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Climate action in China

Four levers to advance
gender and social equality

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Summary

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- China is highly vulnerable to climate change risks, including storm surges, urban waterlogging and agricultural droughts. The country has a key role to play in global climate action – for which, effective delivery on national targets for carbon peaking by 2030 and carbon neutrality by 2060 will be essential. Simultaneously, China is pursuing low-carbon innovation, the revitalization of rural areas and the promotion of women’s development.
 - Gender and social inequalities affect the ability of people to participate in decision-making and access land, finance, technology and services key for climate resilience. Consequently, the adverse impacts of climate change disproportionately affect disadvantaged social groups, including women and girls, low-income communities and people with disabilities. In China, these people may be more vulnerable if located in remote rural areas, or in urban areas without a ‘hukou’ or household registration permit.
 - Climate change interventions that address gender and other social inequalities can produce more effective and sustainable outcomes – as measures that improve the capacity of disadvantaged groups to adapt to climate change impacts also enhance the capacity of the whole community. Furthermore, women’s participation in climate change decision-making produces better environmental outcomes and a fairer distribution of resources.
 - China’s current approach to climate change and socio-economic policy is relatively siloed, top-down and technocratic, which typically precludes the consideration of inclusive approaches to climate action that support women’s development. This poses the risk of implementing climate change measures that inadvertently worsen social inequalities.
 - However, key synergies exist between work on climate change mitigation and adaptation, rural revitalization and women’s development in China. For example, initiatives that assist low-income rural women farmers to develop sustainable, secure livelihoods – through access to education and technology – support women’s development, as well as community-level climate resilience and poverty reduction. The transition away from fossil fuels will create a net increase in jobs in China – providing an opportunity to promote diversity in the newly created jobs and ensure a ‘just transition’ for the most affected workers and communities. By leveraging the synergies between these policy areas, China can accelerate progress on its national climate goals while promoting ‘common prosperity’, sustainable growth and women’s development.

- While collaboration among researchers and practitioners working in China on climate action, rural revitalization, women’s development and social inclusion is relatively limited, interest in interdisciplinary exchange is growing. There is a nascent interdisciplinary ‘community of practice’ on gender and inclusion in climate action in China, with international ties, which could build a strong evidence base to support cross-sectoral policy dialogue, public awareness and the development of inclusive climate programmes.
- To advance gender equality and social inclusion in climate action in China, this paper proposes four levers for change:
 - 1) Collecting sex-, age- and diversity-disaggregated data and conducting interdisciplinary qualitative research can help to identify the root causes of different social groups’ vulnerability to direct and systemic climate change impacts. This can help to target and ‘make the case’ for gender-transformative climate change adaptation measures, as well as raise awareness among the public and policymakers.
 - 2) Combining climate change, rural revitalization and women’s development research agendas can help to identify cross-cutting solutions to environmental and social issues. For example, improving women’s access to and control over land, education and credit, and addressing unequal gender norms, can support the climate resilience of women and therefore benefit their communities.
 - 3) Interdisciplinary and international collaboration on gender-transformative climate change programmes can harness synergies between gender equality and climate action. Programmes to ensure that all people – including low-income, rural and rural-to-urban migrant women – have opportunities to access ‘green jobs’ in a just transition away from fossil fuels to sustainable energy are an opportunity for collaboration and can inform policy measures.
 - 4) Supporting inclusive approaches to climate action offers funders an opportunity for impact and innovation in China. Funders can foster interdisciplinary collaboration by supporting gender and inclusion capacity-building, creating coalitions between organizations, and requiring gender mainstreaming in programme proposals, monitoring and evaluation.

01

Introduction

Climate change solutions that promote gender and social equality deliver more effective and equitable outcomes – and can accelerate progress on China’s climate and development goals.

In the summer of 2022, parts of China experienced the longest and most intense heatwave on record, followed by one of the worst droughts in six decades. These incidents affected hundreds of millions of people and impacted food production, manufacturing and power supply in multiple cities.¹ In Guangdong province unprecedented rainfall levels caused flooding that threatened important economic centres and forced hundreds of thousands to evacuate.² Climate change is expected to make such extreme weather events more frequent and intense in China, as the country is acutely vulnerable to its adverse impacts.³

Tens of millions of people in China live in low-lying coastal urban centres that are likely to be affected by sea-level rise, as well as heatwaves and changing weather patterns that may also increase the frequency of air pollution events and the spread of infectious diseases.⁴ Other urban centres are at high risk of waterlogging and flooding.⁵ China’s average temperature has been rising faster than the rest of the world, and over 80 per cent of China’s glaciers are shrinking.⁶ Temperature increases are expected to exacerbate water shortages in northwest

¹ Xia, Z. (2022), ‘Adapting China to extreme weather’, *China Dialogue*, 19 October 2022, <https://chinadialogue.net/en/climate/adapting-china-to-extreme-weather>; Wong, D. and Huang, H. (2022), ‘China’s record heatwave, worst drought in decades’, *South China Morning Post*, 31 August 2022, <https://multimedia.scmp.com/infographics/news/china/article/3190803/china-drought/index.html>; Lo, J. (2022), ‘China hit by longest and strongest heatwave on record’, *Climate Home News*, 23 August 2022, <https://www.climatechangenews.com/2022/08/23/china-hit-by-longest-and-strongest-heatwave-on-record>.

² Al Jazeera (2022), ‘Hundreds of thousands evacuated in China amid heavy rains, floods’, 21 June 2022, <https://www.aljazeera.com/news/2022/6/21/hundreds-of-thousands-flee-homes-in-china-amid-heavy-rains>.

³ Chao, Q. et al. (2021), *Climate Change Risk Assessment and Governance 2021: Insights from UK–China Cooperation*, Beijing: Tsinghua University, <http://www.3e.tsinghua.edu.cn/storage/app/media/uploaded-files/download/202112/WS2-3%20report%20EN.pdf>.

⁴ Ibid.

⁵ Ding, H. et al. (2021), ‘Accelerating climate-resilient infrastructure investment in China: Executive Summary’, World Resources Institute, Beijing: World Resources Institute, <https://wri.org.cn/sites/default/files/2021-12/accelerating-climate-resilient-infrastructure-investment-in-china-summary-report-EN.pdf>.

⁶ Sandalow, D. et al. (2022), *Guide to Chinese Climate Policy 2022*, Oxford: Oxford Institute for Energy Studies, <https://chineseclimatepolicy.oxfordenergy.org/wp-content/uploads/2022/11/Guide-to-Chinese-Climate-Policy-2022.pdf>.

China, and increase the amount of drought-affected farmland.⁷ These direct climate risks will affect socio-economic development in China by disrupting agriculture, forestry and water resources, as well as economic activity in urban centres.⁸ Trillions of dollars are estimated to be at risk from climate change impacts in China's coastal provinces.⁹

These direct climate change risks can also set into motion cascading effects that impact China's society and the economy. For example, in 2019, the working hours lost in China due to heat-related events caused by climate change alone were equivalent to 40 per cent of the working hours lost during the COVID-19 pandemic.¹⁰ This figure is expected to increase in future – with growing economic implications.¹¹ Systemic risks caused by the effects of climate change may also affect food security, migration, economic stability, health and well-being.¹² Going forward, building resilience to direct and systemic climate risks – especially among disadvantaged social groups – will be a key challenge for China, although this will take a range of forms, given China's significant social, ecological and climatic diversity.¹³

China has national climate change mitigation targets, but to meet them it will need to urgently accelerate its decarbonization efforts.

China has national climate change mitigation targets, but to meet them – like all major greenhouse gas emitters – it will need to urgently accelerate its decarbonization efforts.¹⁴ China's key goals are to reach peak CO₂ emissions by 2030 and achieve carbon neutrality by 2060.¹⁵ China has also pledged to reduce carbon intensity (CO₂ emissions per unit of GDP) by more than 65 per cent from 2005 levels by 2030.¹⁶ Guidance on these targets from the Communist Party of China (CPC) Central Committee and the State Council has informed

⁷ Ding et al. (2021), 'Accelerating climate-resilient infrastructure investment in China'; Chao et al. (2021), *Climate Change Risk Assessment and Governance 2021*.

⁸ Chao et al. (2021), *Climate Change Risk Assessment and Governance 2021*.

⁹ Sandalow et al. (2022), *Guide to Chinese Climate Policy 2022*.

¹⁰ Teng, F., Wang, T. and Guo, J. (2021), *Carbon Neutrality Targets and Climate Risk: An Assessment of Economic Damage from Climate Change*, Beijing: Institute of Energy, Environment and Economy, Tsinghua University, <http://www.3e.tsinghua.edu.cn/storage/app/media/uploaded-files/download/202112/WS1%20report%20EN.pdf>.

¹¹ Ibid.

¹² Quiggin, D., De Meyer, K., Hubble-Rose, L. and Froggatt, A. (2021), *Climate change risk assessment 2021*, Research Paper, London: Royal Institute of International Affairs, <https://www.chathamhouse.org/2021/09/climate-change-risk-assessment-2021>.

¹³ Qi, Y. et al. (2021), *Enhancing Climate Risk Governance in China*, Beijing: Tsinghua University, <http://www.3e.tsinghua.edu.cn/storage/app/media/uploaded-files/download/202112/WS4%20report%20EN.pdf>.

¹⁴ Climate Action Tracker (2022), 'China', <https://climateactiontracker.org/countries/china> (accessed 2 Feb. 2023).

¹⁵ These goals were announced by Chinese President Xi Jinping in a speech to the UN General Assembly in 2020, although the carbon-peaking goal was a strengthened version of a goal first announced after a meeting with US President Obama in 2014. These goals, particularly the 2060 carbon-neutrality goal, have promoted green development to an overarching policy priority in China. Teng, Wang and Guo (2021), *Carbon Neutrality Targets and Climate Risk: An Assessment of Economic Damage from Climate Change*; Sandalow et al. (2022), *Guide to Chinese Climate Policy 2022*.

¹⁶ Sandalow et al. (2022), *Guide to Chinese Climate Policy 2022*. This goal, announced by President Xi in 2020, is a strengthened version of a goal announced by then Premier Wen Jiabao before the Copenhagen climate change conference in 2009 (which aimed to reduce carbon intensity by between 40 per cent and 45 per cent from 2005 levels by 2020). This was China's first ever stated goal for reducing carbon emissions – although China was widely reported to have become the world's highest emitting country in 2006, as an Annex II country in the United Nations Framework Convention on Climate Change (UNFCCC), it was not required to set absolute emissions reduction targets.

government authorities at all levels to develop implementation plans for sectors and industries.¹⁷ This is commonly referred to as the ‘1+N’ policy system – in which the ‘1’ refers to an overarching long-term approach to achieving the 2060 carbon neutrality goal, and the ‘N’ encompasses a range of specific plans to meet the 2030 carbon peaking goal, including implementation plans for construction, transport, energy and industrial sectors.¹⁸ National ‘1+N’ policies inform the development of climate policies and measures at the provincial government level.¹⁹ China’s national low-carbon development strategy is guided by the concept of ‘ecological civilization’ – a Chinese vision of sustainable development, aiming to balance continued economic development with environmental protection – which was written into the country’s constitution in 2018.²⁰

China’s climate change policies currently integrate gender and other social factors to a limited extent.²¹ This is partly due to China’s predominantly scientific and technocratic approach to national climate change policymaking – which is relatively siloed from socio-economic policymaking – as well as the underrepresentation of women in climate change policymaking.²² A lack of awareness of the relevance of gender and inclusion to climate action among policymakers is another contributing factor.²³ However, as the next section explores, by addressing inequalities and promoting wider public participation in climate action, gender-transformative²⁴ and inclusive approaches can accelerate progress on China’s national climate goals while promoting equitable socio-economic development.

¹⁷ State Council of the People’s Republic of China (2021), *Working Guidance for Carbon Dioxide Peaking and Carbon Neutrality in Full and Faithful Implementation of the New Development Philosophy*, Beijing: State Council of the PRC; National Development and Reform Commission of the PRC (2021), ‘Action Plan for Carbon Dioxide Peaking Before 2030’, 27 October 2021, https://en.ndrc.gov.cn/policies/202110/t20211027_1301020.html; Sandalow et al. (2022), *Guide to Chinese Climate Policy 2022*. For more information on the specific goals included in the ‘1+N’ policy system, see: De Boer, D. and Fan, D. (2022), ‘How is Progress in China’s 1+N Policy Framework?’, China Council for International Cooperation on Environment and Development, 11 March 2022, <https://cciced.eco/climate-governance/how-is-progress-in-chinas-1n-policy-framework>.

¹⁸ Sandalow et al. (2022), *Guide to Chinese Climate Policy 2022*; De Boer and Fan (2022), ‘How is Progress in China’s 1+N Policy Framework?’.

¹⁹ De Boer and Fan (2022), ‘How is Progress in China’s 1+N Policy Framework?’.

²⁰ Wei, F. et al. (2020), ‘Ecological civilization: China’s effort to build a shared future for all life on Earth’, *National Science Review*, 8(7), nwaa279, <https://doi.org/10.1093/nsr/nwaa279>; Greenfield, P. and Ni, V. (2021), ‘“Ecological civilisation”: an empty slogan or will China act on the environment?’, *Guardian*, 16 October 2021, <https://www.theguardian.com/environment/2021/oct/16/ecological-civilisation-empty-slogan-cop15-or-will-china-act-on-environment-aoe>.

²¹ Zhou, Y. and Sun, X. (2020), ‘Toward gender sensitivity: women and climate change policies in China’, *International Feminist Journal of Politics*, 22(1), pp. 127–149, <https://doi.org/10.1080/14616742.2019.1687001>.

²² Ibid.

²³ UN Women research found that officials in Jiangsu, Qinghai and Shaanxi provinces did not perceive women to be more vulnerable than men to climate change impacts – despite women being more vulnerable on average in these provinces due to gendered disparities in access to education, capital, land and employment options, as well as power and autonomy in household and public decision-making. UN Women (2017), *Gender Dimensions of Vulnerability to Climate Change in China*, Beijing: UN Women China, <https://asiapacific.unwomen.org/sites/default/files/Field%20Office%20ESEAAsia/Docs/Publications/2017/01/Gender-Dimensions-English-r2s.pdf>.

²⁴ ‘Gender-transformative’ refers to policies and measures that consider and address the causes of gender inequalities, in order to change negative gender norms, roles and power relations, and promote gender equality and women’s development. See Table 1 for more information.

Gender and inclusion in climate action

Groups that are disadvantaged by social, economic and political inequalities are more vulnerable to the adverse impacts of climate change.²⁵ Women and girls are disproportionately affected by climate change impacts, especially in developing countries due to gender inequalities²⁶ – such as the underrepresentation of women in decision-making on environmental issues, making it more likely that climate change solutions do not meet their needs.²⁷ Due to social inequalities, low-income groups, rural-to-urban migrants, people with disabilities, elderly people and children are also more likely to be affected by direct and systemic climate risks in varying contexts. However, an individual may be a member of more than one of these groups and consequently experience overlapping forms of marginalization – a concept known as ‘intersectionality’.²⁸ This can shape people’s experiences of climate change impacts and solutions.²⁹ For instance, women with disabilities are more likely to be unemployed, or to work in informal, precarious and poorly paid employment, than able-bodied women, which affects their capacity to cope with economic shocks related to climate change impacts.³⁰

China’s population of 1.4 billion is culturally and socially diverse, given the range of ethnic groups spread among its over 30 provinces, autonomous and special administrative regions, and centrally administered municipalities. Combined with the country’s ecological diversity and disparities in development between urban and rural areas, making generalizations across China’s population is challenging – pointing to the need for increased research on the vulnerabilities of different social groups to climate impacts in diverse contexts.³¹ There is evidence that due to social inequalities, certain social groups are likely to be more vulnerable to direct climate impacts such as extreme weather events in China – in both urban and rural areas. Urban waterlogging affects safe access to public transport, which is more commonly used by women and low-income communities. It also affects access to public health services, which can disproportionately affect pregnant women,

²⁵ Intergovernmental Panel on Climate Change (2022), *Climate Change 2022: Impacts, Adaptation and Vulnerability*, Geneva: IPCC, https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_FinalDraft_FullReport.pdf.

²⁶ This paper uses the terminology ‘gender equality’ rather than ‘gender equity’, in keeping with United Nations usage. The UN Women (2022) definition is: ‘Gender equality refers to the equal rights, responsibilities and opportunities of women, men, girls and boys. Equality does not imply sameness but that the rights of women and men will not depend on the gender they were born with. Gender equality implies that the interests, needs and priorities of all genders are taken into consideration, recognizing the diversity of different groups. Gender equality is not a women’s issue, but should concern and fully engage all genders while recognizing that neither all men nor all women are a homogeneous group.’ Importantly, this refers not only to *formal* equality (equality of treatment), but also *substantive* equality (equality of real outcomes). UN Women (2022), *Handbook on Gender Mainstreaming for Gender Equality Results*, New York: UN Women, <https://www.unwomen.org/sites/default/files/2022-02/Handbook-on-gender-mainstreaming-for-gender-equality-results-en.pdf>.

²⁷ Intergovernmental Panel on Climate Change (2022), *Climate Change 2022: Impacts, Adaptation and Vulnerability*.

²⁸ Crenshaw, K. (1989), ‘Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics’, *University of Chicago Legal Forum*, 1, pp. 139–167; Kaijser, A. and Kronsell, A. (2013), ‘Climate Change Through the Lens of Intersectionality’, *Environmental Politics*, 23(3), pp. 417–433.

²⁹ Resurrección, B. P. et al. (2019), *Gender-Transformative Climate Change Adaptation: Advancing Social Equity*, Rotterdam and Washington, DC: Background paper to the 2019 report of the Global Commission on Adaptation, <https://www.sei.org/publications/gender-transformative-climate-change-adaptation-advancing-social-equity>.

³⁰ UN Women (2021), *This Virus has Changed Us All: Experiences of Women with Disabilities in the Asia-Pacific Region During COVID-19*, New York: UN Women, https://www.unwomen.org/sites/default/files/2022-01/Brief-Experiences-of-women-with-disabilities-in-the-Asia-Pacific-region-during-COVID-19-en_0.pdf.

³¹ Qi et al. (2021), *Enhancing Climate Risk Governance in China*.

children and elderly people.³² In urban heatwaves in China, elderly people and women, especially pregnant women, are significantly more vulnerable to adverse health impacts.³³ Internationally, people with disabilities are two to four times more likely to die in a disaster,³⁴ due to exclusive disaster risk reduction processes and inaccessible early warning systems,³⁵ and while publicly available data in China are limited, similar patterns are likely to apply.³⁶ In the aftermath of extreme weather events and disasters, women and girls are more exposed to the risk of gender-based violence, and women and girls with disabilities are at particular risk.³⁷

Gender and social inequalities affect the ability of people to access land, finance, technology and services key for climate resilience. In China, women are less likely to have land and property in their names than men, in both rural and urban contexts, despite the social norm that female partners and their families contribute to such purchases, which affects their financial independence and credit.³⁸ In a study of Jiangsu, Qinghai and Shaanxi provinces, researchers found that women were disadvantaged in terms of income; control over land; and access to credit, off-farm employment, climate change adaptation training, and early warning systems.³⁹ These disparities have significant implications for China's rural climate change adaptation, given the overrepresentation of women and elderly people in China's agricultural sector, particularly in small-scale farming.⁴⁰ Moreover, poor households in China's rural areas are more exposed to the adverse impacts of climate change, but have a lower capacity to adapt – making climate change impacts (especially extreme

³² Sogani, R. (2016), *Gender approaches in climate compatible development: Lessons from India*, Cape Town: Climate and Development Knowledge Network, Practical Action Consulting and Institute of Development Studies, https://cdkn.org/sites/default/files/files/CDKN_India-Gender_report_WEB.pdf.

