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SPECIAL SECTION: The Commons: A Revisit

Celebrating Jodha: And Revisiting the Commons

Harini Nagendra, [*] Pranab Mukhopadhyay, [**] Rucha Ghate [***]

Abstract: Narpat S. Jodha (1937–2020) passed away at the age of 83 years. He is best remembered for his contribution to research on the commons and livelihoods in semi-arid regions in India. His work has transcended geographical boundaries and has won him worldwide recognition. His passing away provides an occasion to revisit the commons issue for multiple reasons, mainly that the livelihood issues that triggered the study of the commons still remain. Despite all the livelihood benefits that the commons provide, it is widely acknowledged that the commons in India are under threat, which throws open multiple questions: Is it due to the absence of secure property rights among local communities or the result of weak governance mechanisms? We also recognize that research on the commons has moved beyond livelihood issues to gender perspectives, digital commons, urban issues, and health.

Keywords: Commons; Narpat S. Jodha.

1. LIFE AND WORKS OF N.S. JODHA

Narpat S. Jodha (1937–2020), born in Rajasthan, India, has left behind a rich legacy of work on common pool resources (CPRs), having pioneered work in an area that was an unfashionable research domain at the time. His

[*] School of Development, Azim Premji University, Burugunte Village, Sarjapur Hobli, Anekal Taluk, Bangalore 562125, India; harini.nagendra@apu.edu.in.

[**] Goa Business School, Goa University, Taleigao Plateau, Goa 403206, India; pm@unigoa.ac.in. ✉

[***] Foundation for Ecological Security, Anand; C-616, Athashri, Off Pan Card Club, Road, Baner, Pune 411 045, Maharashtra, India; rucha@ncf-india.org.

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long journey in academic writing began in 1966 (Jodha 1966) and ended in 2019 (Bhatta *et al.* 2019). He completed his masters in Economics at the Delhi School of Economics (Mukhopadhyay and Ghate 2020) and his PhD in Economics at the University of Jodhpur in the late 60s (Jodha 1967). He was honoured as a Fellow of the World Academy for Art and Science in 2001. He also served as the President of the Indian Society of Ecological Economics (INSEE) and the President of the International Society for the Study of the Commons (IASC), both during the period 2004–06. He was also the Conference President of the Indian Society for Agricultural Economics in 2008.

He began his work life at Indian Council for Agricultural Research-Central Arid Zone Research Institute (CAZRI), Jodhpur, in 1963 and went on to join the Indian Agricultural Research Institute, New Delhi. He later moved to different Consultative Group on International Agricultural Research (CGRIA) organizations, most significantly International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Hyderabad.

His work is widely cited. Although the most cited of his papers was published in the journal *Science* (Kates 2001), the article that he is best remembered for is from the 1980s (Jodha 1986), which he authored when he was working at ICRISAT. His study, based on 80 villages in 21 districts in 7 states, highlighted the significance of CPRs for employment and income generation among the rural poor. It claimed that the income that poor households derived from CPRs ranged between 15% and 23% of their total income. The finding that drew the attention of many in the field was that CPRs contributed more to rural livelihoods than many anti-poverty programmes. Jodha also flagged the fact that the area under CPRs was declining, which would negatively impact the livelihoods of the rural poor.

While trying to understand his academic journey, we turned to the most popular web search engine that captures the academic footprint of all researchers these days—Google Scholar. As anyone in this field would know, the multiplicity of author names is a nightmare for bibliometric analysis. Jodha's articles can be found under four different names—N.S. Jodha (over 6,000 search results), Narpat Jodha, Narpat S. Jodha, and Narpat Singh Jodha—making collating his legacy difficult.

His early work was on agriculture in semi-arid regions. Starting from the 1960s he regularly published in the *Indian Journal of Agricultural Economics* and *Economic & Political Weekly*. He worked simultaneously on agriculture, poverty, and natural resources in the early part of his career. By the early 1990s, he had expanded his spatial domain to the mountains and how communities were dealing with issues concerning livelihoods and resources.

His shift in research focus from semi-arid to mountainous regions was probably driven by his shift from ICRISAT to the International Centre for Integrated Mountain Development (ICIMOD).

