief Veterinary Officer and Chief Poultry Veterinary Officer stated the following regarding risk of outbreaks of avian influenza: "It should be clarified that there is no question whether such a virus will arrive in Israel, but rather when and what will be the scope of damage. The current structure of laying hens' facilities and their scattering in the State of Israel may cause a disaster to public health, which is more likely to happen than the outbreak of COVID-19, that has been striking down the world and Israel as we are writing these sentences."¹⁵⁶

Subsidies of insurance premiums and compensations for addressing diseases prevent farmers from internalizing the basic cost of the risks created by intensive farming. Reduction of production cost

149. OECD, "Agricultural Policy Monitoring and Evaluation 2015,"

150. "ריקבה רשבו בלחה יקוושב תורחתה תרבגה" [Competition Increase in the Milk and Cattle Meat Markets], Gov.il, published on April 5, 2014, www.gov.il/he/departments/policies/2014_des1584.

151. "2018 תנש מוכיסו נמד ינפ לע תורומת – לארשיב הגדמה פנע" [The aquaculture industry in Israel - changes over time and summary of year 2018], Moag.gov.il, assessed on November 12, 2021, https://archive.moag.gov.il/yhidotmisrad/research_economy_strategy/publication/2019/Documents/fishery_industry.pdf.

152. ILS 5.9 million in 2019 (US\$1.72M).

153. ILS 2.8 million in 2019 (US\$820,000).

154. Covering insurance premiums for poultry, cattle (milk and meat, including pasture), sheep and goats and fish farms.

155. OECD 2020, p. 315.

156. Letter from CVO (Acting) Dr. Tamir Goshen and CPVO Dr. Ram Katz, to Dr. Asaf Levi, Senior Deputy for Means of Production and Att. Efrat Vered of the Legal Department, titled "Increase of eggs production and upgrading the egg laying extension."

and the cost of addressing risks allow increased production.¹⁵⁷ The result is fewer incentives for the farmer to reduce public health risks at the farm level.¹⁵⁸

At the same time, mechanisms employed by the Ministry of Agriculture support the intensification of factory farming, in terms of both productivity and animal product consumption, both of which may pose risks of zoonotic spillover. The growth of productivity and consumption rates, ranking Israel one of the world's top consumers of meat per capita as indicated above, is also a source of pride for the Ministry of Agriculture and industry. For instance, prior to Israel's independence day celebrations, the ministry had published a press release hailing the increase of beef consumption and live animal importation.¹⁵⁹

Unregulated Use of Antibiotics

The CDC identifies overuse of antibiotic material in farm animals as a cause for antibiotic-resistant bacteria that can be transferred to humans,¹⁶⁰ which is a well-documented global risk.¹⁶¹ Starting in 2014, the Ministry of Agriculture began recording the routine use of antibiotics administered to animals to promote growth. The data collected showed that it is a highly common practice by livestock farmers. The Ministry found that the current regulations were not properly enforced and were insufficient to address the growing risk increased use of antibiotics presents to public health.¹⁶² Despite these findings, regulation has not been updated in recent years. It should be noted that, in four cattle farms, of the nine that were examined in 2019, there was no proper registration of medicine use.¹⁶³

The examination of this issue is under the authority of both the Ministry of Health and the Ministry of Agriculture. The latter focuses mostly on examining antibiotic residues in animal products. However, there is no sufficient monitoring of the extent of antibiotics administered to animals, of their prevalence in the soil and water sources, or of their contribution to the development of antibiotic-resistant bacteria. Contemporary research shows antibiotic resistance was found in *E.coli*, *Salmonella* and *Campylobacter* originating from livestock.¹⁶⁴

157. Carlos Galperin & Ivana Doporto Miguez, Green Box Subsidies and Trade-Distorting Support: Is there a Cumulative Impact, Agricultural Subsidies in the WTO Green Box: Ensuring Coherence with Sustainable Development Goals. Pag 239 (2009); N. Pelletier & P. Tyedmers, Forecasting Potential Global Environmental Costs of Livestock Production 2000-2050, 107 Proc. Natl. Acad. Sci. U. S. A. 18371 (2010), p 18372. See also: R. Jason Richards & Erica L. Richards, Cheap Meat: How Factory Farming is Harming our Health, the Environment, and the Economy, 4 Ky.J.quine Agric. & Nat.Resources L. 31 (2011); Barry K. Goodwin Problem with Market Insurance in Agriculture, 83 *AM. J. OF AGRIC. ECON.* 643 (2001).