³³ Yang, J. et al. (2019), 'Heatwave and mortality in 31 major Chinese cities: Definition, vulnerability and implications', *Science of the Total Environment*, 649, pp. 695–702, <https://doi.org/10.1016/j.scitotenv.2018.08.332>; Li, C., Wang, Q. and Ma, R. (2017), '深圳市孕产妇妊娠期极端温度变异暴露对早产的影响'

[Effect of Extreme Temperature Variation During Pregnancy on Preterm Delivery in Shenzhen], *预防医学与卫生学* [Preventive Medicine and Hygiene], Conference on Environment and Public Health, <https://wap.cnki.net/touch/web/Conference/Article/ZGDV201711002095.html>.

³⁴ In this paper, a 'disaster' refers to: 'A serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts.' United Nations Office for Disaster Risk Reduction (undated), 'Terminology: Disaster', <https://www.undrr.org/terminology/disaster>.

³⁵ An 'early warning system' is an 'integrated system of hazard monitoring, forecasting and prediction, disaster risk assessment, communication and preparedness activities systems and processes that enables individuals, communities, governments, businesses and others to take timely action to reduce disaster risks in advance of hazardous events.' United Nations Office for Disaster Risk Reduction (undated), 'Terminology: Early warning system', <https://www.undrr.org/terminology/early-warning-system>.

³⁶ United Nations Economic and Social Commission for Asia and the Pacific (UN ESCAP) (2022), *Background paper for Regional Consultation on Facilitating Innovative Action on Disability-inclusive and Gender-responsive DRR: Review of disability-inclusive and gender-responsive disaster risk Reduction in Asia and the Pacific*, Bangkok: UN ESCAP, https://www.unescap.org/sites/default/d8files/event-documents/Background%20paper_ESCAP%20Regional%20Consultation%20on%20DiDRR%2020220428%20final.pdf.

³⁷ UN Women (2021), *'This Virus has Changed Us All'*; Roth, M. and Harrell, E. (2021), 'Safeguarding Women and Girls with Disabilities During Natural Disasters and External Shocks', *Chemonics*, 3 December 2021, <https://chemonics.com/blog/safeguarding-women-and-girls-with-disabilities-during-natural-disasters-and-external-shocks>.

³⁸ Legal protections on women's property rights in China have weakened. In 2011, China's Supreme Court ruled that upon divorce, family homes automatically belong to the registered buyer – historically the husband, due to cultural expectations that a man purchase a house before marriage. In doing so, the court overruled two previous rulings strengthening women's property rights. Fincher, L. H. (2014), *Leftover Women: The resurgence of gender inequality in China*, London: Zed Books; Zang, E. (2020), 'When Family Property Becomes Individual Property: Intrahousehold Property Ownership and Women's Well-Being in China', *Journal of Marriage and Family*, 82(4), pp. 1213–1233, <https://doi.org/10.1111/jomf.12658>.

³⁹ UN Women (2017), *Gender Dimensions of Vulnerability to Climate Change in China*.

⁴⁰ Zhang, L. (2019), 'A Feminist Critique of The Term 'Left Behind' Women', *China Dialogue*, 7 August 2019, <https://chinadialogue.net/en/cities/11414-a-feminist-critique-of-the-term-left-behind-women-2>; Zhou and Sun (2020), 'Toward gender sensitivity'.

weather events) an increasing cause of rural poverty.⁴¹ In urban areas, informal sector workers and migrant workers without a ‘hukou’ (household registration permit) – disproportionately comprised of women – tend to have lower income.⁴² They also face disparities in access to social protection.⁴³ This affects their resilience to climate impacts and related economic shocks.

Climate change impacts can worsen pre-existing gender inequalities, in turn exacerbating the vulnerability of women and girls.

Facing systemic barriers, women are underrepresented at all levels of political decision-making in China, affecting their ability to contribute to solutions. Women comprised only 24.9 per cent of delegates to the National People’s Congress, 3.2 per cent of ministers, and 24.2 per cent of villagers’s committees in 2020 (a 2.8 per cent increase since 2010).⁴⁴ China’s highest-level group of policymakers on climate change – the National Leading Group on Climate Change – does not include any women, or members with gender expertise.⁴⁵ Both internationally and in China, the underrepresentation of women in climate change decision-making has contributed to the limited integration of gender perspectives into climate policies.⁴⁶

⁴¹ World Bank Group (2022), *China: Country Climate and Development Report*; Zhang, Q., Zhao, X. and Tang, H. (2019), ‘Vulnerability of communities to climate change: application of the livelihood vulnerability index to an environmentally sensitive region of China’, *Climate and Development*, 11(6), pp. 525–542, <https://doi.org/10.1080/17565529.2018.1442808>; Liu, C. (2019), ‘我国气候贫困问题的现状、成因与对策’ [The Status, Causes, and Solutions of Climate Poverty in China], *Environmental Economics Research* (4), pp. 148–162, <https://doi.org/10.19511/j.cnki.jee.2019.04.010>.

⁴² Wang, L. and Klugman, J. (2020), ‘How women have fared in the labour market with China’s rise as a global economic power’, *Asia & the Pacific Policy Studies*, 7(1), pp. 43–64, <https://www.doi.org/10.1002/app5.293>; Gustafsson, B., Yang, X. and Sicular, T. (2020), ‘Catching Up with the West: Chinese Pathways to the Global Middle Class’, *The China Journal*, (84), pp. 102–127, <https://doi.org/10.1086/708752>. All Chinese citizens either have a rural or urban ‘hukou’ (household registration permit), which provides different entitlements. A person’s hukou is inherited at birth but can be transferred in some circumstances, such as through education and employment. In major cities such as Shanghai, acquiring an urban hukou is highly competitive, affecting labour mobility as well as migrants’ access to housing and public services. Hung, J. (2022), ‘Hukou System Influencing the Structural, Institutional Inequalities in China: The Multifaceted Disadvantages Rural Hukou Holders Face’, *Social Sciences*, 11(5), <https://doi.org/10.3390/socsci11050194>.

⁴³ Ibid. The International Labour Organization defines ‘social protection’ as ‘the set of policies and programmes designed to reduce and prevent poverty and vulnerability throughout the life cycle. Social protection includes benefits for children and families, maternity, unemployment, employment injury, sickness, old age, disability, survivors, as well as health protection. Social protection systems address all these policy areas by a mix of contributory schemes (social insurance) and non-contributory tax-financed benefits, including social assistance’. International Labour Organisation (2017), *World Social Protection Report 2017–19 Universal social protection to achieve the Sustainable Development Goals*, Geneva: International Labour Organisation, https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_604882.pdf.

⁴⁴ World Economic Forum (2021), *Global Gender Gap Report: Insight Report*, Cologny, Switzerland: World Economic Forum, https://www3.weforum.org/docs/WEF_GGGR_2021.pdf; National Bureau of Statistics (2021), ‘Final Statistical Monitoring Report on the Implementation of China National Program for Women’s Development (2011–2020)’, http://www.stats.gov.cn/english/PressRelease/202112/t20211231_1825801.html.

⁴⁵ Zhou and Sun (2020), ‘Toward gender sensitivity’.

⁴⁶ Zhou, Y. (2020), ‘妇女与环境:新规范与新挑战——对近 5 年中国落实“妇女与环境”战略目标的评估’ [Women And The Environment: New Norms And New Challenges-An Evaluation Of China’s Implementation Of The “Women And The Environment” Strategic Goal In The Past Five Years], *Journal of Shandong Women’s University*, 06, pp. 29–40, <https://www.cnki.com.cn/Article/CJFDTotal-ZHLZ202006004.htm>; Resurrección, B. (2021), ‘Gender, Climate Change and Disasters: Vulnerabilities, Responses and Imagining a more Caring and Better World’, Commission on the Status of Women 66 Background Paper, https://www.unwomen.org/sites/default/files/Headquarters/Attachments/Sections/CSW/66/EGM/Background%20Papers/Bernadette%20RESURRECCION_CSW66%20Background%20Paper.pdf.

Climate change impacts can worsen pre-existing gender inequalities, in turn exacerbating the vulnerability of women and girls.⁴⁷ Due to the gender division of labour,⁴⁸ women and girls around the world – including in China – are responsible for most unpaid domestic work, such as collecting fuel and water, as well as care for family members.⁴⁹ This burden is worsened by resource scarcity and extreme events such as drought, increasing women’s time poverty, exhaustion and exposure to risk, including the risk of experiencing gender-based violence.⁵⁰ Climate change is also expected to cause food price shocks and worsen food insecurity, disproportionately affecting poor households, and poor women and girls in particular.⁵¹ This is because, due to the gender division of labour, women are typically responsible for managing household food security, and due to gender inequalities in the household, women and girls are more likely to reduce their food consumption in times of hardship than men and boys.⁵²

Gender-transformative and inclusive approaches to climate action

Policies that do not take gender and other social factors into consideration are often known as ‘gender blind’. Without explicit efforts to address gender and social inequalities, climate change mitigation and adaptation actions risk entrenching them further.⁵³ In particular, ‘gender blind’ climate change adaptation measures risk exacerbating inequalities through ‘maladaptation’ – underlining the importance of inclusive, interdisciplinary approaches.⁵⁴ On the other hand, policies and programmes that address the causes of gender-based inequalities can change harmful gender norms, roles and power relations to support gender and social equality.⁵⁵ These are known as ‘gender-transformative’ policies and programmes (see Table 1). Creating gender-transformative solutions requires analysis of the root causes of vulnerability and unequal power relations in a particular context, and conducting ‘gender mainstreaming’, or integrating measures to address these inequalities at every stage throughout the policy or programme process – including planning, research, design, budgeting, implementation, and monitoring and evaluation.⁵⁶ These can be applied to climate change mitigation and adaptation interventions alike.

⁴⁷ Resurrección (2021), ‘Gender, Climate Change and Disasters’.

⁴⁸ The gender division of labour refers to ‘the way each society divides work among men and women, boys and girls, according to socially established gender roles or what is considered suitable and valuable for each sex’. UN Women (undated), ‘Gender Equality Glossary’, <https://trainingcentre.unwomen.org/mod/glossary/view.php?id=36&mode=letter&hook=G&sortkey=&sortorder=&fullsearch=0&page=-1>.

⁴⁹ Women assume a disproportionate burden of household work worldwide. In China, women spent 2.5 times longer than men on unpaid household work on average. Organisation for Economic Co-Operation and Development (OECD) (undated), ‘Employment: Time spent in paid and unpaid work, by sex’, <https://stats.oecd.org/index.aspx?queryid=54757> (accessed 18 May 2022).

⁵⁰ Resurrección (2021), ‘Gender, Climate Change and Disasters’.

⁵¹ World Bank Group (2022), *China: Country Climate and Development Report*; Akter, S. (2021), *Gender Inequality and Food Insecurity in the Asian Food System During the COVID-19 Pandemic*, Manila: Asian Development Bank, <https://www.adb.org/sites/default/files/institutional-document/731791/adou2021bp-gender-food-insecurity-covid-19.pdf>.

⁵² Within households, women and girls are more likely to reduce their food consumption, eat last, and eat less nutritious foods in times of food insecurity – due to the unequal distribution of resources within a household based on gender. Akter (2021), *Gender Inequality and Food Insecurity in the Asian Food System During the COVID-19 Pandemic*.

⁵³ Intergovernmental Panel on Climate Change (2022), *Climate Change 2022: Impacts, Adaptation and Vulnerability*.

⁵⁴ Ibid.

⁵⁵ UN Women (2022), *Handbook on Gender Mainstreaming for Gender Equality Results*; Resurrección et al. (2019), *Gender-Transformative Climate Change Adaptation*.

⁵⁶ Ibid. For detailed guidance on gender mainstreaming, see UN Women (2022), *Handbook on Gender Mainstreaming for Gender Equality Results*.

Table 1. Terminology for levels of gender equality in laws, policies and programmes

Term	Definition	Overall outcome
Gender-transformative	Considers and addresses the causes of gender inequalities, to change negative gender norms, roles and power relations in order to promote gender equality and women's development.	Promotes structural change for gender equality
Gender-responsive	Considers gender gaps and biases due to social inequalities, and acts to overcome challenges and barriers to promote gender equality.	Promotes individual or community-level gender equality
Gender-sensitive	Acknowledges and takes into consideration gender inequalities.	Aims to not worsen gender inequalities, but does not promote gender equality
Gender-blind	Does not acknowledge the varying social roles and diverse needs of people of different genders, and gender inequalities in society.	Maintains status quo power relations
Gender-negative	Uses and does not challenge gender roles and norms that reinforce gender inequalities.	Exacerbates gender inequality

Source: UN Women Training Centre (undated), 'Gender Equality Glossary', <https://trainingcentre.unwomen.org/mod/glossary/view.php?id=36&mode=letter&hook=G&sortkey&sortorder&fullsearch=0&page=-1>; International Union for the Conservation of Nature (IUCN) (2018), *Gender mainstreaming and women's empowerment policy: mainstreaming gender responsiveness within the IUCN programme of work*, Gland, Switzerland: IUCN, https://www.iucn.org/sites/dev/files/annex_9_to_c_95_8_iucn_gender_equality_and_womens_empowerment_policy.pdf; UN Women (2022), *Handbook on Gender Mainstreaming for Gender Equality Results*, New York: UN Women, <https://www.unwomen.org/sites/default/files/2022-02/Handbook-on-gender-mainstreaming-for-gender-equality-results-en.pdf>.

By addressing both structural inequalities and environmental challenges, gender-transformative climate change solutions can produce more effective and equitable outcomes. According to the Intergovernmental Panel on Climate Change (IPCC), climate change adaptation measures that prioritize 'capacity-building, and [the] meaningful participation of the most vulnerable and marginalised groups, and their access to key resources to adapt' – including community-based adaptation – produce the most effective and sustainable outcomes.⁵⁷ Climate change adaptation interventions that address the context-specific root causes of vulnerability not only benefit historically marginalized groups, but society as a whole, because by improving the adaptive capacity of vulnerable groups, they also enhance the community's adaptive capacity.⁵⁸ For example, a 2020 study found that increasing women's representation in decision-making and improving women's access to healthcare and education could help societies adapt more effectively to climate change.⁵⁹ Box 1 explores a research experiment in Bangladesh that evaluated the effectiveness of climate change adaptation programmes with differing levels of gender integration.

⁵⁷ Intergovernmental Panel on Climate Change (2022), *Climate Change 2022: Impacts, Adaptation and Vulnerability*, p. 30.

⁵⁸ Tandon, A. (2020), 'Tackling gender inequality is 'crucial' for climate adaptation', *Carbon Brief*. 15 December 2020, <https://www.carbonbrief.org/tackling-gender-inequality-is-crucial-for-climate-adaptation/#:~:text=Efforts%20to%20tackle%20gender%20inequality,change%20than%20their%20male%20counterparts>.

⁵⁹ Ibid.; Andrijevic, M. et al. (2022), 'Overcoming gender inequality for climate resilient development', *Nature Communications*, 11, 6261, <https://doi.org/10.1038/s41467-020-19856-w>.

Box 1. Research experiment in Bangladesh on the impact and cost-effectiveness of gender integration in adaptation programmes

A UN Women research experiment measured the impact of three comparable community-level climate change adaptation programmes in Bangladesh, each with different levels of gender awareness: one 'gender neutral', one 'gender sensitive' and one 'gender transformative'.⁶⁰ The projects were monitored and evaluated based on three overarching outcomes:

- Building climate change resilience through increased awareness and adoption of climate-resilient practices by beneficiaries;
- Strengthening capacity of local civil society and public institutions to support community-level adaptation;
- Increasing women's opportunities to access economic resources and participate in leadership and decision-making.⁶¹

The study found that overall, the gender-transformative programme was most effective. Participants in this programme were 37 per cent more aware of, and able to adopt, climate-resilient practices than the control group. This was because activities to build communities' adaptive capacity, primarily focused on economic empowerment, took steps to overcome additional barriers faced by women due to gender inequalities. These included providing material support such as seed distribution and cash transfers to women, creating producer groups and providing training on climate change resilient economic activities for women. The researchers concluded that 'gender is central to determining the effectiveness of any climate change adaptation intervention'.⁶² They also found that the greater the integration of gender in programme design, the more cost-effective the programme.

To implement a gender-transformative approach in other climate change adaptation programmes, the researchers recommended that programme managers build their capacity on gender mainstreaming and use a self-assessment tool for gender integration in programme design, implementation and monitoring and evaluation. They also recommended that donors use a gender assessment tool to evaluate proposals.⁶³

Supporting the participation and leadership of women and other underrepresented groups in climate change decision-making is an important element of inclusive climate action, which is critical for effective climate change mitigation and adaptation.⁶⁴ Due to social gender roles, women generally assess risk differently

⁶⁰ UN Women (2017), *Understanding Cost-Effectiveness of Gender-Aware Climate Change Adaptation Intervention in Bangladesh*.

⁶¹ *Ibid.*, p. 27.

⁶² *Ibid.*, p. 47.

⁶³ The report provides samples and recommendations for the self-assessment tool for gender integration in programme design (p. 53) and a gender assessment tool for donors (p. 54).

⁶⁴ Intergovernmental Panel on Climate Change (2022), *Climate Change 2022: Impacts, Adaptation and Vulnerability*.

to men,⁶⁵ and their participation in community resource management decision-making is associated with a more equal distribution of benefits.⁶⁶ It has also been shown to improve the effectiveness of climate initiatives from household renewable energy adoption⁶⁷ to land-based climate change mitigation and adaptation.⁶⁸ Women's participation in extractive industry corporate boards is associated with improved corporate climate governance and innovation,⁶⁹ and in national parliaments, results in lower national carbon dioxide emissions.⁷⁰

An intersectional approach to promoting women's participation in decision-making is important, as the meaningful participation of youth, ethnic minorities, local communities and other historically marginalized groups in climate change decision-making also promotes more effective and sustainable outcomes.⁷¹ Indigenous and local communities can contribute unique experience and knowledge to climate change action, and women's knowledge in particular can sometimes be overlooked.⁷² For example, in Yunnan, the Hani people's traditional practices of saving and exchanging seeds enables their access to a variety of species that are able to cope with a range of weather conditions. This supports effective climate change adaptation.⁷³

Building on the holistic vision of the Sustainable Development Goals (SDGs), the international community has increasingly recognized the benefits of integrating gender and social factors into climate change policymaking and implementation. Under its Gender Action Plan, the UN Framework Convention on Climate Change (UNFCCC) has promoted women's participation and leadership in international climate negotiations and supported countries to appoint National Gender and Climate Change Focal Points.⁷⁴ The UNFCCC secretariat has highlighted the benefits of institutional cooperation and coherence on social

⁶⁵ Sellers, S. (2016), *Gender and Climate Change: A Closer Look at Existing Evidence*, Global Gender and Climate Alliance, <https://wedo.org/wp-content/uploads/2016/11/GGCA-RP-FINAL.pdf>; UN Women (2016), *Leveraging co-benefits between gender equality and climate action for sustainable development*, New York: UN Women, https://trainingcentre.unwomen.org/pluginfile.php/66830/mod_folder/intro/Leveraging%20Co-Benefits%20Between%20Gender%20Equality%20and%20Climate%20Action_November.pdf.