One of his lasting contributions was a synthesis of observations and inferences from different studies by ICIMOD and others in mountainous regions across Nepal, India, Bhutan, Bangladesh, China, and Pakistan. His work on mountain specificities in the context of CPRs was considered seminal; in it, he discusses

> […] limited accessibility, high degree of fragility, marginality, diversity, and nature endowed niche resources….. to elaborate, limited accessibility, relative isolation and distance-based closedness, force a community's crucial dependence on local resources and hence their protection while using, including through group action. Fragility favoured (conservation focused) diversified land use with emphasis on extensive type of usage promoting collective stake in fragile (degradable) resources. Marginality, both physical and socio-political, promoted social cohesion for collective self help and risk sharing. (Jodha 2007, 125)

thus bringing out the important component of a community's natural resource base.

His work on community management of natural resources in fragile mountain regions is also widely regarded as seminal (Jodha 2002). He recorded the use of indigenous technologies to adapt to high-risk, low-productivity environments; the gradual decline in traditional resource management systems; and the need for an integrated approach to deal with these specificities while designing policies for such fragile areas.

While Jodha attributed a central role to communities in CPR management, he also emphasized the importance of regulatory institutions. He accepted that the absence of regulatory institutions, combined with rapid population growth (Jodha 1985), might lead to a "tragedy of the commons", as predicted by Hardin (1968). The paper by Jodha, like several other studies, suggests that the effects of rapid population growth are mediated by institutional factors and could be overshadowed by pressures arising from changing market conditions.

One of Jodha's concerns was that socioeconomic change is inadequately captured by social science research, partly due to the researchers' perceptions and partly because of inadequate research approaches and tools (Jodha 1988). CPR research has exploded over the last three decades or so. Many researchers have contributed to this domain, including Ostrom (1990). Interestingly, her research interests and region of interest (Nepal) overlapped with Jodha's significantly. However, CPR research today

explores newer areas and themes that build on the shoulders of these pioneers.

In this short collection for the special section of *Ecology, Economy and Society—the INSEE journal*, we have three contributions examining three different aspects of CPRs. Adhikari (2021, this volume) provides an overview of CPRs, the theory, and the concepts. He also examines the international debate on the commons, its limitations, and the management challenges it poses. Chorran *et al.* (2021, this volume) focus on Rajasthan's CPRs—a research area that was central to Jodha's work—using Ostroms's socio-ecological systems (SES) framework (Ostrom 2009). They conceptualize the problem of livelihoods and CPRs in the context of climate change and provide evidence of how communities adapt through ecological restoration. Murali *et al.* (2021, this volume) focus on Spiti valley—a mountain region that was also an area of research interest to Jodha later in his life. They bring a gender perspective to natural resource management, specifically of water, in this resource-scarce region. Murali *et al.*'s work represents the newer areas being explored by researchers in CPR research.

2. GENDER AND CPRs

Unfortunately, despite the vital role played by women in CPR management across India, which early seminal work on gender in India has shown, post-independence CPR policies have rarely been gender-responsive (Tyagi and Das 2018). These policies fail to recognize both the importance of women in CPR management and the need to design supportive institutions that facilitate the continued participation of women. They seem unresponsive to the existence of deeper structural issues that need to be addressed to enable women's groups to have sufficient voice and agency in the capital-dominated market economy of the twenty-first century. CPR research on gender must necessarily expand into other arenas, seeking to connect to larger pan-Indian societal challenges such as rural land grabbing and the gradual erosion of potential commons-related livelihoods and subsistence in many parts of the country (Doss, Summerfield, and Tsikata 2014). These structural changes have shaped the broader challenges of food insecurity and forced rural–urban migration, as was witnessed across India during the migrant crisis at the time of the nation-wide lockdown in early 2020. CPR studies on gender have begun to cross-connect with this broader nation-wide reshaping of land, economy, and natural resources. For instance, a recent nation-wide study showed that the loss of commons land is largely driven by two processes—private capture by influential households within

villages and state-driven consolidation and transfer of commons land to private interests, fueled by a development agenda (Thapliyal, Mukherji, and Malghan 2019). Inequality, including gender inequality, is closely associated with the loss of CPRs, though causal relationships are hard to establish. Across India, the collapse of CPRs has transferred the burden of stall-feeding cattle and collecting firewood and water from increasingly distant sources onto women and girls (Vij and Narain 2016). This has important repercussions for India's economy as well, making it increasingly difficult for rural Indian women to participate in the formal or informal workforce (Rao 2018).

