

RAPID COMMUNICATION

# Animal-assisted interventions in a farm setting: Integrating global perspectives, social work, and ecological approaches for overall welfare

Dana Spett<sup>1\*</sup>, Abigail West<sup>2</sup>, Zoe Fava<sup>3</sup>, Bonnie Lavoie<sup>2</sup> and Zoraida Rodgers-Rivera<sup>1</sup>

## Abstract

The focus of the article is the integration of global perspectives, social work, and ecological approaches in animal-assisted interventions in a farm setting, presenting a model that addresses animal, human, and environmental welfare. The authors use a literature review and case scenario illustrating this model that suggests that welfare can be achieved through the simultaneous consideration of the following realms: Global initiatives of One Health and United Nations Sustainable Development Goals, the Five Domains of Animal Welfare, social work theory and practice, and regenerative agriculture. Future research should include the practice of this model in a fashion that allows collecting and studying the outcomes for animals, humans, and the environment involved.

**Keywords:** animal-assisted interventions, One Health, United Nations Sustainable Development Goals, the Five Domains of Animal Welfare, social work, regenerative agriculture

## Introduction

Through a literature review and a case scenario, the authors relied on a nonprofit that offers animal-assisted interventions (AAI) for the disabled community on a farm just outside of New York City (hereinafter referred to as “The Farm”). For over two decades, The Farm has sought to understand the inherent benefits of providing services to humans in a natural environment with animals that are cared for with dignity and respect. At The Farm, there is no separation of animal handling and participant interaction – staff are trained for both roles. Our model of AAI allows staff and participants to experience animal interaction and time in nature through a collaborative process. Whether one-on-one or in groups, programming is centered on care and observation; staff rely on animal behavior and the natural environment to provide boundaries and inform activities that enhance the participant experience.

Aligning our work with the One Health Initiative (One Health, n.d.) and the UN Sustainable Development Goals (United Nations, 2016) emphasizes the interconnectedness of human, animal, and environmental health, contributing to broader sustainability goals. The Five Domains of Animal Welfare and the most recent

version of the Animal Welfare Act ensure the highest standards (Mellor *et al.*, 2020; Rep. Krishnamoorthi, 2021). The NASW Code of Ethics (2021) and the Grand Challenges for Social Work (Uehara *et al.*, 2014) guide our ethical considerations and inform our approach to addressing societal challenges. Finally, the incorporation of regenerative agriculture (Newton *et al.*, 2020) principles reinforces our commitment to sustainable and ethical practices, creating a holistic and integrated methodology for our research and professional endeavors.

## Literature review

### GLOBAL PERSPECTIVES

With the incorporation of animal and environmental welfare into AAI, One Health is an important approach to be considered as it is “based upon communication, coordination, and collaboration among human, animal, environmental health, and other relevant partners...to achieve the best health outcomes for people, animals, and plants in a shared environment” (One Health Basics|One Health|CDC, 2023). One Health continues to evolve to include core competencies that encompass social-ecological

Affiliations: <sup>1</sup>Rutgers School of Social Work, New Brunswick, NJ, USA; <sup>2</sup>Columbia School of Social Work, New York, NY, USA; <sup>3</sup>Ramapo College School of Social Work, Mahwah, NJ, USA

\*Corresponding Author: Dana Spett. Email: [Dana.spett@rutgers.edu](mailto:Dana.spett@rutgers.edu)

Submitted: 01 February 2024. Accepted: 11 June 2024. Published: 02 July 2024.

© The Authors 2024. Open Access. This article is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as the use is non-commercial and you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <https://creativecommons.org/licenses/by-nc/4.0/>. The Creative Commons Public Domain Dedication waiver (<http://creativecommons.org/publicdomain/zero/1.0/>) applies to the data made available in this article, unless otherwise stated in a credit line to the data.

systems that sustain animals, people, plants, and ecosystems while also addressing food safety, disease mitigation, and disease surveillance (Fulton, 2022; Laing *et al.*, 2023).

There are 17 Sustainable Development Goals that address topics including human and nonhuman animal health, reduction of inequality, protection of the environment, and promotion of education (United Nations, 2016). The United Nations acknowledges that the welfare of people relies on all animals (wild and domesticated) having a healthy and sustainable ecosystem (Olmos Antillón *et al.*, 2021). Two of the Sustainable Development Goals that have been mentioned through literature regarding animal welfare are Good Health and Well-Being and Life on Land (Keeling *et al.*, 2019; Olmos Antillón *et al.*, 2021; Keeling *et al.*, 2022).