⁶⁶ United Nations Economic and Social Council (2022), 'Achieving gender equality and the empowerment of all women and girls in the context of climate change, environmental and disaster risk reduction policies and programmes: Report of the Secretary-General', <https://digitalibrary.un.org/record/3956348?ln=en>.

⁶⁷ EmPower and UN Environment Programme (2020), *Powering Equality: Women's Entrepreneurship Transforming Asia's Energy Sector*. Bangkok: EmPower and UN Environment Programme, <https://wedocs.unep.org/handle/20.500.11822/33736>.

⁶⁸ Intergovernmental Panel on Climate Change (2018), *Global Warming Of 1.5°C*, <https://www.ipcc.ch/sr15/chapter/spm>.

⁶⁹ Bloomberg New Energy Finance and Sasakawa Peace Foundation (2020), *Gender Diversity and Climate Innovation*, London and Tokyo: Bloomberg New Energy Finance and Sasakawa Peace Foundation, https://assets.bbhub.io/professional/sites/24/BNEF-Sasakawa-Peace-Foundation-Gender-Diversity-and-Climate-Innovation_12012020_FINAL.pdf.

⁷⁰ Mavisakalyan, A. and Tarverdi, Y. (2019), 'Gender and climate change: Do female parliamentarians make difference?', *European Journal of Political Economy*, 56(C): pp. 151–164, <https://doi.org/10.1016/j.ejpoleco.2018.08.001>.

⁷¹ Intergovernmental Panel on Climate Change (2022), *Climate Change 2022: Impacts, Adaptation and Vulnerability*.

⁷² In China, ethnic diversity and biodiversity are correlated, especially in rural areas. Additionally, most of China's poorest counties are in ecologically fragile areas and 40 per cent of them have a significant ethnic minority population. Ma, H. et al. (2022), 'Integrating biodiversity conservation and local community perspectives in China through human dimensions research', *People and Nature*, 0, pp. 1–14, <https://doi.org/10.1002/pan3.10408>.

⁷³ Ibid.; Liu, L. (2021), 'Mainstreaming gender in actions on climate change', *气候变化研究进展 [Climate Change Research]*, 17(5), pp. 548–558, <http://www.climatechange.cn/EN/10.12006/j.issn.1673-1719.2020.298>; Li, C. et al. (2013), 'Local Farmers' Perceptions of Climate Change and Local Adaptive Strategies: A Case Study from the Middle Yarlung Zangbo River Valley, Tibet, China', *Environmental Management*, 52, pp. 894–906, <https://doi.org/10.1007/s00267-013-0139-0>.

⁷⁴ United Nations Climate Change (undated), 'National Gender and Climate Change Focal Points', <https://unfccc.int/topics/gender/resources/list-of-gender-focal-points-under-the-unfccc>.

equality and climate change, particularly to leverage synergies between National Adaptation Programmes of Action (NAPAs), nationally determined contributions (NDCs) and SDGs.⁷⁵ As part of the UN Development Programme (UNDP) Climate Promise initiative, a record 113 countries have integrated gender considerations into their NDCs, and 114 have integrated youth considerations, although China is yet to participate in the Climate Promise initiative.⁷⁶ General recommendation No. 37 of the Committee on the Elimination of Discrimination against Women identified that signatories of the Convention on the Elimination of all Forms of Discrimination Against Women – including China – should ensure that all measures relating to climate change and disaster risk reduction should be based on principles including equality and non-discrimination, ‘with priority being afforded to the most marginalized groups of women and girls’; participation and empowerment; and accountability and access to justice.⁷⁷ The 66th UN conference on gender equality, the Commission on the Status of Women, recognized the importance of climate action for gender equality and called on states to integrate gender-responsive and disability-inclusive perspectives into climate change laws, policies and programmes.⁷⁸

Benefits of gender-transformative and inclusive climate action in China

In China’s policy environment, there are a myriad of opportunities to harness synergies between gender and social equality and effective climate action, as is explored in Chapter 2. For example, new government investments in rural revitalization – including those driven by the ‘common prosperity’ policy agenda⁷⁹ – and women’s development can deliver on multiple objectives by supporting women’s economic empowerment, sustainable livelihoods and climate resilience. Likewise, the green transition in China’s power sector will create an estimated net increase of 3.74 million jobs by 2060.⁸⁰ This creates opportunities to share the economic and social benefits of the green transition more widely, such as by facilitating the participation of women, especially rural and low-

⁷⁵ UNFCCC (2022), ‘Dimensions and examples of the gender-differentiated impacts of climate change, the role of women as agents of change and opportunities for women: Synthesis report by the secretariat’, https://unfccc.int/sites/default/files/resource/sbi2022_07.pdf.

⁷⁶ UN Development Programme (2022), *Climate Promise Progress Report*, New York: UNDP, https://climatepromise.undp.org/sites/default/files/research_report_document/Climate%20Promise%20Global%20Progress%20Report%202022.pdf.

⁷⁷ Committee on the Elimination of Discrimination against Women (2018), ‘General Recommendation No. 37 on Gender-related dimensions of disaster risk reduction in the context of climate change’, CEDAW/C/GC/37, p. 7, <https://reliefweb.int/report/world/general-recommendation-no-37-gender-related-dimensions-disaster-risk-reduction-context>.

⁷⁸ The Commission highlighted gender and disability as key social factors to consider, but also acknowledged the intersectional nature of marginalization. UN Economic and Social Council (2022), ‘Achieving gender equality and the empowerment of all women and girls in the context of climate change, environmental and disaster risk reduction policies and programmes CSW 66 Agreed conclusions’, Advance unedited version, https://www.unwomen.org/sites/default/files/2022-03/CSW66%20Agreed%20Conclusions_Advance%20unedited%20version_25%20March%202022.pdf.

⁷⁹ China’s ‘common prosperity’ policy agenda is intended to address income inequality, disparities in rural–urban development and perceived adverse social effects of China’s rapid economic development. Koty, A. C. (2022), ‘How to Understand China’s Common Prosperity Policy’, *China Briefing*, 21 March 2022, <https://www.china-briefing.com/news/china-common-prosperity-what-does-it-mean-for-foreign-investors>.

⁸⁰ Sun et Al. (2022), ‘Economic and employment effects of China’s power transition based on input–output and scenario simulation’, *Advances in Climate Change Research*, 13, pp. 721–728, <https://doi.org/10.1016/j.accre.2022.09.001>.

income women, in newly created ‘green jobs’ – although this will require targeted measures by government and industry.⁸¹ These approaches can leverage the aforementioned environmental benefits of women’s participation in climate action and decision-making, while promoting women’s development. Such cross-cutting policy approaches support the underlying idea of ‘ecological civilization’.⁸²

New government investments in rural revitalization – including those driven by the ‘common prosperity’ policy agenda – and women’s development can deliver on multiple objectives by supporting women’s economic empowerment, sustainable livelihoods and climate resilience.

Moreover, while concepts of equality and justice are sometimes presented as obstacles to urgent action in the low-carbon energy transition,⁸³ inclusive climate change mitigation strategies can, in fact, support more effective delivery on China’s climate goals. Without public acceptance – generated through inclusive processes and fair outcomes – rapidly implemented transitions can be ineffective and cause unexpected delays.⁸⁴ Swift top-down measures for climate change mitigation often disproportionately affect lower-income and socially marginalized groups, which could disrupt social stability in affected areas, such as China’s coal-producing regions.⁸⁵ ‘Just transition’ measures – which ensure that society benefits from the shift to a low-carbon economy, while supporting those most adversely affected by the transition – can help to overcome inertia in key coal-producing provinces such as Shanxi.⁸⁶

There is limited research in Chinese contexts on the vulnerability of different social groups to climate risks and opportunities in the low-carbon energy transition.⁸⁷ However, some research institutions, domestic and international

⁸¹ World Bank Group (2022), *China: Country Climate and Development Report*, Beijing: World Bank Group, <https://openknowledge.worldbank.org/bitstream/handle/10986/38136/FullReport.pdf>; International Renewable Energy Agency (2019), *Renewable Energy: A Gender Perspective*, Abu Dhabi: International Renewable Energy Agency, https://cms.irena.org/-/media/Files/IRENA/Agency/Publication/2019/Jan/IRENA_Gender_perspective_2019_EN_Summary.pdf; CARE (2022), *Making the Green Transition Work for Women: Unlocking Gender-just Economic Opportunities in the Era of Crisis Recovery*, Geneva: CARE International, <https://reliefweb.int/report/world/making-green-transition-work-women-unlocking-gender-just-economic-opportunities-era-crisis-recovery>.

⁸² Wei et al. (2020), ‘Ecological civilization’; Greenfield and Ni (2021), “‘Ecological civilisation’”.

⁸³ Newell, P. via Medium (2018), ‘Squaring urgency and equity in the Just Transition debate’, 24 October 2018, <https://medium.com/just-transitions/newell-8d41bb570076>.

⁸⁴ Ibid.; Schröder, P. (2020), *Promoting a Just Transition to an Inclusive Circular Economy*, Research Paper, London: Royal Institute of International Affairs, <https://www.chathamhouse.org/sites/default/files/2020-04-01-inclusive-circular-economy-schroder.pdf>.

⁸⁵ Li, Y. and Shapiro, J. (2020), *China Goes Green: Coercive Environmentalism for a Troubled Planet*, Cambridge and Medford: Polity Press. p. 114; Wang, L. et al. (2018), ‘Taking Action on Air Pollution Control in the Beijing-Tianjin-Hebei (BTH) Region: Progress, Challenges and Opportunities’, *International Journal of Environmental Research and Public Health*, 15(2), p. 306, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5858375/>; Shen, W. et al. (2020), ‘Understanding the impacts of outdoor air pollution on social inequality: advancing a just transition framework’, *Local Environment*, 25(1), pp. 1–17, <https://doi.org/10.1080/13549839.2019.1687431>.

⁸⁶ Heffron, R. and McCauley, D. (2018), ‘What is the “Just Transition”?’’, *Geoforum*, 88, pp. 74–77, <https://www.sciencedirect.com/science/article/pii/S0016718517303287>; He, G. et al. (2020), ‘Enabling a Rapid and Just Transition away from Coal in China’, *One Earth*, 3(2), pp. 187–194, <https://doi.org/10.1016/j.oneear.2020.07.012>.

⁸⁷ Chao et al. (2021), *Climate Change Risk Assessment and Governance 2021*; Zhou and Sun (2020), ‘Toward gender sensitivity’; UN Women (2017), *Gender Dimensions of Vulnerability to Climate Change in China*.

NGOs and grassroots organizations have been exploring interdisciplinary approaches to climate change research and programmes in China. Together, these experts and practitioners are in a position to compile a strong data and research base to develop gender-transformative programmes. Interdisciplinary research and case studies of these approaches in diverse Chinese contexts can help to make the case to funders and policymakers for increased investment, and to build public awareness of their benefits. Such cross-cutting research and practice also offers Chinese experts and practitioners an opportunity for innovation and international leadership – as China influences international norms on climate change and development through South–South cooperation, including the Belt and Road Initiative.

Only an estimated 1.5 per cent of international climate change related overseas development assistance identified gender equality as a primary objective, and two-thirds of projects did not consider gender equality.

Inclusive and gender-transformative approaches will require additional investment. While data are limited on the integration of gender factors into climate finance in China, only an estimated 1.5 per cent of international climate change related overseas development assistance identified gender equality as a primary objective, and two-thirds of projects did not consider gender equality.⁸⁸ This provides a useful baseline – likely an overestimate, as China does not currently have policies or guidance on the integration of gender into climate finance.⁸⁹ China is rapidly scaling its domestic climate finance, and an estimated \$15 trillion in investments will be needed for China to keep its greenhouse gas emissions compatible with a 2°C global temperature rise.⁹⁰ Increasing the proportion of climate change funding earmarked as gender-transformative, or for which gender is a priority, would make a significant difference to resourcing cross-cutting projects.

This paper begins by exploring China’s climate change and social development policy environments and considering opportunities for more inclusive approaches to climate action (Chapter 2). It then discusses four levers for advancing gender and inclusion in climate change research and practice in China – improving data collection, integrating research agendas, interdisciplinary and international collaboration on programmes, and increased funding for cross-cutting initiatives (Chapter 3). Finally, it makes recommendations for researchers and practitioners working on gender equality and social inclusion, rural revitalization, and climate action in China, as well as for Chinese and international funders (Conclusion).

⁸⁸ Oxfam International (2020), *Climate Finance Shadow Report 2020*, Oxford: Oxfam Great Britain, <https://oxfamilibrary.openrepository.com/bitstream/handle/10546/621066/bp-climate-finance-shadow-report-2020-201020-en.pdf>.

⁸⁹ CCICED (2022), *Policy Measures and Implementation Pathways for the Carbon Emission Peak and Carbon Neutrality Goals*, Beijing: CCICED, <https://cciced.eco/wp-content/uploads/2021/12/SPS-1-Climate-EN.pdf>.

⁹⁰ Sandalow et al. (2022), *Guide to Chinese Climate Policy 2022*; Myllyvirta, L. (2020), ‘Influential academics reveal how China can achieve its ‘carbon neutrality’ goal’, *Carbon Brief*, 14 October 2020, <https://www.carbonbrief.org/influential-academics-reveal-how-china-can-achieve-its-carbon-neutrality-goal>.

Box 2. Research methodology

Experts in climate action, rural development and gender equality in China identified their shared opportunities and challenges – and levers for change.

This paper was informed by interviews, questionnaires and workshops with representatives from academic institutions, government and non-government think-tanks, domestic and international NGOs, and funding organizations working on climate action, poverty alleviation, sustainable development and gender equality in China. These were supported by a comprehensive review of the literature and informal consultations with experts.

A confidential questionnaire with 37 participants and 20 confidential semi-structured interviews explored existing and potential exchange and collaboration between sectors on inclusive climate action, as well as China's policy environment. The questionnaire identified participants by their organizational type and field. The questions were customized accordingly – questions for participants working on rural development, poverty alleviation, gender equality or social inclusion answered on their awareness of, interest in and collaboration with climate change-related organizations, and vice versa. Its questions covered:

- The perceived relevance of gender and inclusion and climate change to their work;
- Levels of familiarity and collaboration with organizations working in other fields;
- Interest in learning more about gender, inclusion and climate change in relation to their work;
- Assessment of the extent to which their municipal, provincial and national policy environments consider climate-vulnerable social groups in the context of climate change and sustainable development, or climate change in the context of socio-economic policies and measures.

The questionnaire and interviews were used to identify a set of shared challenges and opportunities for furthering gender and inclusion in climate action in China, and draft versions of the levers for change. These challenges, opportunities and draft levers for change were discussed in two closed-door online workshops with 40 participants in April 2022, comprised of similar institutional affiliations to interview and questionnaire respondents. Based on workshop discussion, and feedback from workshop participants, the levers for change were revised.

Research participants were from organizations based in mainland China, Hong Kong special administrative region (SAR), and internationally. Efforts were made to ensure geographical diversity within mainland China, although ongoing disruptions from the COVID-19 pandemic contributed to a bias towards engagement with experts based in urban centres. Efforts were also made to ensure the diversity of participants by gender, age and discipline of research or practice.

The paper was subject to several other sources of potential bias. As the research addressed attitudes to social equality, participants may have given answers that were likely to be viewed favourably by other participants and the researcher (social desirability bias). Differing cultural understandings of gender and inclusion may have influenced the framing of the interviews, questionnaires and workshops and interpretation of data. While all contributions were confidential, political sensitivities may have influenced participants' openness, especially as research mainly took place online due to COVID-19 travel restrictions to China. The languages used to complete the research may have excluded some participants, as interviews were completed in English, although questionnaires were completed in English and Chinese, and workshops included simultaneous interpretation between Chinese and English.

02 China's policy environment

China's climate change and socio-economic development policies and measures are relatively siloed, but opportunities exist for more cross-cutting and inclusive approaches.

Inclusive and gender-transformative approaches to climate action can support the implementation of China's national policy agendas across climate change mitigation and adaptation, economic development and rural revitalization, and women's development. Based on confidential interviews and stakeholder workshops with researchers and practitioners in these fields in China, as well as secondary research, this chapter explores opportunities for inclusive climate action across a range of policy areas in China. It also analyses challenges in China's national policy environment for fostering more inclusive, cross-cutting approaches to climate action.

Opportunities for inclusive approaches to climate action

Participating experts and practitioners from the fields of climate change mitigation and adaptation, rural development and women's development strongly agreed that the synergies between these policy areas could be harnessed through cross-cutting approaches. Participants emphasized the benefits of improved gender equality to effective delivery on China's climate change targets, as well as reducing poverty and closing rural–urban income gaps – key elements of the common prosperity policy agenda.

Such cross-cutting policy approaches would help to achieve the vision of 'ecological civilization', which seeks to restore China's natural environment while ensuring continued economic development and rising living standards. In practice, 'ecological civilization' entails developing a state-supported low-carbon economy while addressing environmental issues – including water, soil and air pollution,

greenhouse gas emissions, and biodiversity loss – resulting from decades of rapid economic development.⁹¹ Chinese leaders have also emphasized that climate change mitigation policies and measures should be implemented in a way that supports important socio-economic goals.⁹² For instance, Vice Premier Han Zheng stated in a June 2022 speech that:

We will promote carbon neutrality in a steady and orderly manner, reducing carbon emissions while ensuring energy security, industrial supply chain security, food security and normal life for the masses.⁹³

Climate change mitigation

In a confidential questionnaire, participating researchers and practitioners in climate change, gender equality and rural revitalization in China assessed the national policy environment across these policy areas as ‘somewhat supportive’ of inclusive approaches to climate action. They agreed that national policies on climate change had increasingly considered economic development and equality objectives. Many suggested that national policymakers could strengthen their consideration of, and provision for, the needs of vulnerable groups, particularly in climate change mitigation policies and measures. For example, a Chinese climate change researcher stated:

I think the national policy environment [has] considered the impact of climate risks such as high-temperature heat waves, flood disasters and drought on vulnerable groups, and has formulated countermeasures. However, it is necessary to... further formulate more specific and powerful policies, enhance the resilience of vulnerable people to climate change, reduce losses and alleviate gender and social inequality.⁹⁴

China has not yet appointed a national gender and climate change focal point (NGCCFP), and the integration of gender concerns in China’s national climate change mitigation policies and measures is very limited.⁹⁵ China’s national climate change mitigation policies, and its NDC, do not mention gender or social considerations.⁹⁶ China’s statistical indicator system for climate change – which influences outcomes on certifications, standards and financing for climate action – does not include gender indicators.⁹⁷

⁹¹ Greenfield and Ni (2021), “Ecological civilisation”; Wei et al. (2020), ‘Ecological civilization’; Buckley, L. (2021), *Engaging with China’s Ecological Civilisation: A Pathway to a Green Economy?*, London: Green Economy Coalition and International Institute for Environment and Development, <https://www.greeneconomycoalition.org/news-and-resources/engaging-with-chinas-ecological-civilisation>.

⁹² Sandalow et al. (2022), *Guide to Chinese Climate Policy 2022*.

⁹³ Ibid.; Ministry of Ecology and Environment of the People’s Republic of China (2022), ‘习近平致信祝贺2022年六五环境日国家主场活动’ [Xi Jinping sent a letter to congratulate the national home event of the 2022 June Five Environment Day], 5 June 2022, https://www.mee.gov.cn/ywdt/szyw/202206/t20220605_984362.shtml.