Such an expansion of scope and focus will be essential for gender studies of the commons to provide fundamental explanations of the underlying dynamics that shape many of the current, deeply unjust, large-scale changes that we witness today, leading to wide-ranging insights that have policy impact.

3. URBAN ISSUES

The other area that has seen significant contributions in recent years is urban CPR issues. Despite the fact that developing countries in the global South are still largely rural, they have been urbanising at a faster rate than developed countries of the global North over the past several decades (Nagendra *et al.* 2018). As the population in South Asia becomes increasingly urban and the poor migrate to urban spaces for their livelihood, the role of urban commons needs to be looked at from multiple dimensions. With some estimates indicating that India will become more than 50% urban in a couple of decades (Nagendra *et al.* 2018), CPR research in India must significantly expand its focus to consider urban commons in detail.

Across the urban gradient, from large cities to small towns, urban ecological commons have been taken over by the state and local municipalities (Mundoli, Manjunatha, and Nagendra 2017) as 'waste' government property to be converted into schools, bus stations, and housing colonies, and by private real estate interests (Parikh 2020) for high-end apartments, malls, and corporate campuses. The accelerating land grabbing, fueled by public and private interests, has sharply eroded spaces for the commons in cities. Given the scarcity of land in India's cities and the multitude of interests and actors staking a claim on scarce resources, urban commons have become sites of intense contestation, exclusion, and even violence. CPR research in cities increasingly views the commons through a lens of eco-Marxism, political ecology, and feminist studies (Rao 2020). In Mumbai, for instance,

cattle grazers, salt pan workers, Koliwadi fishers, and migrant workers foraging for fuelwood are excluded from access to mangroves, protected forests, lakes, parks, streets, and footpaths by urban visions of 'modern' city restorations that have no space for traditional commons users, considering them both unsightly and unhygienic (Parthasarathy 2011). Similar patterns of exclusion have been documented in cities across India, including Delhi, Chennai, and Bangalore. Yet, there is still hope. Polycentric governance systems, drawing on collaborations between local governments and community groups, have a role to play in lake restoration movements in Bangalore and many other cities (Nagendra and Ostrom 2014). Peri-urban farming communities in areas like Gurgaon have been able to self-organize the use of waste water flows from the city as a resource, mediating water insecurity and forging new norms and practices of cooperation for waste water sharing (Narain and Singh 2017). Environmental placemaking around restored urban ecological commons appears to be a route by which diverse migrants from different socioeconomic backgrounds forge an emotional connect to the city, deriving a strong sense of place and investing in commons action (Sen and Nagendra 2020). Further research is needed to understand the factors shaping the processes and outcomes of commons transformation, both as the loss of CPRs and the forging of new forms of urban collective action. In particular, we lack an understanding of transformations in Tier 2 and Tier 3 cities and towns as most urban commons research in India has so far been in larger metropolitan cities, with rare exceptions (Zimmer, Véron, and Cornea 2020).

4. DIGITAL COMMONS

Digital and information commons are another domain where issues of property rights are discussed intensely. As information and communications technology (ICT) began to gain ground across the world, for example, with the development of the internet and collaborative approaches towards open-source software development, new digital commons began to emerge. These were maintained by communities of software developers and creative minds in line with principles of collective creation, sharing, and free availability for third-party users. These ideas, and the underlying spirit of the commons, clash with another growing tendency—to create proprietary software that requires a paid (often substantially expensive) licence to use and operate. As seminal work on the information commons—an area of work that emerged after around 1995— has shown, multiple users of the digital commons began to notice discussions around issues such as the norms of sharing, free riding, conflict, and overuse, which had been discussed extensively in CPR literature (Hess and Ostrom 2011).