Good Health and Well-Being is to “ensure healthy lives and promote wellbeing for all at all ages” (United Nations, 2016). Through the lens of animal welfare, this goal aims to combat disease and provide quality health care (Keeling *et al.*, 2019). Good animal husbandry increases animals’ immune-competence and protection against zoonotic diseases that have the potential to be transferred to humans (Keeling *et al.*, 2019). Life on Land is focused on ensuring the sustainable usage of terrestrial ecosystems, managing forests, addressing desertification, countering land degradation, and combatting biodiversity loss (United Nations, 2016). Keeling *et al.* (2019) identified links between animal welfare and Life on Land, including grazing methods to reduce soil loss and enhance carbon sequestration.

## FIVE DOMAINS OF ANIMAL WELFARE

The Five Domains Model, initially formulated in 1994, was developed for animal welfare assessment and includes nutrition, environment, health, behavioral interaction, and mental state (Mellor *et al.*, 2020). Mellor *et al.* (2020) provide a comprehensive review of the 25-year history, which includes updates to the Model demonstrating how thinking has shifted to include the welfare impacts of Human-Animal Interactions. For example, the Model, most recently updated in 2020, renamed Domain Four from Behavior to Behavioral Interactions which draws attention to how humans influence animals and how that interaction can have both positive and negative effects (Mellor *et al.*, 2020).

## SOCIAL WORK PRINCIPLES

Social work is a profession founded on principles of advocacy, justice, and ensuring people are connected with their basic needs. Contributions focused on intersectionality and the expansion of equity have connected social work to elements of the natural environment, including nonhuman animals. These developments were motivated by professional guidelines like the Grand Challenges, which were presented as a set of broad ideas that would allow for science and practice methods to be applied to larger social challenges and galvanize the field of social work (Uehara *et al.*, 2014). Of the 12 Grand Challenges in social work practice, health equity, strengthening social responses to environmental changes, reducing isolation, and maximizing productive and meaningful activity throughout life draw strong correlations to the goals of animal welfare. These parallels were addressed in an evaluation of environmental social work by Mathias *et al.* (2023), “In the eyes of many proponents of environmental social work...an exclusive focus on human needs appears plainly shortsighted, perhaps even prejudiced. Some point to the inextricable entanglement of human needs with the welfare of other species or with the physical environment as a whole.” Mathias *et al.* (2023) affirms the need to clarify the necessary goals for inclusive social work practice through the involvement of nonhuman animals, their welfare, and nature itself in both social work practice and advocacy.

Preventative action is as important in animal care as it is in social work; each animal’s ability to thrive should be prioritized through proper husbandry practices, veterinary care, enrichment and

socialization. In addressing the Grand Challenges, prevention is outlined to benefit both individuals and communities with documented successes in the areas of several Grand Challenges such as poverty, youth development, and health equity (Uehara *et al.*, 2014).

An additional social work principle that applies to animal welfare is participant self-determination, as named in the NASW Code of Ethics. It is defined as follows: “Social workers respect and promote the right of clients to self-determination and assist clients in their efforts to identify and clarify their goals.” (Code of Ethics, 2021). By caring for animals and humans in a manner that allows them to practice decision making, they are similarly given the right to reap the benefits of self-determination.

## REGENERATIVE AGRICULTURE

Regenerative agriculture, originally coined in the 1980s by the Rodale Institute, is a systems-thinking approach that seeks to restore ecosystems through concepts such as improving soil health, increasing biodiversity, and sequestering carbon, which is typically measured by outcomes such as fertile soil and enhanced ecosystem services (LaCanne and Lundgren 2018; Newton *et al.*, 2020; Schreefel *et al.*, 2020; O’Donoghue *et al.*, 2022; Hargreaves-Mendez and Hotzel, 2023). Missing in the literature, according to a systematic review by Hargreaves-Mendez and Hotzel (2023), is the inclusion of the welfare of human and nonhuman animal health in regenerative agriculture principles. As an example of regenerative agriculture, as chickens in a vegetable garden walk and scratch, they turn up the soil and fold new organic nutrients into it via their feces left behind (Blecha and Leitner, 2014).

