Chapter 1
Designing Social Innovation for Sustainable Livelihoods

Gavin Brett Melles

1 Designing Development

Without a broad theory of change, the idea that employment, technology, social enterprise business models, infrastructure or other resources and capitals will lead to development is inadequate. While other approaches to design for development exist, including capabilities design (Oosterlaken 2009), this book takes the sustainable livelihoods framework (SLF) as an analytic framework and a broad theory of change, which defines the elements, e.g. capitals, institutions, processes, vulnerabilities, that enable and disable sustainable livelihood outcomes. Livelihood assets—products, services and other capitals—and institutional structures and processes—can be designed to enable desirable livelihood strategies and outcomes. This is a project that requires simultaneously top-down institutional and bottom-up social innovation initiatives.

2 The Sustainable Livelihoods Framework: A Framework for Understanding and Promoting Change

Thirty years ago, Chambers and Conway (Chambers and Conway 1991) proposed the sustainable livelihoods framework (SLF) as a way of analysing the contexts and possibilities for rural development. The work of Robert Chambers and later DFID adoption and development of SLF as the framework of choice for first rural and then all development analysis and action is a story well told elsewhere (Ashley et al. 1999; Chambers and Conway 1991; Solesbury 2003). With its basis in participatory approaches, focus on sustainability and influenced by Sen's notions of capabilities

G. B. Melles (✉)
School of Design, Swinburne University of Technology, Melbourne, Victoria 3122, Australia
e-mail: gmelles@swin.edu.au

G. B. Melles (ed.), *Designing Social Innovation for Sustainable Livelihoods*,
Design Science and Innovation, https://doi.org/10.1007/978-981-16-8452-4_1

(Sen 2000), the framework quickly became the default approach for development agencies in the UK, Europe and elsewhere through the nineties (Davies et al. 2008; Krantz 2001; Neely et al. 2004). Over time, the model has experienced revisions to address critique with respect to the politics of development and the necessary institutional changes that development requires (Banks 2016; Baumann 2000). Despite criticism, the framework remains a 'comprehensive analytical device that prioritizes the interests of those rural groups traditionally neglected by mainstream modernization policies' (Hall and Midgley 2004, p. 87). SLF is moreover no longer limited to a rural focus but applies more broadly to both urban and rural contexts (e.g. Farrington et al. 2002).

Below the SLF diagram shows the interdependent elements of vulnerability contexts, capitals, transforming processes and structures, livelihood strategies and outcomes. At the core of the model is the link between capitals and transforming structures and processes—this is where social and institutional innovation can enable strategies and outcomes. The model immediately shows how a project focus on a particular product or service as a source of new capital or assets is only valuable to development in the broader context of variables identified. Without simultaneously transforming structures and processes in markets (Dorward et al. 2003), governments (Mok and Lau 2014), environmental commons (Lienert and Burger 2015) and elsewhere for social outcomes, social products and services will fail to deliver sustainable change (Fig. 1). Positive livelihood outcomes and strategies arise when structures and processes are transformed, e.g. gender, autonomy and local knowledge integrated as fundamental to change and enable access to the capitals, which themselves are the product of new livelihood outcomes. For example, access to affordable housing and the related infrastructures requires institutional changes. The reduced

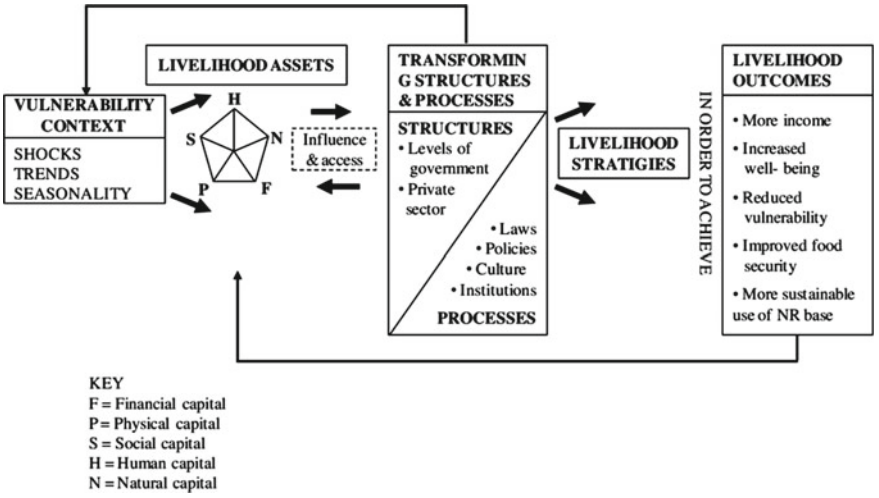

Fig. 1 *Source* Carney (Ashley et al. 1999)

vulnerability and increased well-being that can result leads to increased capitals in a self-reinforcing loop.