158. Carlos Galperin & Ivana Doporto Miguez, Green Box Subsidies and Trade-Distorting Support: Is there a Cumulative Impact, Agricultural Subsidies in the WTO Green Box: Ensuring Coherence with Sustainable Development Goals. Pag 239 (2009); N. Pelletier & P. Tyedmers, Forecasting Potential Global Environmental Costs of Livestock Production 2000-2050, 107 Proc. Natl. Acad. Sci. U. S. A. 18371 (2010), p 18372. See also: R. Jason Richards & Erica L. Richards, Cheap Meat: How Factory Farming is Harming our Health, the Environment, and the Economy, 4 Ky.J.quine Agric. & Nat.Resources L. 31 (2011); Barry K. Goodwin Problem with Market Insurance in Agriculture, 83 *AM. J. OF AGRIC. ECON.* 643 (2001).

159. Ministry of Agriculture and Rural Development, "רשבה תכירצ יונתג תא תואלקחה דרשמ מסרפמ תואמצעה מוי תארקל" [Before Independence Day the Ministry of Agriculture Publishes the Meat Consumption Data], Gov.il, published on April 12, 2021, www.gov.il/he/Departments/news/independence_day-dovrut.

160. "Antibiotic Resistance and Food," CDC.gov, assessed on November 12, 2021, <https://www.cdc.gov/drugresistance/food.html>.

161. "NARMS – Combating Antibiotic Resistance with Surveillance," CDC.gov, assessed on November 12, 2021, <https://www.cdc.gov/narms/faq.html>; Meat Atlas: Facts and Figures about the Animals We Eat 44–45 (Christine Chemnitz & Stanka Becheva exec. eds., 2014), p. 26–27; https://friendsoftheearth.eu/wp-content/uploads/2014/01/foee_hbf_meatatlantlas_jan2014.pdf; R. Jason Richards and Erica L. Richards, "Cheap Meat: How Factory Farming Is Harming our Health, the Environment, and the Economy," Kentucky Journal of Equine, Agriculture, & National Resources Law 4, no.1 (2011): 43-47.

162. Percentage of feed mixed with antibiotics as growth enhancers: 54% in turkey feed, 100% egg chickens, 60% broiler, 66% cattle. Date from 2016, Ministry of Agriculture and Rural Development, www.moag.gov.il/vet/Yechidot/mispo/pirsumim/2016/Documents/regulazia_anti_3.pdf.

163. Data provided by the Ministry of Agriculture and Rural Development, freedom of information request no. 2907, November 19, 2020 (henceforth: "FOI 2020"). It should be noted that the other four farms lack proper documentation of mortality.

164. Tali Berman, "Promoting Smart Use of Antibiotics in Livestock: Improving Regulation on Veterinary Use," policy paper, published September 2020.

Lack of Enforcement and Transparency

It is estimated that 91% of all chicken coops in Israel are unlicensed.¹⁶⁵ Despite several recent updates to government rules and regulation over the last fifteen years, provisions have not been implemented due to disagreements with coop operators. This poses significant public health risks and increased enforcement is needed.

Transparency allows the public to act in accordance with existing risks. One initiative that had the potential to increase awareness of public health risks was a call for the Ministry of Health to publish a clear and accessible list of retailers that were found to have sold contaminated meat products. Such a system is implemented in New York City.¹⁶⁶

In 2019, The Ministry of Agriculture performed nine reviews of animal health and welfare in dairy farms and one at calf-feeding grounds. The review found a severe lack of proper documentation of mortality and medical treatments. These findings imply that there is a great need for more extensive reviews.¹⁶⁷