## Case scenario

From the heart of The Farm, one can experience the balance created by prioritizing the needs of the animal community. Freedom of choice is celebrated and utilized as a teachable moment throughout programming with the horses and small animals. Participants engage with the small animals while the inside of their paddocks remain visitor-free spaces protecting their welfare. Honoring their ability to seek food or rest over socialization has also proven helpful for participants, fostering conversations and familiarity with animals’ autonomy and the idea that all beings deserve respect. All staff are trained and empowered to suspend an activity should the personal safety of an animal be compromised by a participant, the environment, or any situation.

Activities are direct and hands-on for some animals, while for others, like sheep, goats, and pig it is more peripheral. These elements come together each afternoon at 3:30 pm as the animals surrounding the retirement barn await their dinner. The pig, goats, sheep, chickens, and retired horses have their evening meal prepared by a participant guided by their instructor. Participants feeding the retirement barn learn to follow a schedule, such as soaking grain for the horses and sprinkling the pigs’ grain onto rocks so they can express natural rooting behaviors. Feeding the goats is an activity that is structured to allow participants to observe and experience the animals’ perspectives, body language, and preferences. These activities fulfill the dual role of educating participants while also providing enrichment to the animals.

Another farm-based activity is garden-assisted learning, which includes feeding and caring for the chickens and working in the garden. The chickens are egg birds and are cared for by staff, volunteers, and participants. They are housed in an enclosure with a predatory apron that keeps them safe at night and during the day they roam the garden fertilizing and aerating the soil. The Farm’s implementation of regenerative agriculture also includes sheep, which are seasonally rotated to graze on invasive plants. Honeybees move between pollinator gardens and hives that are maintained exclusively by a professional beekeeper. These species contribute to The Farm’s regenerative agriculture plan and provide meaningful lessons to participants.

## Discussion

One Health on The Farm is all-encompassing and strives to balance a through line between the entire ecosystem of species – plants, animals, and humans. Each member of the community has played a part in this transformation, and the contributions of each would not be possible without the other. Humans on The Farm fought against the expansion of built structures and parking facilities, even when more land was acquired. The boundaries set on further development allowed for animals to have ample space in their paddocks and indoor facilities, maintaining health, low noise levels, and reduced stress. Efforts to enhance animal welfare in this peri-urban setting included the identification of green assets on the property. The Farm's master plan led to proactive environmental enrichment strategies, such as shaded areas throughout paddocks to mitigate heat and berms along roads and high-traffic areas for noise reduction. From the animals' production of healthy manure came the opportunity to create compost; this compost is instrumental in the growth of The Farm's accessible produce garden. The Farm intentionally included pollinator gardens in their master plan to facilitate bees, native plant health, and food production. Regenerative agriculture and guidance from the United Nations Sustainable Development Goals provide an overarching theme with the goal of equilibrium across all Five Domains – nutrition, environment, health, behavior interactions, and mental state – seeking balance for the well-being and welfare for all the animals on the farm (Mellor *et al.*, 2020).

As a nod to the Five Domains Model, all animals on The Farm have a preventative health plan which is monitored and adapted by experienced and credentialed staff. The Farm prioritizes animal welfare by ensuring that the animals' feelings, functioning, and natural behaviors are both considered and documented. For instance, the horses experience daily turnout in pairs or small groups to foster social relationships; the sheep rotationally graze allowing them to roam and forage as they would in nature. Animals are given respite from programming to address any signs of physical or behavioral needs, with onset and duration of the breaks being determined by equine and small animal managers. The Farm schedules 1 week per month to rest from the hustle and bustle that can come with an active community; this time is used for animal care appointments like the acupuncturist, farrier, and veterinarian. The intersection of people served on The Farm with the well-being of the animals is curated and central to the overall mission of The Farm.

Social workers take a person-centered approach by observing, hearing, listening, and engaging with participants, meeting them where they are and adapting interventions. Using this same approach, the community of animals who live on The Farm are viewed as partners. Social workers have the opportunity to enhance their participants' right to self-determination by modeling the process with animals. With a healthy human-animal relationship, resilience can be built for both participant and animal; studies have shown that such connections can help an animal build stress resilience, allowing for them to be handled and medically treated with less anxiety (Rault *et al.*, 2020). Through the addition of animal welfare to social work theory and practice, participants learn boundaries and respect while the animals involved in interventions are able to have their needs met.