⁹⁴ Confidential questionnaire, ‘Social Inclusion and Climate Action in China’, completed by a Chinese climate change researcher.

⁹⁵ Parties were encouraged to appoint an NGCCFP at COP25, as part of the five-year enhanced Lima work programme on gender and its gender action plan. At the time of writing, 94 countries and institutions had appointed NGCCFPs. United Nations Climate Change (undated), ‘National Gender & Climate Change Focal Points’, <https://unfccc.int/topics/gender/resources/list-of-gender-focal-points-under-the-unfccc>; EmPower for Climate (2022), ‘People’s Republic of China’, <https://www.empowerforclimate.org/en/where-we-work/map/china-profile>; Zhou and Sun (2020), ‘Toward gender sensitivity’.

⁹⁶ Zhou and Sun (2020), ‘Toward gender sensitivity’; EmPower for Climate (2022), ‘People’s Republic of China’; State Council of the People’s Republic of China (2021), ‘国务院关于印发2030年前碳达峰行动方案的通知’ [Notice of the State Council on Printing and Distributing the Action Plan for Carbon Peaking by 2030], http://www.gov.cn/zhengce/content/2021-10/26/content_5644984.htm; National Development and Reform Commission (NDRC), People’s Republic of China (PRC) (2021), ‘Action Plan for Carbon Dioxide Peaking Before 2030’.

⁹⁷ EmPower for Climate (2022), ‘People’s Republic of China’.

Supporting public awareness can help to mobilize bottom-up contributions to emissions reduction. Consumer demand reduction – especially among China’s urban middle class – can contribute to climate change mitigation. Women’s understanding of climate change is particularly important, as due to the existing gender division of labour, women make most household purchasing decisions, and are responsible for much demand and end use of energy resources in food production, care and education.⁹⁸

Low-carbon economic development and a just transition

China is pursuing a high-innovation, low-carbon approach to economic development. The Chinese government has detailed energy efficiency and industrial upgrading goals and is investing in low-carbon technology development, including strategic industries such as new energy vehicles.⁹⁹ More broadly, China is seeking to rebalance its economy – away from its previous export-oriented, labour-intensive manufacturing approach – by increasing the share of high-value services and stimulating domestic consumption.¹⁰⁰ This transition offers a suite of new employment opportunities in ‘green jobs’.¹⁰¹

However, the World Bank estimates that 10–15 per cent of China’s workforce is employed in industries with a high-carbon intensity – including manufacturing, energy, transport and mining.¹⁰² The energy transition is projected to cause the loss of 1.6 million to 1.9 million jobs in these sectors.¹⁰³ While projections indicate that more jobs will be created than lost in China due to the energy transition,¹⁰⁴ newly created ‘green jobs’ generally require high-level human capital (education and skills).¹⁰⁵ They will be predominantly created in China’s coastal provinces, while job losses will be concentrated in China’s inland northern and western provinces, which are more reliant on coal production and heavy industries.¹⁰⁶ For instance, investment in technically feasible low-carbon measures in Chinese cities – such

⁹⁸ IPCC (2022), *Mitigation of Climate Change*, Geneva: IPCC, <https://www.ipcc.ch/report/sixth-assessment-report-working-group-3>.

⁹⁹ Ibid.; Ministry of Industry and Information Technology, National Development and Reform Commission, and Ministry of Ecology and Environment (2022), “三部委关于印发工业领域碳达峰实施方案的通知 [Notification from Three Ministries Regarding Publication of Implementation Plan for Carbon Peaking in Industry], 7 July 2022, Ministry of Industry and Information Technology of the People’s Republic of China, https://www.miit.gov.cn/zwgk/zcwj/wjfb/tz/art/2022/art_df5995ad834740f5b29fd31c98534eea.html.

¹⁰⁰ China’s ‘dual circulation’ strategy, first introduced in policy documents in 2020, involves diversifying international trade, and increasing its value, while stimulating domestic consumption. Tran, H. (2022), ‘Dual circulation in China: a progress report’, *Atlantic Council*, 24 October 2022, <https://www.atlanticcouncil.org/blogs/econographics/dual-circulation-in-china-a-progress-report>.

¹⁰¹ Liu, X., Cao, F. and Fan, S. (2022), ‘Does Human Capital Matter for China’s Green Growth?—Examination Based on Econometric Model and Machine Learning Methods’, *International Journal of Environmental Research and Public Health*, 19, 11347, <https://doi.org/10.3390/ijerph191811347>; World Bank Group (2022), *China: Country Climate and Development Report*.

¹⁰² World Bank Group (2022), *China: Country Climate and Development Report*.

¹⁰³ Ibid.

¹⁰⁴ World Bank Group (2022), *China: Country Climate and Development Report*; Della Vigna, M. et al. (2021), *Carbonomics – China Net Zero: The clean tech revolution*, New York: Goldman Sachs, <https://www.goldmansachs.com/insights/pages/gs-research/carbonomics-china-netzero/report.pdf>; The more ambitious the energy transition plans, the higher the job creation potential. Research by C40 Cities on thirteen major Chinese cities found that job creation would be an average of 17 per cent higher if China’s renewable energy plans were compliant with keeping global warming to 1.5°C. C40 Cities (2021), *Coal-free cities: the health and economic case for a clean energy revolution*, New York: C40 Cities, <https://c40.my.salesforce.com/sfc/p/#36000001Enhz/a/1Q0000001mlk/Sb6HyccJdHHRziZ32Gto5Uls.pIXCH.BxguVpIGC3v8>.

¹⁰⁵ World Bank Group (2022), *China: Country Climate and Development Report*.

¹⁰⁶ Ibid.; He et al. (2020), ‘Enabling a Rapid and Just Transition away from Coal in China’.

as retrofitting buildings and improving public transportation – could create an estimated 15.2 million jobs by 2030 and lower urban greenhouse gas emissions by 48 per cent in the same period.¹⁰⁷

Consequently, just transition measures will be important to avoid exacerbating economic inequality between China's regions – a key element of President Xi's common prosperity policy agenda.¹⁰⁸ The concept of a just transition is gaining some traction among policymakers, NGOs and research institutions in China, and the government has introduced subsidies, retraining opportunities and job placements for newly unemployed coal and steel workers.¹⁰⁹

Promoting the employment of underrepresented groups, including women, in new 'green jobs' can ensure high-quality human capital in key industries while reducing economic inequalities.

According to World Bank modelling of an energy transition scenario aligned with China's 2030 and 2060 goals, 77 per cent of jobs lost would be among lower skilled workers, and 64 per cent would be among men.¹¹⁰ However, the wider impacts on communities that depend on carbon-intensive industries should not be overlooked. Ancillary enterprises that rely on coal workers for income (such as the service industry) – which are often informal and often have a higher proportion of female employees – should be included in transition-related social protection schemes so as to not be left behind. Additionally, energy prices in China are expected to rise in the short-term because of the energy transition, which will disproportionately affect low-income households, many of which are female-headed.¹¹¹ Rural and low-income households – which are more likely to use coal – may need additional support for access to reliable, sustainable and affordable energy.¹¹²

Promoting the employment of underrepresented groups, including women, in new 'green jobs' can ensure high-quality human capital in key industries while reducing economic inequalities. China's disparities in educational quality between urban and rural areas are especially severe for children of urban migrants living in rural

¹⁰⁷ Coalition for Urban Transitions (2021), *Seizing the Urban Opportunity: How national governments can recover from COVID-19, tackle the climate crisis and secure shared prosperity through cities*, Coalition for Urban Transitions: Washington, DC, https://urbantransitions.global/wp-content/uploads/2021/03/Seizing_the_Urban_Opportunity_WEB-1.pdf.

¹⁰⁸ Wu, G. (2022), *China's Common Prosperity Program: Causes, Challenges, and Implications*, Asia Society Policy Institute, New York and Washington, DC: Asia Society Policy Institute, https://asiasociety.org/sites/default/files/2022-03/ASPI_ChinaCommonProsp_report_fin.pdf; Koty (2022), 'How to Understand China's Common Prosperity Policy'.

¹⁰⁹ He et al. (2020), 'Enabling a Rapid and Just Transition away from Coal in China'.

¹¹⁰ World Bank Group (2022), *China: Country Climate and Development Report*.

¹¹¹ Ibid.

¹¹² He et al. (2020), 'Enabling a Rapid and Just Transition away from Coal in China'; Principles for Responsible Investment and SynTao Green Finance (2022), *Investing for a just transition: Principles for a just transition disclosure framework in China*, London: Principles for Responsible Investment.

areas or in urban areas without a hukou – particularly for girls in these groups.¹¹³ These disparities influence their labour force participation and social mobility – and ability to access highly skilled ‘green jobs’.¹¹⁴ The energy transition is a chance to open up opportunities for women – including low-income and migrant women – in male-dominated sectors such as research and development, technology and renewable energy.¹¹⁵ This can be achieved through gender-transformative interventions such as those explored in Box 5.

Climate change adaptation

Some of China’s major climate change adaptation and disaster risk reduction policies and measures consider gender and other social factors. China’s National Strategy for Climate Adaptation mentions vulnerable groups in the context of health – including the need to identify which population groups are most vulnerable to climate change-related health risks, and monitoring climate-sensitive disease conditions in central China.¹¹⁶ It also outlines plans to improve climate risk protection in cities for vulnerable groups, including children, low-income groups, elderly people, pregnant women and people with chronic health conditions.¹¹⁷ China’s disaster risk reduction policies and measures have integrated some gender-responsive and inclusive provisions, such as including sanitary products in relief supplies and guaranteeing access to medical services for pregnant and lactating women, elderly people, infants and people with disabilities.¹¹⁸ Its statistical monitoring system includes indicators for women, the elderly, children, people with disabilities and economically marginalized groups, to make transitional assistance after disasters inclusive.¹¹⁹

The Chinese government is developing increasingly comprehensive responses to climate change risks, and measures to build resilience.¹²⁰ The government’s growing emphasis on adaptation provides opportunities for creative community-level adaptation interventions, including participatory and holistic approaches that combine development and climate change adaptation objectives to support the resilience of climate vulnerable communities.¹²¹ However, China’s adaptation

¹¹³ World Bank Group and Development Research Center of the State Council, the People’s Republic of China (2022), *Four Decades of Poverty Reduction in China: Drivers, Insights for the World, and the Way Ahead*; Wong, C. (2019), ‘Public policy for a modernising China: The challenge of providing universal access to education under fiscal decentralisation’, in Dougherty, S. and Kim, J. (eds) (2019), *Fiscal Decentralization and Inclusive Growth in Asia*, OECD: Paris, https://www.oecd-ilibrary.org/governance/fiscal-decentralisation-and-inclusive-growth-in-asia_67eca5ea-en.

¹¹⁴ Wang and Klugman (2020), ‘How women have fared in the labour market with China’s rise as a global economic power’; Golley, J., Zhou, Y. and Wang, M. (2019), ‘Inequality of opportunity and gender discrimination in China’s labour income’, in Song, L., Zhou, Y. and Hurst, L. (eds) (2019), *The Chinese Economic Transformation: Views from Young Economists*, Canberra: ANU Press, <https://doi.org/10.22459/cet.2019.12>; Zhou, X. and Xie, Y. (2019), ‘Market Transition, Industrialization, and Social Mobility Trends in Postrevolution China’, *American Journal of Sociology*, 124(6), pp. 1810–1847, <https://doi.org/10.1086/703346>.

¹¹⁵ International Renewable Energy Agency (2019), *Renewable Energy: A Gender Perspective*; CARE (2022), *Making the Green Transition Work for Women*.

¹¹⁶ Government of the PRC (2022), 国家适应气候变化战略2035 [National Climate Change Adaptation Strategy 2035], Beijing: Government of the PRC, <https://www.gov.cn/zhengce/zhengceku/2022-06/14/5695555/files/9ce4e0a942ff4000a8a68b84b2fd791b.pdf>.

¹¹⁷ Ibid.

¹¹⁸ Zhou and Sun (2020), ‘Toward gender sensitivity’; UN Women (2017), *Gender Dimensions of Vulnerability to Climate Change in China*.

¹¹⁹ UN Women (2017), *Gender Dimensions of Vulnerability to Climate Change in China*.

¹²⁰ Qi et al. (2021), *Enhancing Climate Risk Governance in China*.

¹²¹ Jeffs, N. (2021), 性别平等的气候变化政策：国际最佳做法与中国实施探讨 [Gender-Responsive Climate Change Policy: International Best Practices and Implementation in China], Master’s Thesis, Beijing: Tsinghua University. One example of such an approach is participatory budgeting in Zeguo township, Wenling city, explored in United Nations Democracy Fund and newDemocracy Foundation (undated), *Enabling National Initiatives to Take Democracy Beyond Initiatives*, New York: United Nations Democracy Fund, <https://www.un.org/democracyfund/sites/www.un.org.democracyfund/files/newdemocracy-undef-handbook.pdf>.

strategy does not specify which social groups are classified as ‘vulnerable populations’ – reflecting the difficulty of generalizing at a national level.¹²² Existing government data on climate change vulnerability is not easily accessible.¹²³ Participants suggested that further research – especially cross-cutting qualitative research – on the differential vulnerability of social groups in China would be important for informing effective adaptation policy and programming interventions.

Rural revitalization

Poverty reduction is a long-standing government priority in China. The 2013 Targeted Poverty Alleviation strategy focused on meeting the needs of specific poor households and was successful in reaching the national target of eliminating extreme poverty by 2020.¹²⁴ Social protection provisions have been significantly expanded, although informal sector workers – disproportionately comprised of women in both rural and urban areas – and urban migrant workers continue to be excluded from most forms of government support.¹²⁵ This affects their ability to cope with and recover from extreme weather events and economic shocks related to climate change.¹²⁶ The government has broadened its approach to rural development, replacing the Office of Poverty Alleviation and Development with the National Administration for Rural Revitalization in early 2021.¹²⁷ China’s current rural revitalization strategy aims to improve agricultural productivity and sustainability, as well as access to public services and non-agricultural employment opportunities in rural areas.¹²⁸ This also links with the common prosperity policy agenda promoted by President Xi since early 2021, which aims to address income inequality (and expand China’s middle class),¹²⁹ as well as inequalities between rural and urban areas, and among China’s diverse regions.¹³⁰

¹²² Ibid.

¹²³ World Bank Group (2022), *China: Country Climate and Development Report*.

¹²⁴ Extreme poverty was measured as \$2.30 per person per day, as applied in rural areas (differing to the international poverty line of \$1.90 per person per day). While estimates vary, based on the international poverty line metric, China reduced the number of people living in extreme poverty by a historic 800 million between 1980 and 2020. Lugo, M. A., Raiser, M. and Yemtsov, R. (2021), ‘What’s next for poverty reduction policies in China?’, *Brookings*, 24 September 2021, <https://www.brookings.edu/blog/future-development/2021/09/24/whats-next-for-poverty-reduction-policies-in-china>; World Bank Group and Development Research Center of the State Council, the People’s Republic of China (2022), *Four Decades of Poverty Reduction in China: Drivers, Insights for the World, and the Way Ahead*.

¹²⁵ World Bank Group and Development Research Center of the State Council, the People’s Republic of China (2022), *Four Decades of Poverty Reduction in China: Drivers, Insights for the World, and the Way Ahead*.

¹²⁶ Tenzing, D. (2019), ‘Integrating social protection and climate change adaptation: A review’, *WIREs Climate Change*, 11(2), e626, <https://doi.org/10.1002/wcc.626>.

¹²⁷ Ibid.

¹²⁸ Ibid.; Not to be confused with the New Rural Reconstruction Movement, a grassroots movement inspired by the Rural Reconstruction movement of the 1920s and 1930s, which explores alternative approaches to rural development, including agroecology approaches to smallholder farming and revitalizing rural communities’ social and cultural life. For more information, see: Guo, H. (2013), ‘The “New Rural Reconstruction”: movement and sustainable agricultural development in China’, Thesis, CERDI - Centre d’Études et de Recherches sur le Développement International, <https://tel.archives-ouvertes.fr/tel-01168306>.

¹²⁹ China’s Gini coefficient (the most common measure of income inequality – where 0 represents perfect inequality and 1 indicates all income being received by one individual) was estimated at 0.47 by the National Statistics Bureau in 2020. Hancock, T. (2021), ‘China Needs Cut to Inequality for Common Prosperity: PBOC’s Cai’, *Bloomberg United Kingdom*, 29 November 2021, <https://www.bloomberg.com/news/articles/2021-11-29/china-needs-cut-to-inequality-for-common-prosperity-pboc-s-cai?leadSource=uverify%20wall>.

¹³⁰ Wu (2022), *China’s Common Prosperity Program*; Koty (2022), ‘How to Understand China’s Common Prosperity Policy’.

Participants suggested that further opportunities exist to integrate climate change adaptation into rural revitalization measures, especially at the provincial level.

A practitioner from a grassroots environmental NGO shared:

I think it is necessary to combine the consequences of climate change with the protection of vulnerable groups in rural revitalization, and it is possible to introduce relevant policies, such as protection support for vulnerable groups, community education, etc.¹³¹

Several participants suggested that these cross-cutting approaches can be achieved by mainstreaming climate change and environmental considerations into rural revitalization and women's development plans, programmes and assessment objectives. For example, this could entail facilitating poor women farmers' access to financial services and credit, enabling them the option to invest in climate change adaptation measures.¹³²

Women's development

Gender equality is enshrined in China's constitution and the Law of the People's Republic of China on the Protection of the Rights and Interests of Women.¹³³ However, this does not guarantee that China's laws and policies produce gender-equal effects. For example, although gender-based discrimination in hiring is illegal in China, gender-based hiring biases have increased since the relaxation of the one-child policy, and job postings explicitly specifying a preference or requirement for male applicants have become more common.¹³⁴

China's National Programme for Women's Development (2021–30) takes a relatively holistic approach to environmental and social challenges. It includes environmental targets such as reducing the impact of environmental pollution on women's health, improving the gender sensitivity of disaster response measures, and promoting 'women's important role in the construction of ecological civilisation'.¹³⁵ The plan highlights increasing women's participation in science and technology education and industries; participation in rural revitalization – including land rights protection – and in local-level decision-making as key pathways for women's contributions to solving environmental

¹³¹ Confidential questionnaire, 'Social Inclusion and Climate Action in China', completed in Chinese by a practitioner from Chinese grassroots environmental NGO. Translation author's own.

¹³² Zhou, L. and Sun, J. (2016), '气候变化与中国连片特困地区资产贫困陷阱' [Climate Change and Asset-Based Poverty Trap in China Contiguous Destitute Areas], *Journal of Nanjing Agricultural University (Social Science)*, 16(5), pp. 55–64, <http://html.rhhz.net/njnydxbskb/20160506.htm>.

¹³³ The National People's Congress of the PRC (2019), 'Constitution of the People's Republic of China', <http://www.npc.gov.cn/englishnpc/constitution2019/201911/1f65146fb6104dd3a2793875d19b5b29.shtml>; China.Org.Cn (undated), 'Law of the People's Republic of China on the Protection of the Rights and Interests of Women', <http://www.china.org.cn/english/government/207405.htm>.