Conclusion

Each of the depicted cases poses a grave risk for zoonotic diseases. In addition, a significant number of these cases involve a minority group, such as the Jewish-Orthodox community and the Bedouin and Arab populations. Authorities choose not to confront either of these communities on certain practices. In our view, to achieve change, punitive enforcement measures should be paired with educational and local community efforts and community-inclusion in the decision-making process. As we stated throughout our report, punitive measures, while important in pointing towards the desired social conduct, have their limitation in changing deeply rooted social norms. Focusing enforcement efforts mostly at marginalized groups without addressing the broader socio-political aspects would not fully address root causes and solutions and may prove arbitrary and futile, while at the same time, raising significant ethical questions.¹⁶⁸ Such policies might also drive the people involved to go underground and more effectively hide their activities. A significant change of harmful practices towards both humans and animals must also be based on revised culturally based core perceptions of nonhuman animals. The principles of the “One Health” approach, for example, could serve to aid in creating the social changes we hope to see,¹⁶⁹ taking into account each society’s own cultural specificities (such as religion, ethnicity, and gender) and paying close attention to vulnerable populations’ needs.¹⁷⁰ It is not by accident that these marginalized populations had the highest COVID-19 infections rates in the country overall. However, it is still too early to tell what the ramifications of COVID-19 are in terms of future behavior.

165. Aaron Reich, “Israel’s Chicken Coops Riddled with Health and Safety Concerns - Comptroller Report,” The Jerusalem Post, May 10, 2022, <https://www.jpost.com/health-and-wellness/article-706296>.

166. “Making the Grade in New York,” EHA Group, assessed on November 18, 2021, <https://www.ehagroup.com/food-safety/new-york-abc-restaurant-grading/>.

167. “FOI 2020.”

168. Justin Marceau, *Beyond Cages: Animal Law and Criminal Punishment* (Cambridge: Cambridge University Press, 2019).

169. For elaboration on the “one health” model, see: Betty Jean Curran, Molly A. Jenkins, and Philip Tedeschi, “The Global and Cross-Cultural Reach of Trauma-Informed Animal-Assisted Interventions,” in *Transforming Trauma: Resilience and Healing through our Connections with Animals*, ed. Philip Tedeschi, and Molly Anne Jenkins (Indiana: Purdue University press, 2019), 423-461.

170. Aubrey H. Fine, Philip Tedeschi, and Erica Elvove, “Forward Thinking: the Evolving Field of Human-animal Interactions,” in *Handbook on Animal-assisted Therapy: Foundations and Guidelines for Animal-assisted Interventions*, ed. Aubrey H. Fine (Cambridge: Academic Press, 2015), 21-35.

In the case of the Ultra-Orthodox communities, the attitude of the state may stem from their excessive political power. Conflicts, when they arise, involve tensions around controversial issues such as exemption from military conscription, and stipends. With regard to the Bedouin community, most attention is given to the land conflict and the animal issue is put aside. Thus, the illegal and unregulated slaughter of animals is ignored as long as these practices stay within the confines of the community, do not pose a severe overt threat to public health, and do not sustain land ownership claims (e.g. through grazing). Bedouin and Arab populations, although recognized and documented, are treated as marginal and these practices within those communities are not seen as posing enough danger to necessitate serious governmental measures.

Beyond the complex economic, geopolitical, and cultural aspects, the current state of affairs is a result of considering animals as insignificant. The fact that the livestock industry creates a health hazard is recognized, but at the same time Israeli agriculture has mythic status. Risk is, thus, left to risk management policies. A change may happen when the costs incurred by the livestock industry – such as higher insurance premiums, mass culling of animals as well as public health and environmental hazards – are internalized. The state, then, might move towards reconsidering the subsidization of factory farms, which, in turn, might cause a natural reduction of animal-based products. This process may accelerate due to the impact of climate change. In this scenario, the remaining farms may become increasingly responsible as far as taking precautions to protect animal and human health. In the context of this research, we have been able to analyze several phenomena which we identified as most prominent and central to zoonotic disease risk in Israel. We were not able to cover every aspect of biohazard, but we have certainly touched upon the main potential risks for this kind of disease. Besides the significance of examining these phenomena in the global aspects, this report will also serve as a basis for further discussion and local policy-making.