Like humans, animals are incredibly resilient yet fragile; risk and protective factors are continually at play and must be considered to ensure their overall well-being and welfare (Hutchison, 2019). In other words, biology, ecology, and health should all be considered in a framework together. Much of social work's historical focus has been primarily on human beings; the profession does not acknowledge animals formally (Taylor *et al.*, 2016). Social work that seeks pathways to wellness involving AAI should be included in the Social Work Code of Ethics (Tedeschi *et al.*, 2006; Taylor *et al.*, 2016). Taylor *et al.* mention that "social work's professional silence

on animals means there is little talk about or guidance for how we might conceptualize and work with animals across contexts and lifespan" (Taylor *et al.*, 2016, p. 137). The first step forward within the broader realm of social work and human-animal interaction should begin with an acknowledgment of animals that partner and assist social workers, making AAI possible (Taylor *et al.*, 2016).

## Limitations

As The Farm continues to develop its practices with animal care and welfare in mind, the authors recognize the limitations that accompany this model. As a peri-urban farm, its proximity to busy roads and city centers influences the amount of space and quiet afforded to the animals. The Farm's ability to commit to a purely natural environment is inhibited: forestry growth must be curtailed because of built structures that share the landscape. With the animals' needs met through current regimens, the authors also understand the duality of expression of natural behavior within the barriers of common practices that align with modern domestication. These barriers shed light on the need for even more education and advocacy, with the hope that future implementations of AAI incorporate global perspectives, the Five Domains of Animal Welfare, social work principles, and regenerative agriculture.

In conclusion, by intertwining methods rooted in the welfare of animals, humans, and the environment, The Farm exemplifies a paradigm shift toward comprehensive well-being. This integrated approach illuminates the interconnectedness of human-animal interactions and the ecosystems in which they take place, fostering a sustainable community where each member contributes and in turn benefits. The implications extend beyond the scope of this study, advocating for continued education, research, and training to further develop and implement such models, thereby advancing the intersectionality of welfare across diverse contexts.

## CONFLICT OF INTEREST

The authors have no conflicts of interest to declare.

## ETHICS STATEMENT

The authors confirm that the research meets any required ethical guidelines, including adherence to the legal requirements of the study country.

## AUTHOR CONTRIBUTIONS

All author contributed equally to the development of this article.

## FUNDING STATEMENT

This research received no funding from any agency in the public, commercial, or not-for-profit sectors.

## References

- Blecha and Leitner (2014) Reimagining the food system, the economy, and urban life: New urban chicken-keepers in US cities, *Urban Geography* 35(1), 86–108. DOI: 10.1080/02723638.2013.845999.
- Code of Ethics (2021) Social Workers' Ethical Responsibilities to Clients. NASW, National Association of Social Workers. Available at: <https://www.socialworkers.org/About/Ethics/Code-of-Ethics/Code-of-Ethics-English/Social-Workers-Ethical-Responsibilities-to-Clients> (accessed 30 January 2024).
- Fulton, A. (2022) Efficacy of the ecosystem services approach in transitioning to regenerative agriculture in Australia. *Reinvention: An International Journal of Undergraduate Research* 15(1), 1–17.
- Hargreaves-Méndez, M.J. and Hötzel, M.J. (2023) A systematic review on whether regenerative agriculture improves animal welfare: A qualitative analysis with a one welfare perspective. *Animal Welfare* 32, e36. DOI: 10.1017/awf.2023.28. Available at: <https://www.congress.gov/bill/117th-congress/house-bill/3277/text>.