¹³⁴ Ibid.; Nadworny, K. (2021), 'Gender Discrimination in the Chinese Workplace', 23 December 2021, Society for Human Resources Management, <https://www.shrm.org/resourcesandtools/hr-topics/global-hr/pages/gender-discrimination-in-the-chinese-workplace-global-hr.aspx>; Zhang, P. (2021), 'Men only' job adverts prompt women's rights group in China to take on employers over gender discrimination', 18 February 2021, *South China Morning Post*, <https://www.scmp.com/lifestyle/article/3121967/men-only-job-adverts-prompt-womens-rights-group-china-take-employers-over>.

¹³⁵ National Working Committee on Children and Women under the State Council (2021), '《中国妇女发展纲要(2021–2030年)》全文' [Full text of the National Women's Development Plan (2021–2030)], http://www.nwccw.gov.cn/2021-09/27/content_295246.htm.

problems.¹³⁶ It also calls for the strengthening of gender equality assessments across all laws and policies.

Challenges for inclusive approaches to climate action

Fragmented policy implementation

China's political system is hierarchical but fragmented, with five levels of government – national, provincial, prefecture, county and township.¹³⁷ At every level, the CPC and Chinese government are closely tied.¹³⁸ The party selects the heads of government offices and state-owned enterprises, and senior leaders hold positions in both the CPC and government.¹³⁹ China's central government leads policymaking and sets the direction of travel, for example, through national goals and statements by political leaders. Subnational governments implement central government policies, but also generate policies and regulations based on national objectives.¹⁴⁰

Respondents reported that collaborations among NGOs, research institutes and local government in policy implementation were highly effective and could be expanded further – especially at a municipal level – to advance inclusive approaches to climate action.

This hierarchical structure enables more flexible and contextual policy implementation – crucial in a country as large and diverse as China – but it also creates challenges with local compliance. Policy implementation is monitored through a performance evaluation system for officials – the 'target responsibility system'⁷ – that includes a range of sometimes conflicting factors such as GDP growth, social stability and emissions reduction.¹⁴¹ Local officials can implement policies according to their interests with relatively limited oversight from central officials – although the central government has been increasing its oversight, including through crackdowns on corruption.¹⁴² This bureaucratic system can pose challenges to effective national policy implementation.

¹³⁶ Ibid.

¹³⁷ The framework of 'fragmented authoritarianism' – developed by Lieberthal and Oksenberg in 1988 – has been used to understand the functioning of the Chinese political system for decades. Lieberthal, K. and Oksenberg, M. (1988), *Policy Making in China: Leaders, Structures and Processes*, Princeton, NJ: Princeton University Press; Brødsgaard, K. E. (eds) (2017), *Chinese Politics as Fragmented Authoritarianism*, London and New York: Routledge.

¹³⁸ Sandalow et al. (2022), *Guide to Chinese Climate Policy 2022*.

¹³⁹ Ibid. For more information, see Gallagher, K. S. and Xuan, X. (2019), *Titans of the Climate: Explaining Policy Process in the United States and China*, Cambridge, MA, United States: MIT Press.

¹⁴⁰ Qi, Y. and Wu, T. (2013), 'The politics of climate change in China', *Wiley Interdisciplinary Reviews: Climate Change*, 4(4), pp. 301–313, <https://doi.org/10.1002/wcc.221>.

¹⁴¹ Although the evaluation criteria for officials have increasingly incorporated environmental objectives, they remain weighted towards GDP growth. The system also does not include the differential social impacts of these environmental factors – influencing officials' priorities. Gallagher and Xuan (2019), *Titans of the Climate: Explaining Policy Process in the United States and China*.

¹⁴² Li and Shapiro (2020), *China Goes Green*; Gallagher and Xuan (2019), *Titans of the Climate: Explaining Policy Process in the United States and China*.

Due to these challenges, participants assessed their municipal and provincial policy environments as less supportive of inclusive approaches to climate action than the national policy environment. Several participants suggested that despite national policy support for gender and inclusion in climate action, enforcement of these laws and policies was limited. An expert on gender equality and climate change assessed that at a municipal level:

The awareness and practice of gender sensitivity and fairness and justice are weak, and climate mainstreaming has a long way to go.¹⁴³

However, increasing awareness of the benefits of these approaches – through sharing of research and case studies in diverse Chinese contexts with subnational officials – could help to address this.

Participants – particularly those based in rural areas – also suggested that holistic approaches to climate change and socio-economic development issues are sometimes implemented at a local level without their climate change components being made explicit. Approximately three-quarters of participants rated municipal- and provincial-level policy environments as ‘highly supportive’ or ‘supportive’ of improving the resilience of vulnerable communities, as well as facilitating collaboration between environmental and social sectors in research and practice. Respondents reported that collaborations among NGOs, research institutes and local government in policy implementation were highly effective and could be expanded further – especially at a municipal level – to advance inclusive approaches to climate action. Environmental NGOs in rural areas were particularly interested in deepening their collaboration with local government. Box 3 explores the role of Chinese and international NGOs in governance in China.

Box 3. Role of Chinese and international NGOs in governance in China

Despite an increasingly constrained operating context, environmental NGOs play a key role in governance in China, especially at the local level.

Since the introduction of new NGO laws in 2017, all Chinese NGOs must be registered with the Ministry of Civil Affairs and mandatory meetings with security officials are commonplace.¹⁴⁴ To operate in this context, Chinese NGOs navigate political risks and priorities using a range of strategies.¹⁴⁵ Some NGOs, especially those with an advocacy focus or those operating in more politically sensitive areas such as women’s rights, have closed or moved overseas.¹⁴⁶ Others – especially environmental NGOs – have established close collaboration with government, and in some cases, acted as ‘contractors’ for service provision.¹⁴⁷

¹⁴³ Confidential questionnaire, ‘Social Inclusion and Climate Action in China’, completed in Chinese by a Chinese expert on gender equality and climate change. Translation author’s own.

¹⁴⁴ Li and Shapiro (2020), *China Goes Green*.

¹⁴⁵ Ibid.; Nie, L. and Wu, J. (2022), ‘Strategic responses of NGOs to the new party-building campaign in China’, *China Information*, 36(1), pp. 46–67, <https://doi.org/10.1177/0920203X21995705>.

¹⁴⁶ Nie and Wu (2022), ‘Strategic responses of NGOs to the new party-building campaign in China’; Reuters (2016), ‘China women’s rights centre closes amid civil society crackdown’, 1 February 2016, <https://www.reuters.com/article/uk-china-rights-women-idUKKCN0VA2CC>.

¹⁴⁷ Mok, K. H., Chan, C. K. and Wen, Z. (2020), ‘State-NGOs relationship in the context of China contracting out social services’, *Social Policy & Administration*, 55(4), pp. 687–701, <https://doi.org/10.1111/spol.12651>; Xu, J. and Byrne, J. (2020), ‘Explaining the Evolution of China’s Government–Environmental NGO Relations since the 1990s: A Conceptual Framework and Case Study’, *Asian Studies Review*, 45(4), pp. 615–634, <https://doi.org/10.1080/10357823.2020.1828824>.

Environmental NGOs make an increasingly important contribution to environmental governance in China, especially in influencing local policymaking and implementation processes.¹⁴⁸ For example, the NGO Green Zhejiang promoted public participation and social justice in water governance in Zhejiang province by galvanizing citizens to collect information on water pollution and facilitating multi-stakeholder engagement with local government.¹⁴⁹ International NGOs like Oxfam have worked closely with local governments to promote rural development and climate change adaptation for decades.¹⁵⁰ In a first for NGOs in China in 2015, environmental NGOs were granted standing in courts to take part in environmental public interest litigation.¹⁵¹

Research participants shared that the political context in China for international collaboration between Chinese and international NGOs has changed in recent years, especially on more sensitive rights-based topics.¹⁵² This is largely due to changes in the institutional environment, including the 2017 Law on the Management of the Activities of Overseas NGOs Within Mainland China (commonly known as the ‘foreign NGO law’).¹⁵³ Under this law, international NGOs must register with China’s Public Security Bureau.¹⁵⁴ To manage political risks, many international NGOs operating in China typically engage carefully in policy advocacy – focusing on policy engagement with government rather than the public – and partner only with registered Chinese NGOs.¹⁵⁵ Some international NGOs and philanthropy organizations operating in China have shifted the emphasis of their policy advocacy work away from more politically sensitive issues such as women’s rights – with some moving towards environment and climate change-related work, as it is often perceived to be less sensitive.¹⁵⁶

¹⁴⁸ Gao, X. and Teets, J. (2020), ‘Civil society organizations in China: Navigating the local government for more inclusive environmental governance’, *China Information*, 35(1), pp. 46–66, <https://doi.org/10.1177/0920203X20908118>; Li, H., Tang, S. and Lo, C. W. (2022), ‘Resource dependency, perceived political environment, and ENGO advocacy under authoritarian rule’, *Journal of Environmental Policy & Planning*, 24, pp. 667–679, <https://doi.org/10.1080/1523908X.2022.2031928>.

¹⁴⁹ Gao and Teets (2020), ‘Civil society organizations in China: Navigating the local government for more inclusive environmental governance’.

¹⁵⁰ Wu, Y. (2021), ‘From Copenhagen to Paris: China’s climate governance journey’, *China Dialogue*, 14 July 2021, <https://chinadialogue.org.cn/en/climate/copenhagen-to-paris-china-climate-governance-journey>.

¹⁵¹ Xu and Byrne (2020), ‘Explaining the Evolution of China’s Government–Environmental NGO Relations since the 1990s: A Conceptual Framework and Case Study’; Zhuang, H. and Wolf, S. A. (2021), ‘Environmental public interest litigation: new roles for civil society organizations in environmental governance in China’, *Environmental Sociology*, 7(4), pp. 1–14, <https://doi.org/10.1080/23251042.2021.1897243>.

¹⁵² Online workshop held under the Chatham House Rule, April 2022; confidential interview with international climate change researcher, 2022; confidential interview with Chinese researcher on civil society, 2022.

¹⁵³ Holbig, H. and Lang, B. (2022), ‘China’s Overseas NGO Law and the Future of International Civil Society’, *Journal of Contemporary Asia*, 52(4), pp. 574–601, <https://doi.org/10.1080/00472336.2021.1955292>; 国家市场监督管理总局 [State Administration for Market Regulation] (2021), ‘中华人民共和国境外非政府组织：境内活动管理法 [The People’s Republic of China’s Law on the Management of the Activities of Overseas NGOs Within Mainland China]’, https://gkml.samr.gov.cn/nsjg/bgt/202106/t20210610_330541.html.

¹⁵⁴ Li and Shapiro (2020), *China Goes Green*.

¹⁵⁵ Noakes, S. and Teets, J. C. (2018), ‘Learning Under Authoritarianism: Strategic Adaptations Within International Foundations and NGOs in China’, *Voluntas*, 31, pp. 1093–1113, <https://doi.org/10.1007/s11266-017-9939-9>; Wilhelm, K. et al. (2021), ‘What Future for International NGOs in China?’, *ChinaFile*, 24 November 2021, <https://www.chinafile.com/conversation/what-future-international-ngos-china/>; confidential interview with international climate change researcher, 2022.

¹⁵⁶ Confidential interview with international climate change researcher, 2022; confidential interview with Chinese researcher on civil society, 2022.

Siloed approaches to policymaking

Institutional barriers limit integration between China's women's development, economic and environmental policies and planning.¹⁵⁷ Policymakers in environmental departments are not incentivized to work on gender equality, as it is the focus of the Ministry of Civil Affairs and China's National Working Committee on Children and Women (NWCCW). The NWCCW has relatively limited involvement in climate policymaking. Similarly, there is segmentation between the Ministry of Civil Affairs and environmental ministries – as an expert from a Chinese climate change social service agency shared:

The national level [institutions] have strongly promoted and supported the implementation of the dual carbon goal [for 2030 and 2060], but because of the division of labour, the protection of vulnerable groups is mainly [the responsibility of] the Ministry of Civil Affairs, which lacks the corresponding awareness and policy tools for climate change and sustainable development, and should promote civil affairs.¹⁵⁸

Institutional fragmentation or policy 'silos' are not unique to China. However, China's strongly scientific and technocratic approach to climate policymaking can make intersectoral collaboration challenging.¹⁵⁹ While this approach contributes to scientifically rigorous target-setting and policymaking, it can preclude consideration of the social impacts of climate change and the green transition.¹⁶⁰ As one climate change researcher shared:

The national programmes and action plans on climate change as well as breakdown policies at subnational and local level... tend to be technocratic and lack specific provisions to address the needs of the vulnerable.

China's dominant climate change policymaking approach also contributes to a preference for top-down technical solutions rather than participatory community-level approaches.¹⁶¹

These characteristics affect responses to systemic climate risks across environmental, social and economic policy areas. A comprehensive analysis of China's climate risk governance system concluded that: 'Most climate risk management measures taken by the government are sectoral measures, and there is a lack of a comprehensive, systematic, and integrated thinking to guide climate risk management',¹⁶² and recommended a holistic, cross-department approach to climate security. A similar assessment recommended improved intersectoral coordination to ensure that climate change measures contribute effectively to China's national socio-economic development strategies.¹⁶³ Likewise, a gender

¹⁵⁷ International experts have identified this as an issue common to many countries. Resurrección (2021), 'Gender, Climate Change and Disasters'; United Nations Economic and Social Council (2022), 'Achieving gender equality and the empowerment of all women and girls in the context of climate change, environmental and disaster risk reduction policies and programmes: Report of the Secretary-General'.

¹⁵⁸ Confidential questionnaire, 'Social Inclusion and Climate Action in China', completed in Chinese by an expert in a Chinese climate change social service agency. Translation author's own.

¹⁵⁹ UN Women (2017), *Gender Dimensions of Vulnerability to Climate Change in China*; Zhou and Sun (2020), 'Toward gender sensitivity'; Li and Shapiro (2020), *China Goes Green*.

¹⁶⁰ Li and Shapiro (2020), *China Goes Green*.

¹⁶¹ Jeffs (2021), 性别平等的气候变化政策: 国际最佳做法与中国实施探讨 [Gender-Responsive Climate Change Policy: International Best Practices and Implementation in China].

¹⁶² Qi et al. (2021), *Enhancing Climate Risk Governance in China*, p. 34.

¹⁶³ Chao et al. (2021), *Climate Change Risk Assessment and Governance 2021*.

equality researcher suggested that ‘more inclusive and coherent’ cross-cutting policy interventions could effectively address systemic climate risks.¹⁶⁴ Many participants expressed a desire to contribute to cross-cutting initiatives on climate change and equitable development, although several felt that opportunities to do so were limited.

Limited awareness and capacity on gender and inclusion in climate action

As officials typically specialize in one policy area, many have limited awareness of the differentiated impacts of climate change, and in turn, gender-transformative or socially inclusive approaches to climate action.¹⁶⁵ UN Women found that climate change officials in Jiangsu, Qinghai and Shaanxi provinces did not perceive women to be more vulnerable to the adverse impacts of climate change than men, despite women’s disproportionate vulnerability in these regions, due to disparities in women’s access to education, information and resources.¹⁶⁶ This also underlies the fact that women are not identified as a vulnerable group in China’s National Strategy for Climate Adaptation.¹⁶⁷

Participants suggested that gender mainstreaming could be deepened across all areas of policymaking and implementation, including rural revitalization. China’s National Plan for Women’s Development (2021–30) calls for increased capacity-building on gender equality for officials involved in law and policymaking and implementation – providing an impetus for further work in this area.¹⁶⁸ Many participants suggested that further multi-stakeholder engagement with researchers and practitioners, and capacity-building on the relationships between gender equality, socio-economic development and climate action, could help to build the capacity of officials to make and implement inclusive climate change measures.

Underrepresentation of women in decision-making

The underrepresentation of women at all levels of government in China, including environmental ministries, contributes to the limited integration of a gender perspective in Chinese environmental policies.¹⁶⁹ The 2021 World Economic Forum Global Gender Gap Report ranked China as 118th out of 156 countries assessed in terms of women’s political empowerment.¹⁷⁰ Women

¹⁶⁴ Confidential interview with gender equality researcher at international university.

¹⁶⁵ UN Women (2017), *Gender Dimensions of Vulnerability to Climate Change in China*.

¹⁶⁶ Ibid.

¹⁶⁷ Government of the PRC (2013), 中国国家适应气候变化战略 [National Climate Change Adaptation Strategy], Beijing: Government of the PRC, <https://www.gov.cn/gzdt/att/att/site1/20131209/001e3741a2cc140f6a8701.pdf>.

¹⁶⁸ National Working Committee on Children and Women under the State Council (2021), ‘中国妇女发展纲要 (2021—2030年) 全文’ [Full text of the China National Women’s Development Plan (2021–2030)].

¹⁶⁹ Zhou (2020), ‘妇女与环境:新规范与新挑战——对近5年中国落实“妇女与环境”战略目标的评估’ [Women And The Environment: New Norms And New Challenges – An Evaluation Of China’s Implementation Of The “Women And The Environment” Strategic Goal In The Past Five Years]; Resurrección (2021), ‘Gender, Climate Change and Disasters: Vulnerabilities, Responses and Imagining a more Caring and Better World’.

¹⁷⁰ World Economic Forum (2021), *Global Gender Gap Report: Insight Report*; National Bureau of Statistics (2021), ‘Final Statistical Monitoring Report on the Implementation of China’s Program for Women’s Development (2011-2020)’, http://www.stats.gov.cn/english/PressRelease/202112/t20211231_1825801.html.

comprise only about 30 per cent of CPC membership.¹⁷¹ There are no women in China's Politburo or Standing Committee, and women make up less than 9 per cent of the CPC Central Committee, the political assembly that elects the Politburo.¹⁷² Participants suggested that women's participation in policymaking is affected by unequal gender roles and limited advancement opportunities. Women officials are often given less competitive positions and are expected to retire five years earlier than their male counterparts, inhibiting their progression and leadership opportunities.¹⁷³

The underrepresentation of women at all levels of government in China, including environmental ministries, contributes to the limited integration of a gender perspective in Chinese environmental policies.

Participants suggested that increasing the participation of women and other vulnerable groups would contribute to cross-cutting solutions. This could be fostered through formal institutions. China's National Plan for Women's Development (2021–30) calls for 'effective measures to increase the proportion of women in party committees, people's congresses, governments, CPPCC, party and government work departments at all levels', as well as rural grassroots governance.¹⁷⁴ However, it does not include quantitative targets, or take an intersectional perspective to address the underrepresentation of specific groups of women, such as women with disabilities, in decision-making. Ways to strengthen the participation of women and other underrepresented groups in climate action include equitable local stakeholder engagement, and collaboration with women's development NGOs and research institutions on environmental and social policymaking.

¹⁷¹ Yu, J. (2022), 'Beijing briefing: Party power remains a male preserve', *The World Today*, 29 September 2022, <https://www.chathamhouse.org/publications/the-world-today/2022-10/beijing-briefing-party-power-remains-male-preserve>.

¹⁷² For more information on the state of women's political leadership, and the structure of the Chinese political system, see Yu (2022), 'Beijing briefing: Party power remains a male preserve'.

¹⁷³ Ibid. In the public sector and state-owned enterprises, the statutory retirement age is 60 for men, 55 for women in office roles, and 50 for women in blue-collar professions. Kawate, I. (2021), 'China's young and old rail against raising retirement age', *Nikkei Asia*, 4 April 2021, <https://asia.nikkei.com/Spotlight/Society/China-s-young-and-old-rail-against-raising-retirement-age>.

¹⁷⁴ National Working Committee on Children and Women under the State Council (2021), '《中国妇女发展纲要(2021—2030年)》全文' [Full text of the China National Women's Development Plan (2021–2030)].