Although there has been very little work on the digital commons in India, recent work from other countries has important implications for the increasing tendency to equate online communications with efficient progress in many corporate and government circles without an adequate understanding of the potential challenges. At a time when e-governance is gaining momentum across India and is being pushed as a model of efficiency, transparency, and anti-corruption, studies such as these have important implications for urban and rural India.

Other global research analyses the increasing challenge of consolidating the influence of the world's largest technology companies—Facebook, Amazon, Google, Apple, and others—who are being investigated by governments in North America and Europe for how they capture, store, analyse, and disseminate the massive volumes of digital data that they access on a daily basis and to what use they put them. Given their increasing monopoly over many forms of public data, currently, they seem to have the power to set many of the de facto rules for data use, a situation that rightly alarms many scholars of the digital commons (Prainsack 2019). Concerns have also been expressed about the increasing consolidation of big data, which includes the personal data of citizens, opening up new possibilities for surveillance by public authorities (Lyon 2014). New property rights on data are needed to help protect users against the exploitation of their privacy and individual rights by private and public agencies, and theories of the commons can have an influential role to play in devising such new legal systems of rights (Fia 2020). While some work has been done in this regard in India, there is potential to vastly expand the scope, focus, and relevance of commons research to digital and information commons issues, which are of vital importance in contemporary times. Unfettered use of public data will otherwise result in data grabbing and the enclosure of data commons by a few powerful interests, rather than ensuring that big data remains available for public use as data commons, as the initial rhetoric and promise suggested (Purtova 2017).

5. HEALTH AS A COMMON CONCERN

Finally, another emerging area of work on the commons is the health commons. Although the need for robust, inexpensive, accessible community-based health services across India, and indeed across the world, is self-evident, commons research has played a relatively small role in shaping debates on public health so far. Yet, research on the health commons is steadily gaining ground in recent years, though to a limited extent in India. Despite the increasing privatization of healthcare across the

world, health commons research argues that a market-driven system will not maximize public health. Healthcare driven by private markets (as so much of healthcare is increasingly becoming in India, for example) limits patient choice, makes the medical system intentionally opaque, and results in classic commons-type enclosures, excluding marginalized communities from access (Nonini 2007). A second challenge where commons research can play a role is in understanding how to move from micro-commons or small-scale community health programmes towards the provision of larger-scale regional healthcare. Ideas of polycentricity can play an influential role here, with multi-level horizontal and vertical stakeholder collaborations that keep in mind design principles identified by Ostrom (Smith-Nonini, 2006). In addition, research on the health commons stresses the need to go beyond a focus on good strategic practices such as polycentricity towards normative commons approaches, for instance, where participation becomes an inherent value, and, finally, towards political approaches of campaigning and advocacy building for the transformation of public health towards greater civil society engagement and commons action. These insights have tremendous value for India.

In conclusion, this special section pays tribute to the tremendously influential role played by Narpat S. Jodha in shaping commons and CPR work in India. He conducted path-breaking work to document and bring to light the need to ensure a central role communities in the management of ecological CPRs across India while highlighting for policymakers the vital role played by CPRs in the daily lives and livelihoods of rural communities. The three research papers in this section demonstrate why issues concerning the commons, as studied by Jodha and so many others, continue to play an influential role in India today. In addition, in this introductory note, we examine other emerging issues of the commons, which were not as prominent in the times when Jodha conducted his research. These include the need for an expanded focus on gender marginalization and new issues such as urban and peri-urban CPR management, digital and information commons, and health commons. While some work has been done on urban and peri-urban commons in India, the volume of work is relatively small compared to the larger focus on the rural commons. With India on a steady path towards urbanization, we cannot ignore the central importance of urban CPRs in shaping just, equitable, and sustainable cities. This demands more research. Further, there has been minimal research on digital and information technologies from a commons perspective. These are assuming an increasing significance in contemporary India, with the growing influence of large players like Google, Facebook, and Amazon in shaping public behaviour and the

potential for increasing citizen surveillance with the consolidation of public datasets. We need greater societal conversations and scholarly examinations of the norms of the common use of big data, and commons theory can play an influential role in these conversations. Finally, another emerging area of new research on the commons is public health. With the increasing privatization of healthcare in India, concerns about exclusion and marginalization are emerging strongly. Commons theory, and its normative and philosophical underpinnings, are beginning to play an influential role in public health debates in many parts of the world, but research on CPRs and public health has largely been siloed in India. This is another emerging area that deserves new focus, as the chasms in availability of healthcare during the *annus horribilis* of 2020—the year of COVID-19—have demonstrated so sharply.