3 Democratizing Social Design: Little Design and Big Design Merge?

The concept of design has always lived a double life of expert and more diffuse interpretations, including with respect to social goals. Manzini (2015) usefully distinguishes between conventional design work—*expert design*, e.g. industrial design—and a broader agenda—*diffuse design*, e.g. policy design as two ways of understanding this double life. Here, I want to suggest that both expert and diffuse senses relative to social innovation and design have their origins in two works from fifty years ago. On the one hand, modern design professions experienced a turn to the social in development contexts through the work of Viktor Papanek. Papanek in *Design for the Real World* (Papanek 1971) proposed that industrial designers create socially responsible solutions, rather than being handmaidens to the unsustainable consumption projects of mainstream design. These solutions included product innovations adapted to affordability and need.

While much has been achieved and written since in the fields of social design (Margolin and Margolin 2002), Papanek's agenda remains a marginal professional activity in design (Melles et al. 2011). In the decades since Papanek, design fields have expanded their methodological landscape (Sanders and Stappers 2008)—to include the social through the creation of subfields such as social design and co-design methods, including in the social innovation space (Britton 2017). Recent attempts by designers to define social design, identify multiple strands, including a focus on activism or action research, methodological sociality, e.g. co-design, and critique of the limits of the field in understanding the wider ideological contexts to which it has shifted (Chen et al. 2016). However, design discussions of the wider issues remain unsubstantial. Thus, Kuure and Miettinen (2017) in their framework for social design identify but do not discuss in any detail culture, participation, community focus as core elements, while alluding to creating equal relations and empowering community.

Designers often appear to focus especially on the design process (and tools and methods) in projects and are somewhat fixated on the uniqueness of democratic and empowering design approaches (e.g. Docherty 2017) for achieving major social change. With their narrow project and process orientation and inability to see ideological and institutional factors, they tend to collapse different terms together. Chick (2011), for example, equates social innovation design with the social side of sustainable development while Selloni and Corubulo (2017) seem to conflate social enterprise (a business model concept) with social innovation and see active community participation as essential to both; for some important differences between these terms, see, for example (Davies and Simon 2013). Thus, there is need for new frameworks

to situate design projects in institutional context as well as a need to update the scope of design in light of its democratic spread to other fields.

Thus simultaneously with Papanek's work, Herbert Simon's *The Sciences of the Artificial* (Simon 1996), originally published in 1969, argued that the search for solutions to human problems in many disciplines, including management, engineering, architecture and social planning, should be characterised as design. Subsequent application of this idea to the design of organizations (e.g. Romme 2003), public policy (e.g. Considine 2012), even business models (Joyce and Paquin 2016), claims that it pays to think of problem solving in socio-technical domains as designing institutions. Simon's allusions to design subsequently became a popular touchstone for expert design as it expanded its reach to services, systems and beyond (Buchanan 1992).

As a result, there has been something of a defacto merging of diffuse and expert senses of design, which is also relevant to design for development. For exmaple, the democratization of design has meant that it is now common to find non-designer groups including design approaches in their community and development projects, especially co-design as an inclusive method (Parsons et al. 2016; Sarmiento Pelayo 2015). The crossover is complete in development fields where diffuse design of urban slum redevelopment, for example, includes expert design methods such as co-design (Kumar et al. 2016). The expansion of the design discourse into other discipline spaces concerned with the social has helped reinforce a blurring of boundaries between expert and diffuse design.

4 From Social to Social Innovation Design

Given that design for social purposes may involve product, service and institutional innovation, it is not surprising that the design thinking movement claims to solve social innovation problems. Brown and Wyatt (2010) exemplify product and service projects in developing countries, arguing that although enterprises use elements of design 'most stop short of embracing the approach as a way to move beyond today's conventional problem solving' (Brown and Wyatt 2010). The authors focus on the process methods and tools, e.g. prototyping, co-design, storyboarding, that play a role in the creation of product and service innovations with social purposes. Such discussions allude vaguely to a range of concepts, including social enterprise, social innovation, social design and empowerment with little precision.