03

Levers to advance gender and social equality in climate action

Four key levers can promote gender-transformative, holistic climate action in research and practice in China: improved data availability, combined research agendas, awareness and capacity, collaboration on inclusive programmes and dedicated funding.

Current situation among researchers and practitioners

Research and programming on climate action, rural revitalization and gender equality and social inclusion has been relatively siloed in China. There are some trailblazing experts on gender equality and climate change, and on the differential vulnerability of social groups to climate risks in Chinese contexts. However, when looking for support on designing gender-transformative programmes, several interview and questionnaire participants reported challenges in finding an expert on gender and inclusion in climate action. Most researchers and practitioners working on rural revitalization, gender equality and social inclusion reported that they were not familiar with many organizations working on the needs of vulnerable social groups, including on gender equality in the context of climate change. Nearly half of researchers and practitioners working on sustainable development and climate action reported the same. Across these sectors, most respondents reported that they did not work very closely across environmental and social

sectors (including climate change adaptation and mitigation, poverty alleviation and rural development, gender equality and social inclusion). Gender equality and women's development experts reported particularly low levels of collaboration with environmental organizations and specialists, which may be due to political sensitivities and the perception of climate change as a technical, scientific issue.

There is geographical variation in the degree of exchange and collaboration among experts and practitioners. Researchers and NGO practitioners in urban centres, particularly Beijing, Shanghai and the Guangdong–Hong Kong–Macao Greater Bay Area, had more interdisciplinary networks than those in the rural areas surveyed.¹⁷⁵ These were based on informal networks, as well as capacity-building and training opportunities, such as workshops on gender mainstreaming for climate change specialists. This may be partly due to the larger presence of international NGOs in these urban areas, which more commonly take cross-cutting approaches to environmental and socio-economic development issues.

Interest in gender and inclusion in climate action has been growing in China's NGO community in recent years, and experts across social and environmental fields emphasize intersectoral linkages relating to inclusive approaches to climate action. In a confidential questionnaire, participating environmental specialists rated the consideration of vulnerable groups in their work as quite important – with a mean rating of 7.8 on a scale of 0–10, with 0 being 'not important' and 10 being 'very important'. The same participants rated gender and inclusion similarly with 7.6 out of 10. Among participating specialists in rural revitalization, gender equality and social inclusion, the mean rating of the importance of climate change mitigation to their work was 7.7 out of 10, and 7.2 out of 10 for the importance of climate change adaptation.¹⁷⁶ Overall, experts' modal ratings of the importance of the other issues to their work were 8 and 10 out of 10, reflecting a diversity of views within the expert community on the relevance of cross-cutting approaches. However, experts across these different fields highlighted supporting the resilience of vulnerable groups and promoting their participation in climate action as key intersectoral synergies.

While some areas of competition among NGOs exist – particularly around attracting funding and opportunities to engage in multi-stakeholder dialogues with the Chinese government – experts generally found research and programmes in rural revitalization, climate action and women's development to be highly complementary. Poor coordination among work in these sectors also poses risks, including maladaptation – or climate change adaptation practices that exacerbate gender and other social inequalities.¹⁷⁷ Through interviews, questionnaires and workshops, experts in these diverse fields identified shared challenges, and opportunities for joint solutions – informing four levers to advance gender-transformative and inclusive climate action in China.

¹⁷⁵ Research participants were from Sichuan, Yunnan, Shaanxi, Gansu, Heilongjiang, Henan, Anhui, Zhejiang provinces; Inner Mongolia and Ningxia Hui autonomous regions; Hong Kong special administrative region; and Beijing and Shanghai municipalities. However, due to COVID-19 related travel disruptions, the sample of respondents was biased towards urban residents. Consequently, there are insufficient data to map networks of experts and NGOs in different administrative regions.

¹⁷⁶ Confidential questionnaire, 'Social Inclusion and Climate Action in China'.

¹⁷⁷ Intergovernmental Panel on Climate Change (2022), *Climate Change 2022: Impacts, Adaptation and Vulnerability*; Resurrección et al. (2019), *Gender-Transformative Climate Change Adaptation*.

Data collection

Quantitative data

Compared with other countries, research on gender and social inclusion and climate change in China is limited.¹⁷⁸ A key contributing factor is the limited availability of sex-, age- and diversity-disaggregated data¹⁷⁹ on environmental impacts in China.¹⁸⁰ Disaggregated data can be used to identify and understand different social groups' levels of vulnerability to direct and systemic climate change impacts.¹⁸¹ Without access to this data, it can be challenging to design tailored gender-transformative programmes and inclusive policy approaches.

Disaggregated data can be used to identify and understand different social groups' levels of vulnerability to direct and systemic climate change impacts.

The Chinese government data collection system is decentralized, as the National Bureau of Statistics (NBS) largely compiles data collected by ministries at lower levels.¹⁸² Data on gender and social factors are not collected on climate change-related topics, as they are often not perceived as relevant.¹⁸³ For example, the environmental statistics provided by the NBS for the China National Programme for Women's Development (2011–20) did not mention gendered differences.¹⁸⁴ Notably, the Chinese government is developing its big data capacity, including remote sensing and field measurements, to inform national environmental governance.¹⁸⁵ While such measures can achieve environmental data collection

¹⁷⁸ Confidential interview with Chinese researcher in climate change and energy, 2022; confidential interview with Chinese women's rights researcher; online workshop held under the Chatham House Rule, April 2022.

¹⁷⁹ Sex-, age- and diversity disaggregated data refers to data – often quantitative – which has been disaggregated by a range of social factors. Ideally disaggregated data should include as many social factors as possible, including wealth quintile, disability status, ethnicity and location. For this data collection, the terminology used is usually 'sex' rather than 'gender', as this is the terminology used in international agreements relating to the issue, including the SDGs, Committee on the Elimination of Discrimination against Women and Sendai Framework for Disaster Risk Reduction. UN Women, UN ESCAP, UNEP and IUCN (2019), *Mainstreaming Gender in Environment Statistics for the SDGs and Beyond: Identifying Priorities for Asia and the Pacific*, New York: UN Women, <https://data.unwomen.org/publications/mainstreaming-gender-environment-statistics-sdgs-and-beyond-identifying-priorities>; Committee on the Elimination of Discrimination against Women (2018), 'General Recommendation No. 37 on Gender-related dimensions of disaster risk reduction in the context of climate change'; United Nations Office for Disaster Risk Reduction – Regional Office for Asia and Pacific (2021), *Sendai Framework Monitor sex, age and disability disaggregated data*, Bangkok: United Nations Office for Disaster Risk Reduction, <https://wrd.unwomen.org/practice/listing-toolbox/sendai-framework-monitor-sex-age-and-disability-disaggregated-data>.

¹⁸⁰ Confidential interview with Chinese researcher in climate change and energy, 2022; confidential interview with Chinese women's rights researcher; online workshop held under the Chatham House Rule, April 2022.

¹⁸¹ UN Women (2020), *Integrating gender in climate change and disaster-related statistics in Asia & the Pacific: example indicators*, New York: UN Women, <https://wrd.unwomen.org/practice/listing-toolbox/integrating-gender-climate-change-and-disaster-related-statistics-asia-and>; UN Women (undated), 'Gender data', <https://wrd.unwomen.org/practice/risk/gender-data>.

¹⁸² Jeffs (2021), 性别平等的气候变化政策: 国际最佳做法与中国实施探讨 [Gender-Responsive Climate Change Policy: International Best Practices and Implementation in China].

¹⁸³ Ibid.

¹⁸⁴ Zhou and Sun (2020), 'Toward gender sensitivity'; Zhou (2020), '妇女与环境: 新规范与新挑战——对近5年中国落实“妇女与环境”战略目标的评估' [Women And The Environment: New Norms And New Challenges – An Evaluation Of China's Implementation Of The “Women And The Environment” Strategic Goal In The Past Five Years].

¹⁸⁵ Li and Shapiro (2020), *China Goes Green*.

on a huge scale, and inform science-based policymaking, they can also involve the penetration of government digital technologies into people's everyday lives, with privacy implications.¹⁸⁶

The government data on climate change vulnerability that does exist can be challenging for NGOs to access.¹⁸⁷ To inform inclusive policy approaches, researchers and NGO practitioners can collect sex-, age- and diversity-disaggregated data on environmental issues in China at a local level. Many already do, particularly specialists in rural revitalization and poverty reduction. This can entail collecting individual level data to identify the differential impacts of macro trends, which can often be overlooked in national-level policy discussions. For example, due to the gender division of labour, improving the availability of affordable clean energy particularly benefits women's health – by reducing indoor air pollution – and can reduce their burden of unpaid household labour.¹⁸⁸ To develop the capacity to collect sex-, age- and diversity-disaggregated data, researchers may need support from specialist consultants or from grassroots organizations. Many international best practices exist for collecting disaggregated data on environmental issues, which can be tailored to Chinese contexts.¹⁸⁹

Qualitative data

The collection of qualitative data can help to clarify the interactions between social inequalities and the natural environment – serving as a reminder of the political nature of environmental impacts and need for systemic rather than purely technical fixes.¹⁹⁰ It can also elaborate the root causes of vulnerability to climate change impacts, informing more effective programmes and policies.¹⁹¹ Interdisciplinary research on the vulnerability of different social groups to climate change, and the effectiveness of climate change adaptation strategies for diverse social groups, can inform tailored local-level programming. Participatory research approaches that include the perspectives and experiences of socially marginalized groups are particularly effective.

¹⁸⁶ Ibid.

¹⁸⁷ World Bank Group (2022), *China: Country Climate and Development Report*.

¹⁸⁸ World Health Organization (2014), *Gender, Climate Change and Health*, Geneva: World Health Organization, https://apps.who.int/iris/bitstream/handle/10665/144781/9789241508186_eng.pdf; Anderson, C. et al. (2017), 'Promoting Resilience, Rights and Resources: Gender-Responsive Adaptation Across Sectors', in Granat, M., Owren, C. and Aguilar, L. (eds) (2017), *Roots for the Future: The Landscape and Way Forward on Gender and Climate Change*, Washington DC: International Union on the Conservation of Nature and Global Gender and Climate Alliance, <https://wedo.org/wp-content/uploads/2015/12/Roots-for-the-future-final-1.pdf>.

¹⁸⁹ Some recent international guides include: UN Women, UN ESCAP, UNEP and IUCN (2019), *Mainstreaming Gender in Environment Statistics for the SDGs and Beyond: Identifying Priorities for Asia and the Pacific*; UN Women (2022), *Model questionnaire: Measuring the nexus between gender and environment*, New York: UN Women, <https://data.unwomen.org/publications/model-questionnaire-measuring-nexus-between-gender-and-environment>.

¹⁹⁰ Resurrección, B. and Elmhirst, R. (eds) (2021), *Negotiating gender expertise in environment and development: voices from feminist political ecology*, Abingdon and New York: Routledge.

¹⁹¹ Resurrección et al. (2019), *Gender-Transformative Climate Change Adaptation*.

For example, evidence from Anhui province and other regions of China suggests that women farmers are less likely to adopt climate-resilient farming practices than male farmers.¹⁹² This is due to their more limited access to information, resources and education on climate change adaptation measures. However, a qualitative study in Anhui province – one of China’s key agricultural areas – found that female smallholder farmers preferred to share information about climate change and adaptation strategies through social networks and were more inclined to adopt climate-resilient agricultural practices when receiving information through these trusted networks.¹⁹³ With this in mind, cross-cutting qualitative research can help to inform the design of gender-transformative climate change adaptation initiatives that leverage social networks among women farmers to support their uptake of climate-resilient practices.¹⁹⁴

Building an evidence base of quantitative and qualitative data in diverse Chinese contexts can help galvanize inclusive climate policies. Data on differential climate impacts and the distribution of costs and benefits of climate change mitigation efforts can help to ‘make the case’ for the relevance of gender-transformative climate change adaptation measures and just transition policies. It can contribute to capacity-building for government officials at all levels. This data collection can also support with monitoring and evaluating China’s progress on international targets such as the SDGs – for which several of the environmental goals have gender indicators.¹⁹⁵ Collecting and disseminating such data can also help to build public awareness on the differential impacts of climate change.

An interdisciplinary ‘community of practice’ on gender and inclusion in climate action

Integrating research agendas

Participants reported that among climate change researchers and practitioners in China, awareness of the relationships between gender and other social inequalities and climate change impacts and solutions is relatively low but increasing. Participants attributed this to several factors, including a predominant understanding of climate change as a scientific rather than a political and economic issue; political sensitivities around gender equality; limited exposure to relevant research and debates on the topic; and perceptions that such evidence and debates are primarily Western. However, participants felt that the prominence of gender and inclusion in the climate change NGO community in China had increased in the

¹⁹² Jin, J., Wang, X. and Gao, Y. (2015), ‘Gender differences in farmers’ responses to climate change adaptation in Yongqiao District, China’, *Science of the Total Environment*, 538, pp. 942–948, <https://doi.org/10.1016/j.scitotenv.2015.07.027>; UN Women (2017), *Gender Dimensions of Vulnerability to Climate Change in China*.

¹⁹³ Kibue, G. W. et al. (2015), ‘Assessment of climate change awareness and agronomic practices in an agricultural region of Henan Province, China’, *Environment, Development and Sustainability*, 17, pp. 379–392, <https://doi.org/10.1007/s10668-014-9546-5>; Resurrección et al. (2019), *Gender-Transformative Climate Change Adaptation*.

¹⁹⁴ Rao, N. et al. (2019), ‘A qualitative comparative analysis of women’s adaptive capacity in climate change hotspots in Asia and Africa’, *Nature Climate Change*, 9, pp. 964–971, <https://doi.org/10.1038/s41558-019-0638-y>.

¹⁹⁵ UN Environment Programme and IUCN (2019), *Gender and environment statistics: Unlocking information for action and measuring the SDGs*, Nairobi: UN Environment, <https://www.unep.org/resources/report/gender-and-environment-statistics-unlocking-information-action-and-measuring-sdgs>.

last decade. This was partly due to the increased prominence of gender in the international climate change regime and international climate change research and advocacy. Requirements for gender and inclusion in monitoring and evaluation by some international funders, and the increased availability of capacity-building programmes on gender and inclusion in China were also key. The increased prominence of public discussions on gender equality-related issues in China may also have contributed to increased awareness. Many urban environmental NGOs have a high proportion of younger women employees, some of whom reported a higher awareness of gender equality issues.

Together, such a network could build a strong evidence base to support the development of inclusive programmes and cross-sectoral policy dialogue.

There is a nascent interdisciplinary ‘community of practice’ on gender and inclusion in climate action in China. Building on existing informal networks among NGOs and research institutions across relevant topic areas – for example, by establishing ‘communities of practice’¹⁹⁶ – can enable convenient exchanges of experience and knowledge and foster new opportunities for research collaborations. This could entail regular networking opportunities, or interdisciplinary exchange through cross-cutting publications and conferences in the academic sphere, or workshops and collaborative programmes by NGOs. Rural revitalization organizations can share important experience on inclusive approaches to climate action, as many integrate gender and social considerations as well as environmental ones into their work (see Box 7). Together, such a network could build a strong evidence base to support the development of inclusive programmes and cross-sectoral policy dialogue.

Several participants suggested that participatory research is another way to break down what may appear to be disciplinary silos from academic or policy perspectives.¹⁹⁷ Elevating the voices of underserved social groups and supporting their leadership can generate joint solutions to environmental and social challenges that are most relevant to vulnerable communities. Box 4 explores how community dialogues on social and environmental issues faced by vulnerable social groups in Hong Kong SAR bridged silos on this topic.

¹⁹⁶ The most common definition of ‘communities of practice’ is ‘groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly’. Wenger, E. (1998), *Communities of practice: Learning, meaning, and identity*, Cambridge: Cambridge University Press, <https://doi.org/10.1017/CBO9780511803932>.

¹⁹⁷ Online workshop held under the Chatham House Rule, April 2022.

Box 4. Community dialogues for social justice and climate action

CarbonCare InnoLab's Paris Watch project identifies synergies in community work on environmental and social issues.

CarbonCare InnoLab, based in Hong Kong SAR, has convened community dialogues with citizens working on social equality issues, and disadvantaged social groups. They have facilitated community-level discussions on synergies between environmental and social solutions, and identify pathways forward on a just transition. For example, drawing on research in Hong Kong SAR, a dialogue with mental health experts highlighted the differential effects of climate change on people with mental health conditions.¹⁹⁸ The project has also identified opportunities for interdisciplinary collaboration, including integrating climate change information into social service platforms and raising awareness among mental health practitioners.¹⁹⁹ In addition, Paris Watch has also enabled a broader perspective on climate change that focuses on systemic impacts, including in the care and healthcare sectors.²⁰⁰ Part of the dialogue with welfare and healthcare workers focused on opportunities to improve the environmental sustainability of Hong Kong SAR's care sector, and build the city's capacity to respond to increasing demand due to the health impacts of climate change on vulnerable and elderly people.²⁰¹

Capacity-building on gender and inclusion in climate action

The creation of an interdisciplinary community requires some capacity-building on the interlinkages between climate action, rural revitalization and women's development. Participants from climate change and sustainable development organizations were interested in integrating gender and social factors into their work in a systemic way – in order to address the root causes of different social groups' vulnerabilities and integrate gender and social considerations at all stages of a project.²⁰² These organizations sought practical guidance on effective gender mainstreaming, and hoped to learn targeted approaches both to inclusive stakeholder engagement and to support vulnerable groups to build their resilience. Likewise, in a confidential questionnaire, Chinese rural revitalization and women's development NGOs stated the need for additional research and case studies to build their capacity to integrate climate change considerations into research and programming.

¹⁹⁸ Chan, E. Y. Y. et al. (2018), 'Association between Ambient Temperatures and Mental Disorder Hospitalizations in a Subtropical City: A Time-Series Study of Hong Kong Special Administrative Region', *International Journal of Environmental Research and Public Health*, 15(4), p. 754, <https://doi.org/10.3390/ijerph15040754>.

¹⁹⁹ Li, K. (2022), *Combining research and community action to support people with mental illness in tackling climate change*, Hong Kong SAR: CarbonCare InnoLab, https://www.ccinnolab.org/uploads/media/pairswatch/Social_challenges_and_climate_action_5_Eng.pdf.

²⁰⁰ Health crises were identified as a key systemic risk globally in a Chatham House-led expert elicitation process. For further information, see Quiggin, De Meyer, Hubble-Rose and Froggatt (2021), *Climate change risk assessment 2021*.

²⁰¹ Li, K. (2021), *Community Dialogue: Extreme weather hit hard welfare and health care workers and the vulnerable*, Hong Kong SAR: CarbonCare InnoLab, https://www.ccinnolab.org/uploads/media/pairswatch/Community_Dialogue_2_English.pdf.

²⁰² UN Women (2016), *Leveraging co-benefits between gender equality and climate action for sustainable development*.

Many climate change and sustainable development specialists were interested in participating in capacity-building workshops. Some of these are already provided by international NGOs and funding organizations, particularly in major urban centres in China, but participants shared that their scope and scale could be expanded. Participants suggested that to be effective, capacity-building training would need to be closely tailored to gender relations in China, and where possible, delivered by Chinese experts.