REFERENCES

Bhatta, L. D., A. Shrestha, N. Neupane, N. S. Jodha, and N. Wu. 2019. "Shifting Dynamics of Nature, Society and Agriculture in the Hindu Kush Himalayas: Perspectives for Future Mountain Development." *Journal of Mountain Science* 16 (5): 1133–49. https://doi.org/10.1007/s11629-018-5146-4.

Doss, C., G. Summerfield, and D. Tsikata. 2014. "Land, Gender, and Food Security." *Feminist Economics* 20 (1): 1–23. https://doi.org/10.1080/13545701.2014.895021.

Fia, T.. 2020. "An Alternative to Data Ownership: Managing Access to Non-Personal Data through the Commons." *Global Jurist* (published online ahead of print 2020), 20200034. https://doi.org/10.1515/gj-2020-0034.

Hardin, G. 1968. "The Tragedy of the Commons." *Science* 162 (3859): 1243–48. https://doi.org/10.1126/science.162.3859.1243.

Hess, C., and E. Ostrom. 2011. *Understanding Knowledge as a Commons: From Theory to Practice*. Cambridge, Mass: MIT Press.

Jodha, N. S. 1966. "The Scarcity Oriented Growth Pattern of Arid Agriculture." *Indian Journal of Agricultural Economics* XXI (4): 1-10.

———. 1967. "Capital Formation in Arid Agriculture-- A Study of Resource Conservation and Reclamation Measures Applied to Arid Agriculture." PhD thesis. Jodhpur: University of Jodhpur.

———. 1985. "Population Growth and the Decline of Common Property Resources in Rajasthan, India." *Population and Development Review* 11 (2): 247. https://doi.org/10.2307/1973488.

———. 1986. "Common Property Resources and the Rural Poor." *Economic and Political Weekly* 21 (26): 1169–81.

———. 1988. "Poverty Debate in India: A Minority View." *Economic and Political Weekly* 23 (45/47): 2421–28.

———. 2002. *Life on the Edge: Sustaining Agriculture and Community Resources in Fragile Environments*. New Delhi: Oxford University Press.

———. 2007. "Mountain Commons: Changing Space and Status at Community Levels in the Himalayas." *Journal of Mountain Science* 4 (2): 124–35. https://doi.org/10.1007/s11629-007-0124-2.

Kates, R. W. 2001. "Environment and Development: Sustainability Science." *Science* 292 (5517): 641–42. https://doi.org/10.1126/science.1059386.

Lyon, D. 2014. "Surveillance, Snowden, and Big Data: Capacities, Consequences, Critique." *Big Data & Society* 1 (2): 205395171454186. https://doi.org/10.1177/2053951714541861.

Mukhopadhyay, P. and R. Ghate. 2020. "Narpat S. Jodha: Forever Restless." *Ecology, Economy and Society–the INSEE Journal* 3 (2): 219–222. https://doi.org/10.37773/ees.v3i2.90.

Mundoli, S., B. Manjunatha, and H. Nagendra. 2017. "Commons That Provide: The Importance of Bengaluru's Wooded Groves for Urban Resilience." *International Journal of Urban Sustainable Development* 9 (2): 184–206. https://doi.org/10.1080/19463138.2016.1264404.

Nagendra, H., X. Bai, E. S. Brondizio, and S. Lwasa. 2018. "The Urban South and the Predicament of Global Sustainability. " *Nature Sustainability* 1 (7): 341–49. https://doi.org/10.1038/s41893-018-0101-5.