Social innovation refers to 'innovative activities and services that are motivated by the goal of meeting a social need and that are predominantly diffused through organizations whose primary purposes are social' (Mulgan 2006). This widely cited definition focuses on activities and services designed with social ends in mind. This terms has recently become a competing term to social design for designers wishing to engage in 'a gamut of new social and political contexts very different from the majority of their peers' (Chick 2011). From the perspective of SLF such innovations constitute new capital formations that might also be transformational in the relevant

sense if the organisational form challenges the status quo and scales (Alvord et al. 2004). In other words, if it concerns the valuing of local knowledge, gender, community and other institutions as a solution to inclusive development contexts then this will lead to new capital formations.

Manzini (2014) in particular, who has been a protagonist of design for social innovation,[1] includes the slow food movement, community gardens and other projects developed and implemented by non-designer creative communities, 'who cooperate in inventing, enhancing, and managing viable solutions for new (and sustainable) ways of living' (Manzini 2014, p. 62). This democratization of design where everyone designs is central to the current social design innovation discourse (see especially Manzini 2015). Responding to the critique of design approaches to social innovation, Hillgren et al. (2011) meanwhile suggest that it is the longer term design of infrastructure not product or service projects which creates a sustainable platform for social innovation design. In addition, they observe that the future of design in social innovation contexts depends on design' stepping back' recognising its limitations and collaborating and learning from other fields.

Thus, the democratization of design has led to a practical merging of expert and diffuse design concerns in social domains. From an SLF perspective, designing social innovations refers particularly to the enhancing of capitals by organisations seeking to promote change. If the initiative scales and incorporates institutional innovations relative to gender, financial access, cooperative and collective logics, then social innovation so understood may lead to sustainable transformation and change (Alvord et al. 2004). Institutional innovation, however, is not just driven by bottom-up project-level initiatives that scale but through institutional innovation, including through policy design, that enable the conditions for relevant SLF growth in capitals. In fact, a strict separation of both processes is impossible to draw definitively. We leave you, the readers, to judge how the case studies in this collection exemplify these two interdependent bottom-up and top-down design potentials.

5 Following Chapters: Case Studies and Discussions

Resisting the urge to see design thinking and projects as the answer to social innovation and development problems (see Blyth and Kimbell 2011), this book sees design principles for resilient livelihoods and meaningful change as depending on detailed analysis, collaborations and collective knowledge processes and structures (Ostrom 2009). To explore inclusive development contexts and designing institutional innovation for sustainable livelihoods, I invited colleagues to write illustrative case studies of their work and examine their work in the light of relevant frameworks, i.e, SLF, social design. I am grateful for the wonderful responses of all my co-authors who in a time of significant disruption delivered inspiring and insightful stories about their work towards enabling sustainable livelihoods. This book of course is itself a dialogue

[1] Especially through the global DESIS network. https://www.desisnetwork.org/.

about commonalities and differences in the hybrid space of diffuse and expert design. Space does not permit me here to acknowledge all the support from foundations in India and Germany, as well as Swinburne University over the years that enabled me to meet many of the authors face to face over the last decade. In this section, I briefly introduce their chapters and how they address the overall agenda of the book.

Chapter 2: Designing Sustainable Livelihoods for Informal Markets in Dhaka, S. Rafsana Hossain, Gavin Brett Melles, Aisling Bailey

In the first case study, Rafsana Hossain, Melles and Bailey explore informal street markets in Dhaka, Bangladesh, as livelihood opportunity and challenge in context of official visibility and invisibility. Hossein, with a background in critical analysis of urban planning projects (Hossain and Fuller 2021), Bailey, who writes on community sustainability initiatives (Kingsley et al. 2019) and I met during our time together at Swinburne University Centre for Urban Transitions. Basing the analysis on an ethnographic survey of street markets, which Hossein undertook, we argue for the significance of street markets as an adaptive livelihood system and argue for more responsible policy design based on this idea. This first chapter, therefore, sets the scene for the book with an account of the significance of design for rural–urban sustainable livelihood policy making, and importantly a more adaptive approach to local and official needs and constraints. Through the allusions to Ostrom's work on socio-ecological solutions to common's pool resource problems (CPR), we also make the case for the importance of theory in seeing livelihood policy and practice design from broader perspectives.