- Hutchison, E.D. (2019) An update on the relevance of the life course perspective for social work. *Families in Society: The Journal of Contemporary Social Services* 100(4), 351–366. DOI: 10.1177/1044389419873240.
- Keeling, L., Tunón, H., Olmos Antillón, G., Berg, C., Jones, M. *et al.* (2019). Animal welfare and the United Nations sustainable development goals. *Frontiers in Veterinary Science* 6, 1–12. DOI: 10.3389/fvets.2019.00336.
- Keeling, L.J., Marier, E.A., Olmos Antillón, G., Blokhuis, H.J., Staaf Larsson, B. and Stuardo, L. (2022) A global study to identify a potential basis for policy options when integrating animal welfare into the UN sustainable development goals. *Frontiers in Animal Science* 3, 1–15. DOI: 10.3389/fanim.2022.974687.
- LaCanne, C.E. and Lundgren, J.G. (2018) Regenerative agriculture: Merging farming and natural resource conservation profitably. *PeerJ* 6, e4428.
- Laing, G., Duffy, E., Anderson, N., Antoine-Moussiaux, N., Aragrande, M. *et al.* (2023). Advancing One Health: Updated core competencies. *CABI One Health* 1–13. DOI: 10.1079/cabionehealth.2023.0002.
- Mathias, J., Krings, A. and Teixeira S. (2023) Which environmental social work? Environmentalisms, social justice, and the dilemmas ahead. *Social Service Review* 97(3), 569–601. DOI: 10.1086/724522.
- Mellor, D.J., Beausoleil, N.J., Littlewood, K.E., McLean, A.N., McGreevy, P.D., Jones, B. and Wilkins, C. (2020) The 2020 five domains model: Including human – animal interactions in assessments of animal welfare. *Animals* 10(10), Article 10. DOI: 10.3390/ani10101870.
- Newton, P., Civita, N., Frankel-Goldwater, L., Bartel, K. and Johns, C. (2020) What is regenerative agriculture? A review of scholar and practitioner definitions based on processes and outcomes. *Frontiers in Sustainable Food Systems* 4, 194.
- O'Donoghue, T., Minasny, B. and McBratney, A. (2022) Regenerative agriculture and its potential to improve farmscape function. *Sustainability* 14(10), 5815.
- Olmos Antillón, G., Tunón, H., de Oliveira, D., Jones, M., Wallenbeck, A. *et al.* (2021) Animal welfare and the United Nations' sustainable development goals—Broadening students' perspectives. *Sustainability* 13(6), 3328. DOI: 10.3390/su13063328.
- One Health (n.d.) WOA – World Organisation for Animal Health. Available at: <https://www.woah.org/en/what-we-do/global-initiatives/one-health/> (accessed 19 January 2024).
- One Health Basics|One Health|CDC (2023). Available at: <https://www.cdc.gov/onehealth/basics/index.html> (accessed 30 January 2024).
- Rault, J.L., Waiblinger, S., Boivin, X. and Hemsworth, P. (2020) The power of a positive human – animal relationship for animal welfare. *Frontiers* 7, 1–13. DOI: 10.3389/fvets.2020.590867.
- Rep. Krishnamoorthi, R. [D-I.-8]. (2021). Text – H.R.3277 – 117th Congress (2021–2022): Animal Welfare Enforcement Improvement Act [Legislation]. Available at: <https://www.congress.gov/bills/117/congress-house-bill/3277/text> (accessed 17 May 2021).
- Schreefel, L., Schulte, R.P.O., De Boer, I.J.M., Schrijver, A.P. and Van Zanten, H.H.E. (2020) Regenerative agriculture – the soil is the base. *Global Food Security* 26, 100404.
- Taylor, N., Fraser, H., Signal, T. and Prentice, K. (2016) Social work, animal-assisted therapies and ethical considerations: A programme example from Central Queensland, Australia. *The British Journal of Social Work* 46(1), 135–152. DOI: 10.1093/bjsw/bcu115.
- Tedeschi, P., Fitchett, J. and Molidor, C.E. (2006) The incorporation of animal-assisted interventions in social work education. *Journal of Family Social Work* 9(4), 59–77. DOI: 10.1300/J039v09n04\_05.
- Uehara, E.S., Barth, R.P., Olson, S., Catalano, R.F., Hawkins, J.D. *et al.* (2014) Identifying and tackling grand challenges for social work. In: *Grand Challenges for Social Work Initiative, Working Paper No. 3*. American Academy of Social Work and Social Welfare, Baltimore, MD. Available at: <https://grandchallengesforsocialwork.org/wp-content/uploads/2015/04/FINAL-Identifying-and-Tackling-GCSW-4-2-2015-formatted-final.pdf> (accessed 30 January 2024).
- United Nations (2016) The 17 Goals|Sustainable Development. United Nations. Available at: <https://sdgs.un.org/goals> (accessed 30 January 2024).