Nagendra, H. and E. Ostrom. 2014. "Applying the Social-Ecological System Framework to the Diagnosis of Urban Lake Commons in Bangalore, India." *Ecology and Society* 19 (2): 67. https://doi.org/10.5751/ES-06582-190267.

Narain, V., and A. K. Singh. 2017. "Flowing against the Current: The Socio-Technical Mediation of Water (in)Security in Periurban Gurgaon, India." *Geoforum* 81 (May): 66–75. https://doi.org/10.1016/j.geoforum.2017.02.010.

Nonini, D. M., ed. 2007. *The Global Idea of 'the Commons'*. New York: Berghahn Books.

Ostrom, E. 1990. *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge, MA: Cambridge University Press.

———. 2009. "A General Framework for Analyzing Sustainability of Social-Ecological Systems." *Science* 325 (5939): 419–22. https://doi.org/10.1126/science.1172133.

Parikh, A. 2020. "Urban Commons to Private Property: Gendered Environments in Mumbai's Fisher Communities." *Environment and Planning D: Society and Space* (October). https://doi.org/10.1177/0263775820961401.

Parthasarathy, D. 2011. "Hunters, Gatherers and Foragers in a Metropolis: Commonising the Private and Public in Mumbai." *Economic and Political Weekly* 46 (50): 54–63.

Prainsack, B. 2019. "Logged out: Ownership, Exclusion and Public Value in the Digital Data and Information Commons." *Big Data & Society* 6 (1): 205395171982977. https://doi.org/10.1177/2053951719829773.

Purtova, N. 2017. "Health Data for Common Good: Defining the Boundaries and Social Dilemmas of Data Commons." In *Under Observation: The Interplay Between EHealth and Surveillance*, edited by Samantha Adams, Nadezhda Purtova, and Ronald Leenes, 177–210. Law, Governance and Technology Series. Cham: Springer International Publishing. https://doi.org/10.1007/978-3-319-48342-9_10.

Rao, M. 2020. "Gender and the Urban Commons in India: An Overview of Scientific Literature and the Relevance of a Feminist Political Ecology Perspective." *International Quarterly for Asian Studies* 51 (1–2): 261–276. https://doi.org/10.11588/IQAS.2020.1-2.11028.

Rao, S. 2018. "Gender and Class Relations in Rural India. " *The Journal of Peasant Studies* 45 (5–6): 950–68. https://doi.org/10.1080/03066150.2018.1499094.

Sen, A., and Harini Nagendra. 2020. "Local Community Engagement, Environmental Placemaking and Stewardship by Migrants: A Case Study of Lake Conservation in Bengaluru, India. " *Landscape and Urban Planning* 204 (December): 103933. https://doi.org/10.1016/j.landurbplan.2020.103933.

Smith-Nonini, S. (2006). "Conceiving the Health Commons: Operationalizing a "Right" to Health". *Social Analysis: The International Journal of Social and Cultural Practice* 50 (3): 233–245. https://doi.org/10.3167/015597706780459331.

Thapliyal, S., A. Mukherji, and Deepak Malghan. 2019. "Economic Inequality and Loss of Commons: Evidence from India. " *World Development* 122 (October): 693–712. https://doi.org/10.1016/j.worlddev.2019.06.012.

Tyagi, N. and S. Das. 2018. "Assessing Gender Responsiveness of Forest Policies in India. " *Forest Policy and Economics* 92 (July): 160–68. https://doi.org/10.1016/j.forpol.2018.05.004.

Vij, S. and V. Narain. 2016. "Land, Water & Power: The Demise of Common Property Resources in Periurban Gurgaon, India. " *Land Use Policy* 50 (January): 59–66. https://doi.org/10.1016/j.landusepol.2015.08.030.

Zimmer, A., R. Véron, and N. L. Cornea. 2020. "Urban Ponds, Environmental Imaginaries and (Un)Commoning: An Urban Political Ecology of the Pondscape in a Small City in Gujarat, India." *Water Alternatives* 13 (2): 225–47. http://www.water-alternatives.org/index.php/alldoc/articles/vol13/v13issue2/572-a13-2-2/file.