Chapter 3: Designing Livelihoods Responsibly: Insights from Seed Conservation and Management Practices Among Farming Communities in India, Sunil D. Santha, Devisha Sasidevan, Sanchita Das, Santosh Kadu

The TASA Institute for Social Sciences (TASA) is one of the leading institutions focused on inclusive innovation in India. Sunil Santha's work with colleagues on rural livelihoods (e.g. Santha 2020) based at the Centre for Livelihoods and Social Innovation, School of Social Work—Mumbai Campus—was familiar to me. In his work, he and colleagues argue for an adaptive innovation model, which accounts for local contingencies, agency and structures. In the second case study, Santha and colleagues examine how traditional farming communities make use of their local knowledge systems and resources to design adaptive solutions to diverse environmental and livelihood uncertainties. Based on insights gathered from three distinct ethnographic qualitative researches conducted among traditional farming communities in Kochi, Purulia and Ahmednagar, respectively, they identify the purposeful design of seed management practices in local contexts of uncertainty and change. Among the many contributions of this case study is the insight that externally promoted projects can disrupt the balance of social-ecological systems and worsen the vulnerabilities of marginalised communities dependent on these resources, if they fail to follow an integrated design-cum-development practice at the local level.

Chapter 4: 'Designerly Ways' for Sustainable Livelihoods, Sharmistha Banerjee, Pankaj Upadhyay, Ravi Mokashi Punekar

I have been long aware of the work of Banerjee and colleagues on Design for Sustainability (DfS) based at IIT Guwahati (Punekar et al. 2020). Following some 'accidental' meetings at conferences in India, it was a pleasure to meet face to face at IIT Guwahati while I was on an Indian Government GIAN teaching fellowship at the neighbouring NIT Silchar. Banerjee and colleagues report on the development and implementation of 'design supports' for livelihood making. They see the sustainable livelihoods approach (SLA) in conjunction with their own framework of design for sustainability, as a potentially strong lens for designers and to aid designers in designing sustainable solutions. In this chapter, they discuss their experience of developing, evaluating and validating design supports for three different problem typologies: (1) 'design for sustainable livelihoods' wherein the community's economic activities are deeply rooted in their social and cultural ways of living, (2) 'design for marginal contexts' (sustainable agricultural mechanization of small farms of developing countries) and (3) 'frugal design' for the lower-income strata to improve their livelihoods. The chapter therefore illustrates a context in which taking sustainable social design as a starting point the overlap of expert and diffuse social design is significant.

Chapter 5: One Size Does Not Fit All: Heterogeneous Groups and Digital Training for Women in Tamil Nadu, India, Arun Kumar Gopalaswamy and M. Suresh Babu

During a 2019 sabbatical as research fellow at the Department of Management, IIT Madras, I was fortunate to meet Professor Kumar and colleagues—their warm welcome over tea breaks and insights into life and history in India remain enduring memories. Hence, it was with great pleasure that I could accept Prof. Kumar's offer to discuss his and Prof Babu's work on ICT training for women entrepreneurs in Tamil Nadu. Digital training for women micro-entrepreneurs can help overcome systemic institutional barriers to their financial inclusion and livelihoods development. They report on the benefits of a program dedicated to training women particularly in key aspects of enterprise digitalisation. Following analysis of their survey results, they discuss several methods for measuring change and provide a mapping of their results to a theory of change (TOC) model. This case study is a reminder of the value of measurable models of evaluating change towards the sustainable livelihood strategies that can lead to positive outcomes. Critical discussion of the overall strengths and weaknesses of the program for gender inclusive development and the need for a social and business environment where digital literacy can create measurable benefits. This chapter, therefore, adds to the body of work in this book pointing to the need for contextual adaptation and where necessary institutional innovation.

Chapter 6: Indo-German Cross-Cultural Collaboration: Sharing Experience and Co-creating Knowledge for Sustainable Urban Livelihoods Design, Christoph Woiwode, Lisa Schneider, Erach Bharucha, Shamita Kumar, Jenny Lay-Kumar, Avinash Madhale, Sanskriti Menon, Petra Schweizer-Ries, Peter Volz, Kranti Yardi, Ulrike Zeshanh