However, many participants reported that interest in, and capacity to conduct, gender mainstreaming and develop more inclusive practices varied within organizations. Gender and inclusion considerations were often treated as a ‘tick box exercise’ in environmental organizations.²⁰³ One reason for this is the argument that prioritizing gender equality, or adding gender equality as a secondary goal, distracts from achieving primary environmental goals, such as emissions reduction.²⁰⁴ Given the wide variety of climate change projects being implemented in China, it is not necessarily relevant to integrate gender and social considerations into all projects, particularly those with a highly technical focus. Yet in many cases, the meaningful integration of gender and social factors into the design and budgeting of a project can support more effective environmental outcomes – as explored in Chapter 1 – contributing to meeting overall project goals, while producing social and economic benefits.

Consultants or frontline civil society groups and NGOs could provide expert input on a wider range of activities throughout the project cycle to support a more holistic approach to environmental and social issues.

There may be some resistance to gender mainstreaming in environmental organizations and to cross-cutting approaches on gender and environment topics more broadly, due to the need for organizations to specialize and leverage their strengths, particularly when bidding for funding.²⁰⁵ Relatedly, one climate change expert suggested that they were hesitant to engage in gender mainstreaming, as gender analysis stems from a different discipline, and they did not want to engage in a ‘tokenistic’ way.²⁰⁶ Proponents see this as an effective division of labour between sectors – including between research institutions and NGOs in the environmental and social spheres.²⁰⁷ However, intersectoral exchange and collaboration can still bring benefits, as Box 5 explores. This is particularly apparent when funders work with multiple organizations to form a coalition and bring out their synergies (of which, Box 6 provides an example).²⁰⁸

²⁰³ Confidential interview with Chinese climate change practitioner, 2022; confidential interview with international climate change researcher, 2022; confidential interview with China-based funding organization, 2022.

²⁰⁴ Confidential interview with international climate change researcher, 2022.

²⁰⁵ Ibid; confidential interview with Chinese climate change practitioner, 2022.

²⁰⁶ Confidential interview with international climate change researcher, 2022.

²⁰⁷ Ibid.

²⁰⁸ Online workshop held under Chatham House Rule, April 2022; confidential interview with international climate change researcher, 2022.

Moreover, gender and inclusion specialists can help to identify key areas of work, and build organizational capacity on gender mainstreaming.²⁰⁹ Consultants or frontline civil society groups and NGOs (such as those working on rural revitalization) could provide expert input on a wider range of activities throughout the project cycle to support a more holistic approach to environmental and social issues. For example, the China Council for International Cooperation on Environment and Development (CCICED) recommends that project leads consider commissioning a gender analysis on a research project's topic prior to the development of a detailed outline, to inform the research plan.²¹⁰ However, gender specialists have tended to be siloed within environment and development organizations, both in China and internationally.²¹¹ Dedicating budget allocations to gender research to cover the relevant time and expertise, and supporting organization-wide capacity-building can help to address this.²¹²

More broadly, supporting staff to participate in capacity-building and adopt more inclusive approaches requires time and financial resources. In a confidential questionnaire, Chinese climate change and environmental NGOs emphasized their need for finance and human resources to be able to implement gender-transformative approaches, especially when faced with tight deadlines and high expectations from funders. Some participants suggested that this required commitment from organizational management. As one staff member at a China-based funding organization shared:

I would be very happy to [integrate gender and inclusion], but we're just not sure how it would fit into our work day – this is more of a top-down decision to make.²¹³

However, while there are undoubtedly benefits of organizational commitments to gender and inclusion, these approaches can also be led by practitioners. Several research participants were young women leading on the integration of gender and inclusion considerations in their environmental organizations. This reflects international evidence that much of the impetus for gender mainstreaming in environment and development organizations comes from gender 'experts', who serve as internal advocates (making the case for the relevance of gender and social considerations to the work of technical organizations), often without formal leadership positions.²¹⁴ Developing a community of practice on gender and inclusion in climate action can support these actors by exchanging knowledge and experience. Within organizations, diverse representation on an organization's management team and board, and gender-transformative organizational policies and procedures – including on workplace discrimination and harassment – can help staff to gain consensus on gender and inclusion in their work.

²⁰⁹ Confidential interview with China-based funding organization, 2022.

²¹⁰ CCICED (2022), *Report on Gender Mainstreaming in SPS for the Period 2021–2022*, Beijing: CCICED, <https://cciced.eco/wp-content/uploads/2022/07/CCICED-Gender-Report-EN.pdf>.

²¹¹ Internationally, this is a common trend, as explored in Resurrección and Elmhirst (eds) (2021), *Negotiating gender expertise in environment and development: voices from feminist political ecology*. Confidential interview with international climate change researcher, 2022; confidential interview with China-based funding organization, 2022.

²¹² Resurrección and Elmhirst (eds) (2021), *Negotiating gender expertise in environment and development: voices from feminist political ecology*.

²¹³ Confidential interview with staff member at China-based funding organization, 2022.

²¹⁴ Resurrección and Elmhirst (eds) (2021), *Negotiating gender expertise in environment and development: voices from feminist political ecology*.

Interdisciplinary and international collaboration on gender-transformative programmes

Interdisciplinary collaboration

Collaboration between researchers and practitioners on climate change, rural revitalization and women's development is relatively limited but growing in China. Some participants working on rural revitalization and climate change adaptation reported that underlying gender inequalities – such as the distribution of unpaid household labour – affected the participation of women in their programmes. Overall, research participants were interested in collaborating on approaches that address climate change and social issues in a synergistic way. For example, areas that affect both women's socio-economic resilience and vulnerability to climate change impacts include protection from, and access to justice for, gender-based violence; coverage by social protection including benefits and healthcare; and access to and control over land, inheritance and other assets.²¹⁵ Further opportunities for collaboration exist in addressing the distribution of unpaid household labour, and diverse women's unequal access to education, information, credit and technology, which underpin many other gender inequalities.²¹⁶

Another key area for interdisciplinary programming is on gender-transformative just transition measures. For example, several research participants suggested that the just transition is under-researched in China and pointed to the need for analyses that consider direct and systemic risks to different social groups, across diverse geographies and sectors. While some such research exists,²¹⁷ there has been limited intersectional gender analysis on the topic – and consequently, limited gender-transformative programming. Box 5 explores opportunities for gender-transformative just transition programmes in China.

Box 5. Opportunities for gender-transformative just transition programmes in China

In China, the low-carbon energy transition is creating new high-quality 'green jobs' in male-dominated sectors, including research and development, technology and renewable energy.²¹⁸ Cross-cutting gender-transformative just transition programmes can support women, especially low-income rural and rural-to-urban migrant women, to access these new opportunities and support gender parity in emerging green industries. This will require measures to:

²¹⁵ Asian Development Bank (2021), *Gender-Inclusive Legislative Framework and Laws to Strengthen Women's Resilience to Climate Change and Disasters*, Manila: Asian Development Bank, <https://www.adb.org/publications/gender-inclusive-legislative-framework-laws-women-resilience>; UN Women (2017), *Gender Dimensions of Vulnerability to Climate Change in China*.

²¹⁶ Strumskyte, S., Ramos Magaña, S. and Bendig, H. (2022), *Women's leadership in environmental action*, Paris: OECD Publishing, <https://www.oecd-ilibrary.org/docserver/f0038d22-en.pdf?expires=1653063677&id=id&acname=guest&checksum=780A32099D340D28CDA66F57FBD7C08A>, <https://doi.org/10.1787/f0038d22-en>; UN Women (2016), *Leveraging co-benefits between gender equality and climate action for sustainable development*.

²¹⁷ For example, World Bank Group (2022), *China: Country Climate and Development Report*; He et al. (2020), 'Enabling a Rapid and Just Transition away from Coal in China'.

²¹⁸ International Renewable Energy Agency (2019), *Renewable Energy: A Gender Perspective*; CARE (2022), *Making the Green Transition Work for Women*.

- Support the participation of women (especially low-income, rural and rural-to-urban migrant women) in higher education and training – including lifelong education and retraining – in fields such as science, technology and engineering, to enable their access to high-skilled jobs in emerging industries.²¹⁹ This could entail targeted outreach at universities, tailored professional training opportunities for women and other underrepresented groups, and establishing mentorship networks for women in ‘green industries’.²²⁰
- Increase women and other underrepresented groups’ employment through targeted recruitment and employment in workplaces, or at a city level for municipal jobs.²²¹ For example, when launching a new fleet of low-emissions buses, Bogotá’s public transport operator TransMilenio is training a cohort of all-women bus drivers.²²²
- Implement flexible workplace policies such as flexible and remote working, as well as childcare support, to address the unequal distribution of unpaid household labour between men and women, which is a structural barrier to women’s workforce participation.²²³
- Address gender inequality in the workplace more broadly through creating and enforcing harassment policies, closing gender pay gaps, and addressing harmful gender stereotypes and norms in organizational cultures.²²⁴ Fostering women’s leadership, through equal promotional opportunities, can help to change culture and attract more women to high-skilled ‘green jobs’.²²⁵ Women’s representation on corporate boards is also associated with improved climate governance and innovation.²²⁶

Such cross-cutting programmes and initiatives can be implemented by workplaces and local governments, but also led by NGOs and organizational networks. For example, the organizational network ENERGIA, the international network on gender and sustainable energy, is a pioneer in gender-transformative approaches to renewable energy – including through research, advocacy and targeted training programmes – in Africa and Asia.²²⁷

²¹⁹ Ibid.; World Bank Group (2022), *China: Country Climate and Development Report*; European Centre for the Development of Vocational Training (2022), ‘Cities in transition: How vocational education and training can help cities become smarter and greener’, C40 Cities Knowledge Hub, July 2022, https://www.c40knowledgehub.org/s/article/Cities-in-transition-How-vocational-education-and-training-can-help-cities-become-smarter-and-greener?language=en_US.

²²⁰ International Renewable Energy Agency (2019), *Renewable Energy: A Gender Perspective*.

²²¹ C40 Cities Climate Leadership Group (2022), ‘Good green jobs: How to ensure an equitable, just transition for workers’, C40 Knowledge Hub, November 2022, https://www.c40knowledgehub.org/s/article/Good-green-jobs-How-to-ensure-an-equitable-just-transition-for-workers?language=en_US.

²²² Ibid.

²²³ International Renewable Energy Agency (2019), *Renewable Energy: A Gender Perspective*; CARE (2022), *Making the Green Transition Work for Women*; Littig, B. (2018), ‘Good work? Sustainable work and sustainable development: a critical gender perspective from the Global North’, *Globalizations*, 15(4), pp. 565–579, <https://doi.org/10.1080/14747731.2018.1454676>.

²²⁴ CARE (2022), *Making the Green Transition Work for Women*.

²²⁵ Ibid.

²²⁶ Bloomberg New Energy Finance and Sasakawa Peace Foundation (2020), *Gender Diversity and Climate Innovation*.

²²⁷ ENERGIA (2022), ‘Impact Areas’, <https://www.energia.org/what-we-do>.

By developing a practical evidence base of gender-transformative climate change programmes, organizations can demonstrate the relevance of gender and inclusion to climate action in China. This requires gender-responsive monitoring and evaluation that can measure programme impacts on both social and environmental indicators – for which there are many applicable international best practices.²²⁸ This can pinpoint synergies – for example, some of the environmental co-benefits of increased women’s participation in decision-making, explored in Chapter 1. It can also help to identify successful interdisciplinary approaches that could be scaled up through intersectoral policy measures. Reporting these results to funders and government stakeholders can ‘make the case’ for inclusive, gender-transformative climate action. Disseminating these case studies more widely can also help to build public awareness.

International collaboration

Participants at Chinese NGOs and research institutions working on climate change found their experiences of international exchange and collaboration beneficial for capacity-building on gender and inclusion. International exchange and cooperation often take place through informal networks, particularly facilitated by global NGOs. The China Council for International Cooperation on Environment and Development (CCICED) has been a key actor for international exchange among researchers and policymakers, and a leader in gender mainstreaming. In 2018, the organization’s executive committee highlighted gender equality as a cross-cutting research priority, and CCICED mainstreamed gender in a series of special policy studies in 2020 on environmental topics.²²⁹ The special policy study on climate action recommends measures for China to support a just transition, promote women’s participation in emerging green industries, mainstream gender in its climate finance, and support women’s leadership on climate action.²³⁰ The policy studies also highlighted areas for future research on climate change and gender equality – including the impact of women’s participation and leadership in the design and implementation of climate change initiatives, and ways that existing green investment measures have combined gender and climate objectives.²³¹ CCICED has also produced recommendations for advancing the integration of gender into CCICED’s research, relevant to many Chinese research organizations.²³²

Increasing awareness of, and capacity to implement, gender mainstreaming and inclusive approaches to climate action among Chinese organizations provides an opportunity for further international exchange and collaboration. Research in the broad field of ‘gender and environment’ is interdisciplinary and closely interconnected – partly due to its links to advocacy at local and global levels.

²²⁸ For example, UN Women (2020), *Integrating Gender in Climate Change and Disaster-Related Statistics in Asia & the Pacific: example indicators*; UN Women (2022), *Model Questionnaire: Measuring the Nexus Between Gender and Environment*; see UN Women (2022), *Handbook on Gender Mainstreaming for Gender Equality Results*.

²²⁹ CCICED (2022), *Report on Gender Mainstreaming in SPS for the Period 2021–2022*.

²³⁰ CCICED (2022), *Policy Measures and Implementation Pathways for the Carbon Emission Peak and Carbon Neutrality Goals*.

²³¹ CCICED (2022), *Report on Gender Mainstreaming in SPS for the Period 2021–2022*.

²³² Ibid

While research on the topic is widely geographically distributed, there are increasing moves to support the production of research on the topic in the Global South.²³³ There is a strong international community of NGOs and international NGOs working on gender-transformative climate action – fostered by coalitions such as the Global Gender and Climate Alliance and the Women and Gender Constituency at the UNFCCC (one of the convention’s nine official stakeholder groups).²³⁴ A wide range of technical environment and development organizations are integrating gender and inclusion considerations into their work.²³⁵ Research and programmes on gender-transformative climate action are an opportunity for Chinese research institutions and NGOs to exchange internationally with this collaborative community.

Participants at Chinese NGOs and research institutions working on climate change found their experiences of international exchange and collaboration beneficial for capacity-building on gender and inclusion.

As the political context for international NGO collaboration in China has changed in recent years (see Box 3), in many cases, tailoring international best practices to a Chinese context may no longer be appropriate. Instead, some participants suggested that collaborations between Chinese and international researchers, practitioners and funders can be guided by Chinese philosophical frameworks (such as ‘ecological civilization’) and integrate gender and inclusion considerations to support the effective delivery of important national policies.²³⁶ Practitioners and organizations with international experiences can continue to play an important bridging role in translating between international and Chinese concepts and policy frameworks.²³⁷

International collaboration can play an important role in fostering innovation on inclusive climate change solutions. For example, one international researcher shared their interest in new cross-cutting research on ‘green masculinities’ exploring how perceptions of masculinity affect men’s adoption of environmentally friendly behaviours – a topic being researched internationally but under-researched in China.²³⁸ A participant involved with international collaborations on climate change research and policy with China emphasized the growing importance of international exchange for innovative climate change solutions:

²³³ The geographical distribution of research and practice on gender and climate is reflected in literature reviews such as Sellers (2016), *Gender and Climate Change: A Closer Look at Existing Evidence*, as well as the authors of the cross-chapter box ‘Gender, Climate Justice and Transformative Pathways’ in Chapter 18 of IPCC (2022), *Climate Change 2022: Impacts, Adaptation and Vulnerability*.

²³⁴ Women and Gender Constituency (2008), ‘Global Gender and Climate Alliance’, <https://wedo.org/global-gender-and-climate-alliance>; Women and Gender Constituency (undated), ‘Members’, <https://womengenderclimate.org/member>.

²³⁵ Resurrección and Elmhirst (eds) (2021), *Negotiating gender expertise in environment and development: voices from feminist political ecology*.

²³⁶ Online workshop held under Chatham House Rule, April 2022; confidential interview with international climate change researcher, 2022.

²³⁷ Confidential interview with international climate change researcher, 2022.

²³⁸ Confidential interview with international gender equality researcher, 2022.

We are coming to the point of decarbonization where we no longer... know what we're doing in the same way. The low-hanging fruits are gone, so a lot of co-creation and new solutions are needed – which is why it is more important than ever that we find new ways of collaborating.

For example, some research participants suggested the benefits of learning from successful examples of just transition interventions in coal industries in other countries, while noting that international experiences are unlikely to be directly applicable, given the large scale and scope of China's transition away from coal relative to developed countries. An example of a successful international collaboration on women's development and climate change resilience is explored in Box 6 below.

Box 6. Strengthening women farmers' income security and climate resilience in Qinghai province

An international collaboration project addressed women farmers' vulnerability to climate impacts by supporting them to build sustainable, secure livelihoods.

In 2015, Qinghai province was one of the last areas in China with a concentration of people living in extreme poverty, and was experiencing climate impacts such as increasing precipitation and extreme weather events, affecting the security of agricultural livelihoods.²³⁹ Although women comprise 70–80 per cent of the labour force in some rural parts of the province, their income security was limited by gendered division of labour and systemic barriers such as limited access to technology and information.²⁴⁰

From 2015 to 2020, the Strengthening Qinghai Women Farmers' Income Security and Resilience in a Changing Climate project worked with over 69,000 women farmers to adapt to climate risks by addressing some of the root causes of their vulnerability.²⁴¹ By uniting diverse domestic and international stakeholders, UN Women China identified synergistic interventions that would simultaneously reduce poverty, empower women and support their adaptation to climate impacts.²⁴² For example, the project supported Guanglin Cooperative to diversify their crops and livestock, reduce waste and integrate more deeply into local economies despite pandemic-related transport disruptions. This supported community food security during the pandemic, increased the climate resilience of their livelihoods and raised their incomes by 60 per cent within one year.²⁴³ Similarly, the project targeted barriers to women's

²³⁹ UN Women Asia and the Pacific (2021), 'Three years on: Rural women in Qinghai lead from the front as a climate-resilience program winds down in China', <https://asiapacific.unwomen.org/en/news-and-events/stories/2021/10/three-years-on>; IFAD (2022), 'IFAD and UN Women join hands for rural women's empowerment in China', <https://www.ifad.org/en/web/latest/-/ifad-and-un-women-join-hands-for-rural-women-s-empowerment-in-china>.

²⁴⁰ Ibid.; UN Women Asia and the Pacific (2020), 'Digital technology opens a window for rural women in Qinghai', <https://asiapacific.unwomen.org/en/news-and-events/stories/2020/09/digital-technology-opens-a-window-for-rural-women-in-qinghai>.

²⁴¹ UN Women Asia and the Pacific (2021), 'Three years on: Rural women in Qinghai lead from the front as a climate-resilience program winds down in China'.

²⁴² Partners on the project included UN Women, International Fund for Agricultural Development (IFAD), United Nations Environment Programme – International Ecosystem Management Partnership (UNEP-IEMP), the China Disabled Persons' Federation and local government such as the Rural Revitalization Bureau and Women's Federation.