Wowoide and colleagues from the Indo-German Centre for Sustainability (IGCS)—a joint initiative of RWTH Aachen and IIT Madras—point to the important of joint knowledge creation for promoting Green Urban Practices. I have been fortunate during visits at RWTH Aachen and IIT Madras to interact with the IGCS and participate in two of their collaborative dialogues on urban green spaces (https://www.igcs-chennai.org/research/igd/), and know first-hand how important the joint conversation is for developing transdisciplinary knowledge and action (Hackenbroch and Woiwode 2016). In general, the authors note that transnational, cross-cultural sharing of local experiences gathered in processes of social innovation is an important factor in global learning. This can be enhanced by the co-design of the event allowing for emergence of topics relevant to the delegates and their work. Wowoide and colleagues highlight the value of co-creative dialogues for social innovation, including especially as part of a reform of higher education towards such transdisciplinary initiatives. The multi-authored chapter, reflecting contributions from multiple institutions from Germany and India reinforces this sense of dialogue and has lessons for other cross-national collaborations towards social change and impacts.

Chapter 7: Importance of Forest and Non-forest Environmental Resources to Sustainable Rural Livelihoods: Insights from a Case Study in Nepal, Bir Bahadur Khanal Chhetri, Santosh Rayamajhi and Sony Baral

During a short stint as Teaching Fellow for Australian Volunteers International (AVI) at the Institute of Forestry, Tribhuvan University (Nepal), in 2021, I met Profs Chhetri, Rayamajihi and Baral and learned of their work on community forestry and livelihoods (Chhetri et al. 2013; Yadav et al. 2020); the opportunity to include their work in this volume was a welcome way of developing our professional relationship. As the authors point out, forest-derived income is particularly important for the poor in meeting their subsistence needs, bridging seasonal gaps, providing a more diversified livelihood base and reducing and spreading risks over space and time. Building on forest-based livelihood perspectives and socio-ecological resiliency, in their survey study, they examine the importance of forest-based income for rural livelihoods. They conclude with a call for more appropriate policy and practice design to enhance the socio-ecological resilience of forest-based communities. Similar to other chapters in this book, there is a call for more appropriate and adaptive forest-related policy for sustainable livelihoods—a call that echoes across this collection.

Chapter 8: Grassroots Innovation-Based Sustainable Livelihoods: Role of Intermediaries. Anamika Dey, Anil Gupta

The honey bee network is a well-known grassroots oriented initiative developed by Professor Anil Gupta and now furthered by a team of colleagues including Anamika Dey (Dey et al. 2017). I have been fortunate to participate as a mentor in SRISTI student workshops for inclusive innovation (https://www.ss.sristi.org/mentors) as well as National Innovation Foundation (NIF) events lead by Prof. Gupta. The success of enabling grassroots innovation depends on intermediary organisations, such as honey bee but also others, in creating the networks and environments for change. In this chapter, Dey and Gupta exemplify both the challenges and the role

of intermediaries in effecting change. From the perspective of SLF, social capital is essential to enabling access to transforming structures and processes and intermediary organisations such as honey Bee help create these linkages between grassroots entrepreneurs and the organisations creating technology access to markets, often a missing element in analyses (Dorward et al. 2003).

6 Summary

For designers working in development contexts and for non-designers engaged in the research and design of policy change for sustainable livelihoods, this book is an introduction to the approaches and concerns from within and beyond design narrowly understood. The book and its authors argue throughout for attention to local contexts and knowledge in understanding and responding to livelihood design but also individually bring particular issues, e.g. intermediation, transdisciplinary dialogues, design for sustainability models and other into focus. Implicitly, the book argues for multidisciplinary teams and perspectives driven by a common aim to discover the capitals, structures and processes that might enable sustainable livelihood strategies and outcomes. In this project, expert design can play a role, but it is a subsidiary one in most cases, and premised on a disposition to learn not lead towards making meaningful change happen. Designing social innovation for sustainable livelihoods suggests that both bottom-up social innovation of products, services and capitals in general may lead to transformational change either through the effects of scale or through top-down institutional innovation, creating access to social, human, financial and other capitals. In both cases, it makes sense to talk about designing for sustainable livelihoods.

References

Alvord SH, Brown LD, Letts CW (2004) Social entrepreneurship and societal transformation: an exploratory study. J Appl Behav Sci 40(3):260–282. https://doi.org/10.1177/0021886304266847

Ashley C, Carney D, Britain G (1999) Sustainable livelihoods: lessons from early experience. DFID.

Banks N (2016) Livelihoods limitations: the political economy of urban poverty in Dhaka Bangladesh. Dev Change 47(2):266–292. https://doi.org/10.1111/dech.12219

Baumann P (2000) Sustainable livelihoods and political capital: arguments and evidence from decentralisation and natural resource management in India. Development October:1–44

Blyth S, Kimbell L (2011) Design Thinking and the Big Society: from solving personal troubles to designing social problems. (Issue June)

Britton G, (2017) Co-design and social innovation: connections, tensions and opportunities. (P. (Firm) issuing body (ed.); 1st editio). Routledge, London

Brown T, Wyatt J (2010) Design thinking for social innovation. Stanf Soc Innov Rev Winter:30–35

Buchanan R (1992) Wicked problems in design thinking. Des Issues 8(2):5–21. http://www.jstor.org/stable/1511637

Chambers R, Conway GR (1991) Sustainable rural livelihoods: practical concepts for the 21st century. IDS discussion paper (No 296; IDS discussion paper, vol 296). ISBN 0903715589
Chen D, Cheng L, Hummels C, Koskinen I (2016) Social design: an introduction. Int J Des 10(1):1–5
Chhetri BBK, Johnsen FH, Konoshima M, Yoshimoto A (2013) Community forestry in the hills of Nepal: determinants of user participation in forest management. For Policy Econ 30:6–13. https://doi.org/10.1016/j.forpol.2013.01.010
Chick A (2011) Design for social innovation: emerging principles and approaches. Iridescent 11(1):78–90. https://doi.org/10.1080/19235003.2012.11428505
Considine M (2012) Thinking outside the box? Applying design theory to public policy. Politics Policy 40(4):704–724. https://doi.org/10.1111/j.1747-1346.2012.00372.x
Davies A, Simon J (2013) How to grow social innovation: a review and critique of scaling and diffusion for understanding the growth of social innovation. In: 5th international social innovation research conference, 2013 (September 2–4), pp 2–4
Davies J, White J, Wright A, Maru Y, LaFlamme M (2008) Applying the sustainable livelihoods approach in Australian desert Aboriginal development. Rangel J 30(1):55. https://doi.org/10.1071/RJ07038
Dey A, Gupta A, Singh G (2017) Open innovation at different levels for higher climate risk resilience. Sci Technol Soc 22(3):388–406. https://doi.org/10.1177/0971721817723242
Docherty C (2017) Perspectives on design thinking for social innovation. Des J 20(6):719–724. https://doi.org/10.1080/14606925.2017.1372005
Dorward A, Poole N, Morrison J, Kydd J, Urey I (2003) Markets, institutions and technology: missing links in livelihoods analysis. Dev Policy Rev 21(3):319–332. https://doi.org/10.1111/1467-7679.00213
Farrington J, Ramasut T, Walker J (2002) Urban areas: general lessons, with illustrations from Indian Cases. Overseas Development Institute (No 162)
Green D (2016) How change happens. Oxford University Press
Hackenbroch K, Woiwode C (2016) Narratives of sustainable Indian urbanism: the logics of global and local knowledge mobilities in Chennai. South Asia Multidiscip Acad J 14. https://doi.org/10.4000/samaj.4190
Hall A, Midgley J (2004) Social policy and rural development: from modernization to sustainable livelihoods. In: Hall A, Midgley J (eds) Social policy for development. SAGE Publications Ltd., pp 87–113. https://doi.org/10.4135/9781446219973.n3
Hillgren PA, Seravalli A, Emilson A (2011) Prototyping and infrastructuring in design for social innovation. CoDesign 7(3–4):169–183. https://doi.org/10.1080/15710882.2011.630474
Hossain SR, Fuller S (2021) Understanding conflict in transport mega-projects: social impacts and power dynamics in the WestConnex project Sydney. Aust Geograp 1–21. https://doi.org/10.1080/00049182.2021.1964162
Joyce A, Paquin RL (2016) The triple layered business model canvas: a tool to design more sustainable business models. J Clean Prod 135:1474–1486. https://doi.org/10.1016/j.jclepro.2016.06.067
Kingsley J, Foenander E, Bailey A (2019) "You feel like you're part of something bigger": exploring motivations for community garden participation in Melbourne Australia. BMC Public Health 19(1):745. https://doi.org/10.1186/s12889-019-7108-3
Krantz L (2001) The sustainable livelihood approach to poverty reduction. In: SIDA. Division for Policy and Socio-Economic Analysis (Issue February). http://www.forestry.umn.edu/prod/groups/cfans/@pub/@cfans/@forestry/documents/asset/cfans_asset_202603.pdf
Kumar A, Lodha D, Mahalingam A, Prasad V, Sahasranaman A (2016) Using 'design thinking' to enhance urban re-development: a case study from India. Eng Proj Org J 3727(May):1–11. https://doi.org/10.1080/21573727.2016.1155445
Kuure E, Miettinen S (2017) Social design for service. Building a framework for designers working in the development context. Des J 20(sup1):S3464–S3474. https://doi.org/10.1080/14606925.2017.1352850