²⁴³ UN Women Asia and the Pacific (2020), 'From flood victims to frontline responders: One women-owned cooperative steps up in rural China', <https://asiapacific.unwomen.org/en/news-and-events/stories/2021/01/from-flood-victims-to-frontline-responders>.

entrepreneurship by facilitating participants' access to information, technology and finance, and addressing entrenched gender norms – ultimately enabling 75 per cent of women participating in entrepreneurship trainings to establish their own businesses.²⁴⁴

Collaboration with specialized organizations, such as the China Disabled Persons' Federation, enabled a more intersectional approach to rural revitalization and women's empowerment. The project provided training in a variety of livelihood skills for people with disabilities and contributed to the employment of over half of participants.²⁴⁵

By addressing the gender division of labour and supporting women's financial independence, the project contributed to shifting social norms. Some participants reported more confidence and increased participation in local affairs – and in Xiaoruoyao village, women took a leading role in community responses to COVID-19.²⁴⁶ Changing gender and social norms takes time and may require other gender-transformative measures, such as balancing the distribution of unpaid household labour, to ensure women are not overburdened with new responsibilities.

Funding for cross-cutting approaches

Globally, the climate finance infrastructure has integrated gender considerations to a limited extent. Oxfam estimates that only 1.5 per cent of climate change-related overseas development assistance identified gender equality as a primary objective, and two-thirds of projects did not consider gender equality.²⁴⁷

These estimates include the support provided by developed countries, as well as multilateral development banks, climate funds and other institutions.²⁴⁸

Of this development assistance, only an estimated 0.2 per cent reaches women led and women's organizations, despite the relevance of many women's development initiatives for a just transition and climate change adaptation.²⁴⁹

The monitoring, reporting and verification of gender considerations in climate finance and development assistance is limited.²⁵⁰ For example, 32 per cent of projects submitted to the OCED Development Assistance Committee in

²⁴⁴ IFAD (2022), 'IFAD and UN Women join hands for rural women's empowerment in China'.

²⁴⁵ IFAD (2022), 'In rural China, new opportunities for persons with disabilities', <https://www.ifad.org/en/web/latest/-/in-rural-china-new-opportunities-for-persons-with-disabilities>.

²⁴⁶ UN Women (2020), 'Roses in the battlefield: rural women farmers join the fight against COVID-19 in China', <https://asiapacific.unwomen.org/en/news-and-events/stories/2020/04/feature-rural-women-farmers-join-the-fight-against-covid-19-in-china>; UN Women Asia and the Pacific (2020), 'From flood victims to frontline responders: One women-owned cooperative steps up in rural China'.

²⁴⁷ Oxfam International (2020), *Climate Finance Shadow Report 2020*, Oxford: Oxfam Great Britain, <https://oxfamlibrary.openrepository.com/bitstream/handle/10546/621066/bp-climate-finance-shadow-report-2020-201020-en.pdf>.

²⁴⁸ Ibid.

²⁴⁹ CCICED (2022), *Policy Measures and Implementation Pathways for the Carbon Emission Peak and Carbon Neutrality Goals*; Jeffs, N. (2022), 'Why women's leadership is key to climate action', *China Dialogue*, 18 January 2022, <https://chinadialogue.net/en/climate/why-womens-leadership-is-key-to-climate-action>.

²⁵⁰ Schalatek, L., Zuckerman, E. and McCullough, E. (2021), *Evaluating the integration of gender in Green Climate Fund projects and programs*, Washington, DC: Heinrich Böll Stiftung Washington, DC and Gender Action, https://us.boell.org/sites/default/files/2021-10/hbs%20Washington_Gender%20Action_More%20than%20an%20add-on_Evaluating%20integration%20of%20gender%20in%20Green%20Climate%20Fund%20projects%20and%20programs.pdf.

2017–18 (reported in 2020) were not screened for gender factors.²⁵¹ This makes tracking progress challenging, and can hold back funders and grantees from evaluating impact.

According to CCICED, the Chinese government has not produced official guidance or policies on integrating gender considerations into climate change finance.²⁵² Data on the integration of gender into climate change-related funding in the Chinese context are lacking, although the international statistics provide a useful baseline. Green finance is rapidly growing in China – with the public sector, including state-owned enterprises, policy banks and state-owned banks, playing a significant role.²⁵³ However, finance deployment will need to rapidly accelerate to meet China’s climate targets – an estimated \$15 trillion in investments will be needed for China to keep its greenhouse gas emissions compatible with a 2°C global temperature rise.²⁵⁴ Increasing the proportion of climate change funding earmarked as gender-transformative, or for which gender is a priority, would make a significant difference to resourcing relevant projects. As in the international context, the current lack of data reporting on the topic makes it challenging to track changes in funders’ priorities and to identify best practices in implementing projects that mainstream gender.

This research project found that the priorities of funding organizations strongly influence the extent to which NGOs and research institutions take inclusive approaches to their work. Many NGOs and research institutions reported that they began to consider gender and inclusion in their work due to it being mandated by their funder – often international funders – in monitoring, evaluation and reporting processes. This provided impetus for learning and adoption of these practices through capacity-building and engaging consultants. On the other hand, several participants reported that if a funder does not prioritize gender and inclusion issues, their own organization will deprioritize them in terms of time and resource allocation, or in one case, even remove related content from reports produced for the funder.

Some funding organizations that participated in research interviews and workshops are building their capacity on mainstreaming gender and inclusion to understand effective ways to advance interdisciplinary approaches to inclusive climate action. However, they face several barriers. Some staff at funding organizations found it difficult to identify entry points for inclusive approaches – for example, how to address underlying gender inequality issues in the renewable energy industry.²⁵⁵ In some cases, organizational leadership did not consider gender-related issues to be relevant to their work – participants interpreted this to be because they considered gender issues to be ‘solved’, or because they were not perceived to be relevant to climate change.²⁵⁶ Participants

²⁵¹ Oxfam International (2020), *Climate Finance Shadow Report 2020*, Oxford: Oxfam Great Britain.

²⁵² CCICED (2022), *Policy Measures and Implementation Pathways for the Carbon Emission Peak and Carbon Neutrality Goals*.

²⁵³ Choi, J., Li, W. and Heller, T. (2021), *The Potential for Scaling Climate Finance in China*, San Francisco: Climate Policy Initiative, <https://www.climatepolicyinitiative.org/wp-content/uploads/2021/02/The-Potential-for-Scaling-Climate-Finance-in-China-1.pdf>; Sandalow et al. (2022), *Guide to Chinese Climate Policy 2022*.

²⁵⁴ Sandalow et al. (2022), *Guide to Chinese Climate Policy 2022*; Myllyvirta (2020), ‘Influential academics reveal how China can achieve its ‘carbon neutrality’ goal’.

²⁵⁵ Confidential interview with staff at a Chinese funding organization, 2022.

²⁵⁶ Ibid; confidential interview with staff at an international funding organization, 2022.

suggested that they needed to undertake gender and inclusion capacity-building to be able to ‘make the case’ internally in their organization for the relevance and benefits of gender and inclusion in environmental-related funding.²⁵⁷ For this, effective monitoring, evaluation and transparent tracking of projects with gender integration is key.

Where funders – especially Chinese funding organizations – with a development or environment focus do not have detailed gender and inclusion requirements (for example, for project proposals, budgeting, monitoring, evaluation and reporting), implementing these can catalyse the uptake of inclusive approaches to rural revitalization and climate action. However, given that many NGOs still have limited capacity on these issues, participants recommended that such requirements should be accompanied by capacity-building support.

Additionally, designing success indicators for systemic approaches to climate action can be challenging. Due to the combination of environmental and social objectives, such indicators typically require both quantitative and qualitative monitoring and evaluation. Systemic change – including changes in social norms and power dynamics – takes a relatively long time. While its impacts can be felt among individuals and communities, it can be time-consuming to capture in monitoring and evaluation processes, and difficult to measure in simple indicators. Flexibility on success indicators relating to gender and inclusion is important. Some participants shared that funders and grantees need to be aligned on the timeline and expectations for social outcomes from inclusive climate action interventions.²⁵⁸

Funders can support the development of innovative new approaches to climate action by supporting interdisciplinary workshops, networks and collaborative programmes.

Funders have a crucial role to play in supporting increased interdisciplinary collaboration on holistic, gender-transformative climate change solutions. While there is interest in interdisciplinary collaboration on gender and inclusion, rural revitalization and climate action among practitioners, resources to support the expansion of such initiatives are currently limited. Funders can support the development of innovative new approaches to climate action by supporting interdisciplinary workshops, networks and collaborative programmes. In workshops for this paper, participants shared that funders can sometimes create an environment of competition between grantees during funding processes.²⁵⁹ However, some funders aim to foster a more collaborative approach, by co-creating systemic solutions to a problem with an interdisciplinary group of grantees during the planning process.²⁶⁰ Following this, different grantees can implement different

²⁵⁷ Ibid.

²⁵⁸ Online workshop held under the Chatham House Rule, April 2022.

²⁵⁹ Ibid.

²⁶⁰ Ibid.; confidential interview with international climate change researcher, 2022.

workstreams according to their expertise – enabling effective and cost-efficient results – which are key considerations for funding organizations. This approach could be expanded in areas including gender-transformative just transition measures, building the climate resilience of education systems and supporting gender-transformative rural revitalization programmes.

International funders are entering the environmental space in China from other issue areas such as poverty alleviation, which may bring in expertise in gender and inclusion for programme design, monitoring and evaluation. Given this background, funders may be interested in financing projects that address both social and environmental dimensions of climate change. Integrating gender and social factors into climate change research and programming could attract more international funding to NGOs and research institutions in China, while offering funders an opportunity for innovation and impact.

04 Conclusions

Gender-transformative, interdisciplinary approaches to climate action are an opportunity for China's research institutions and NGOs to innovate and make progress on national climate and socio-economic goals.

This paper shows that there is a nascent interdisciplinary community of practice – with international ties – working on climate change, rural revitalization and women's development in China. Developing this community of practice is key for establishing more inclusive approaches to climate action in China. Such a network can build a strong evidence base on the differential impacts of climate change and the low-carbon transition in diverse Chinese contexts. This can take many forms, including the collection of sex-, age- and diversity-disaggregated data, interdisciplinary qualitative research on the impacts of climate change and climate action measures on communities, and sharing lessons learned from programmes and community projects.

To conduct such work effectively, many researchers and practitioners would require increased capacity-building – including training and exposure to case studies – on approaches to integrating gender and inclusion considerations in work on climate change. Funding to develop inclusive, gender-transformative climate change research and programmes is also important. Demonstrating the effectiveness of inclusive approaches to climate action – through research and programme monitoring and evaluation – can attract attention from domestic and international funders and galvanize support.

For a wider impact, sharing the results of this research and practice outside an expert community – with both policymakers and the public – is crucial. Sharing evidence from diverse Chinese contexts and multi-stakeholder dialogues can support capacity-building on this topic for central and subnational level officials. This can in turn contribute to cross-cutting policymaking and implementation, and potentially increased funding for more holistic approaches to climate action. Public engagement and outreach through conventional and social media can build public understanding of the differential impacts of climate change and the benefits of inclusive climate solutions. It could help to boost participatory community solutions to climate change, rural revitalization

and women's development. Ultimately, these approaches can accelerate action on China's 2030 carbon peaking and 2060 carbon neutrality goals, while contributing to gender equality in the pursuit of a just transition, common prosperity and 'ecological civilization'.

Risks

While the four key levers established in this paper are mutually reinforcing, there are some risks that could affect the adoption of more inclusive approaches to climate action in China. Gender and inclusion in climate action may be perceived as a Western concept that is not applicable to China. This is because much of the research and developments on integrating gender in climate change programming and policy have taken place internationally,²⁶¹ and gender mainstreaming in climate policies is an emerging international norm in the UN climate change regime.²⁶² However, research and experimentation with gender-transformative climate and development programmes in diverse Chinese contexts can demonstrate the co-benefits of these approaches relevant to China. Additionally, these cross-cutting approaches to climate action are important to overarching Chinese policy goals such as the achievement of 'ecological civilization'.

As gender and inclusion indicators are not yet integrated into guidance and performance evaluations for officials overseeing environmental issues,²⁶³ these considerations may be perceived as additional burdens or overly politically sensitive, and receive pushback, especially at provincial and municipal levels. Inclusive approaches to climate change may also be dismissed or deprioritized due to the urgency of climate change mitigation efforts, given China's national targets. However, just transition approaches can, in fact, ensure public acceptance of climate change mitigation policies and contribute to social stability – on which officials are evaluated – particularly in the most affected communities in China's coal-producing northern and western provinces.²⁶⁴ In addition, developing an evidence base of inclusive climate action programmes can demonstrate the resulting co-benefits and their contributions to meeting multiple national socio-economic and climate goals.

Given China's size and diversity, no 'one size fits all' solution to gender-transformative climate action exists. In the process of experimenting with different climate change adaptation measures, it is possible that some maladaptation examples emerge, which could result in cross-cutting gender-transformative solutions being dismissed. Yet, China has a history of successful local-level policy

²⁶¹ Huyer, S., Acosta, M., Gumucio, T. and Ilham, J. I. J. (2020), 'Can we turn the tide? Confronting gender inequality in climate policy', *Gender and Development*, 28(3), pp. 571–591, <https://doi.org/10.1080/13552074.2020.1836817>.

²⁶² UNFCCC (2021), 'The Big Question: Why is Gender Central to Climate Change Action?', United Nations Climate Change, 26 March 2021, <https://unfccc.int/blog/the-big-question-why-is-gender-central-to-climate-change-action>; Blomstrom, E. and Burns, B. (2017), 'Global policy landscape: A supporting framework for gender-responsive action on climate change', in Granat, Owren and Aguilar (eds) (2017), *Roots for the Future: The Landscape and Way Forward on Gender and Climate Change*, Washington DC: International Union on the Conservation of Nature and Global Gender and Climate Alliance, <https://wedo.org/wp-content/uploads/2015/12/Roots-for-the-future-final-1.pdf>.

²⁶³ Gallagher and Xuan (2019), *Titans of the Climate: Explaining Policy Process in the United States and China*.

²⁶⁴ Schröder (2020), *Promoting a Just Transition to an Inclusive Circular Economy*; Newell (2018), 'Squaring urgency and equity in the Just Transition debate'.

experimentation that can inform national-level policymaking. For example, China piloted its emissions trading scheme in 2011, including eight provinces and cities over subsequent years, which informed the design of a national scheme launched in 2021.²⁶⁵ Embracing this tradition of innovation can support the development of inclusive approaches to climate action tailored to diverse contexts in China.

Recommendations

Based on participatory research with academics and practitioners working in China, this paper proposes four levers to foster more inclusive and gender-transformative climate action in China: improving data collection, integrating research agendas, interdisciplinary and international collaboration, and increased funding for cross-cutting initiatives. Based on these four levers, researchers, practitioners and funders across the fields of climate action, poverty alleviation and women's development in China (based internationally, in Hong Kong SAR or mainland China) could consider the following actions:

Data collection

Researchers and practitioners:

- Increase collection of sex-, age- and diversity-disaggregated environmental data, and conduct research – especially interdisciplinary qualitative research – on the differential impacts of climate change and the low-carbon transition. This evidence base can help to design targeted interventions for equitable socio-economic and climate outcomes in diverse Chinese contexts while preparing for future climate impacts. It can also demonstrate the value of gender-transformative adaptation measures to policymakers and the public.

An interdisciplinary community of practice on gender and inclusion in climate action

Researchers and practitioners:

- Combining climate change, women's development and rural revitalization research agendas – through building an interdisciplinary community of practice via policy and academic networks – can help to identify cross-cutting solutions to environmental and social issues. For example, gender-transformative interventions that improve women's access to and control over land, education and credit, and address unequal gender norms, can support women's climate change resilience and bring social and environmental co-benefits. Such a network can also support entrepreneurs on gender and inclusion to advance the uptake of inclusive approaches in their environment and development organizations.

²⁶⁵ Sandalow et al. (2022), *Guide to Chinese Climate Policy 2022*; Liu, H. (2021), 'In-depth Q&A: Will China's emissions trading scheme help tackle climate change?', *CarbonBrief*, 24 June 2021, <https://www.carbonbrief.org/in-depth-qa-will-chinas-emissions-trading-scheme-help-tackle-climate-change>.

- Developing a community of practice may require experts and practitioners to undertake additional capacity-building on integrating gender and inclusion in environmental research and programmes, and vice versa. Rural revitalization and poverty reduction experts can share expertise on integrating environmental and gender equality considerations into holistic solutions.

Funders:

- A gap in resources exists for capacity-building workshops on gender and inclusion in climate action, and for developing a combined research programme on gender-transformative climate action in China – for example, on strengthening the climate resilience of education and healthcare systems in ways that improve access for disadvantaged social groups. Supporting the development of a community of practice on gender and inclusion in climate action in China can accelerate the development of innovative research and practice, with benefits for public participation in climate action and inclusive policy implementation.

Interdisciplinary and international collaboration on gender-transformative programmes

Researchers and practitioners:

- Interdisciplinary and international collaboration on gender-transformative climate change programmes can foster innovation and harness synergies between gender equality and climate action. Key areas for such collaborations include programmes to ensure that all people – including low-income, rural and rural-to-urban migrant women – have opportunities to access ‘green jobs’ in a just transition.
- Share case studies of gender-transformative programmes in diverse Chinese contexts with funders and policymakers, as they can help to demonstrate the co-benefits of inclusive approaches to climate action and identify successful interdisciplinary approaches that could be scaled up through cross-sector policy measures. It may be helpful to consider their potential contributions to national policy goals such as common prosperity, building an ‘ecological civilization’ and meeting China’s 2030 and 2060 climate goals. Disseminating these case studies more widely can also help to build public awareness.

Funding for cross-cutting approaches

Researchers and practitioners:

- Consider cross-cutting approaches to climate action as an opportunity to innovate and attract international funding – for example, through engaging with funding organizations to understand their priorities on gender and inclusion and exploring interdisciplinary collaboration in funding bids. Capacity-building on gender mainstreaming in project planning, budgeting, monitoring and evaluation may be required if funders implement more comprehensive gender and inclusion requirements.

Funders:

- Building internal capacity on gender mainstreaming and the synergies between gender and social equality, socio-economic development and climate action can help funding organizations to understand the co-benefits of gender-transformative and cross-cutting approaches to environment-related funding. An increased evidence base of cross-cutting inclusive climate and development programmes can help changemakers in funding organizations to ‘make the case’ internally for these approaches.
- Supporting inclusive approaches to climate action offers an opportunity for impact and innovation in China. Funders can bring together coalitions of partners from a range of disciplines to opportunities for cross-cutting programmes – providing strategic direction, while grantees implement work according to their expertise.
- Of the estimated \$15 trillion in investments needed for China to keep its emissions compatible with a 2°C global temperature rise (even more for 1.5°C),²⁶⁶ increasing the proportion of climate change funding earmarked as gender-transformative, or for which gender is a priority, would make a marked difference. Requiring gender and social considerations in project planning, budgeting, monitoring, evaluation and reporting can support their adoption among climate change and rural revitalization researchers and practitioners.
- However, as systemic change takes a relatively long time, funders and grantees need to be aligned on the timeline and expectations. Openness to a range of qualitative and quantitative indicators on gender and inclusion in climate action can support the implementation of more innovative approaches.

Through exchange and collaboration, researchers and practitioners in climate action, rural revitalization and women’s development in China could build a strong evidence base on gender and inclusion in climate action. This could unlock the development of gender-transformative programmes, as well as cross-sectoral policy dialogue and public awareness on gender-transformative climate change solutions. Given the urgency and wide-ranging impacts of the climate crisis, rural–urban inequities, and gender inequality, combined solutions have never been more important.

²⁶⁶ Myllyvirta (2020), ‘Influential academics reveal how China can achieve its ‘carbon neutrality’ goal’.

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