Lienert J, Burger P (2015) Merging capabilities and livelihoods: analyzing the use of biological resources to improve well-being. Ecol Soc 20(2). https://doi.org/10.5751/ES-07405-200220
Manzini E (2014) Making things happen: social innovation and design. Des Issues 30(1):57–66. https://doi.org/10.1162/DESI_a_00248
Manzini E (2015) Design when everybody designs: an introduction to design for social innovation. MIT Press
Margolin V, Margolin S (2002) A "Social Model" of design: issues of practice and research. Des Issues 18(4):24–30. https://doi.org/10.1162/074793602320827406
Melles G, de Vere I, Misic V (2011) Socially responsible design: thinking beyond the triple bottom line to socially responsive and sustainable product design. CoDesign 7(3–4):143–154. https://doi.org/10.1080/15710882.2011.630473
Mok KH, Lau M (2014) The quest for sustainable livelihoods: social development challenges and social policy responses in Guangzhou China. Soc Policy Soc 13(02):239–250. https://doi.org/10.1017/S1474746413000638
Mulgan G (2006) The process of social innovation. Innov Technol Govern Glob 1(2):145–162. https://doi.org/10.1162/itgg.2006.1.2.145
Neely C, Sutherland K, Johnson J (2004) Do sustainable livelihoods approaches have a positive impact on the rural poor? A look at twelve case studies (No 16; Livelihood Supoort Program, Issue October)
Oosterlaken I (2009) Design for development: a capability approach. Des Issues 25(4):91–102. https://doi.org/10.1162/desi.2009.25.4.91
Ostrom E (2009) A general framework for analyzing sustainability of social-ecological systems. Sci New Ser 325(5939):419–422. https://doi.org/10.1126/science.ll70749
Papanek V (1971) Design for the real world: human ecology and social change, 2nd edn. Bantam Books. http://www.amazon.com/Design-Real-World-Ecology-Social/dp/0897331532
Parsons M, Fisher K, Nalau J (2016) Alternative approaches to co-design: insights from indigenous/academic research collaborations. Curr Opin Environ Sustain 20:99–105. https://doi.org/10.1016/j.cosust.2016.07.001
Punekar RM, Banerjee S, Upadhyay P (2020) Design for sustainability—collaborative learning and dissemination at IIT Guwahati, Assam. In: Sustainability awareness and green information technologies. Springer International, pp 479–494. https://doi.org/10.1007/978-3-030-47975-6_20
Romme AGL (2003) Making a difference: organization as design. Org Sci 14(5):558–573. http://www.jstor.org/stable/4135149
Sanders EB-N, Stappers PJ (2008) Co-creation and the new landscapes of design. CoDesign 4(1):5–18. https://doi.org/10.1080/15710880701875068
Santha SD (2020) The circulation and politics of knowledge: climate change and livelihood struggles in a coastal fishing community. Glocalism J Cult Polit Innov 3
Sarmiento Pelayo MP (2015) Co-design: a central approach to the inclusion of people with disabilities. Revista de La Facultad de Medicina 63(3Sup):149–154. https://doi.org/10.15446/revfacmed.v63n3sup.49345
Selloni D, Corubolo M (2017) Design for social enterprises: how design thinking can support social innovation within social enterprises. Des J 20(6):775–794. https://doi.org/10.1080/14606925.2017.1372931
Sen A (2000) Development as freedom. Oxford University Press
Simon HA (1996) The sciences of the artificial (Third). MIT Press
Solesbury W (2003) Sustainable livelihoods: a case study of the evolution of DFID policy London. In: Development (No 217; Issue June)
Yadav Y, Chhetri BBK, Raymajhi S, Tiwari KR, Sitaula BK (2020) Evaluating contribution of trees outside forests for income of rural livelihoods of Terai Region of Nepal. Open J for 10(04):388–400. https://doi.org/10.4236/ojf.2020.104024