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Sustainable services for whom? Ensuring rural water service delivery supports equality

Greater effort is needed to ensure progress in rural water service delivery is reducing inequalities in service levels, promoting inclusive decision-making and providing equitable benefits. To date much of the discussion, practice, and policy on service delivery innovations in rural water supply has neglected these considerations in favour of operational sustainability.

This brief highlights the latest thinking in rural water sustainability, with a focus on achieving equality in rural water service provision. It argues that intra-community inequalities are likely to persist despite advances in operational sustainability or functionality, and that complementary actions to reduce inequalities are required. It proposes generic steps for policymakers and practitioners to consider when designing, weighing up, promoting, or evolving service delivery innovation to ensure that services are operationally sustainable, inclusive, and provide adequate service levels for all.

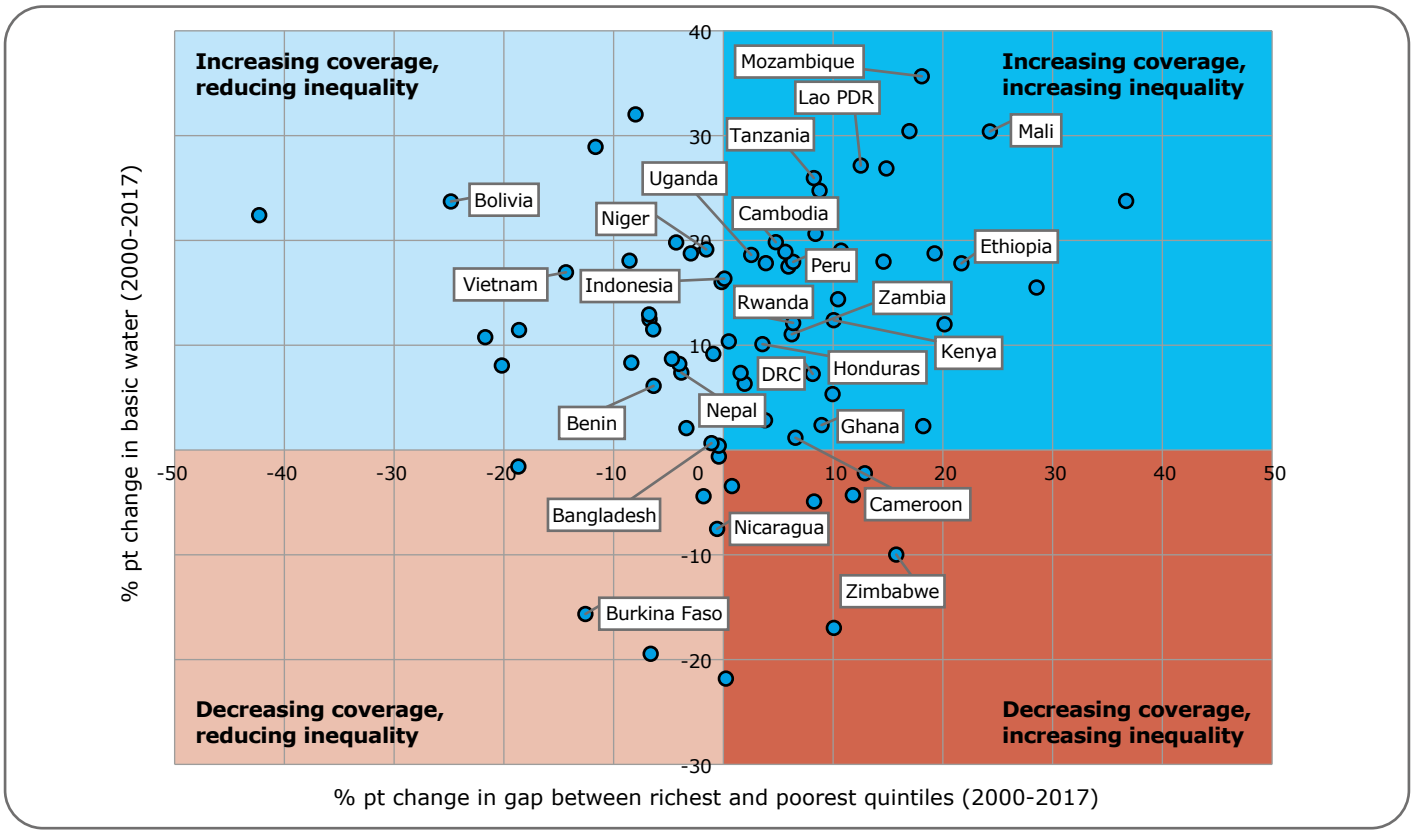
Key messages

Innovations in rural water service delivery must consider how to overcome barriers to equality alongside improvements to functionality. Benefits of improved functionality are not likely to be distributed equally without considering the different needs and influence over decision-making of members within the community.

The ways in which inequalities are reproduced partly stem from the type of service delivery model followed, and solutions need to be designed accordingly. The service authority must implement mechanisms for incentives and accountability that ensure service providers are inclusive, and that they deliver equitable services.

Generic actions can support equality under any service delivery model, and these should be considered alongside functionality innovations. 'Good practice' actions for equality should be prioritised alongside improvements to functionality and not left as an afterthought.

Figure 1: Changes in basic water coverage and inequalities between richest and poorest in rural areas, by country, 2000-2017 (%)[1]



Lessons and insights in this brief are drawn from the Gender and Social Inclusion in Rural Water Supply Management Models multi-country learning event held in Kenya in 2018, facilitated by SNV and ISF-UTS; contributions to a related Rural Water Supply Network (RWSN) Leave No-one Behind (LNOB) three-week e-discussion on inclusive management innovation; and a synthesis of select sector literature and case studies.

Persistent challenges

Despite substantial progress in expanding access to improved water sources in rural areas in recent decades, progress has been uneven (Figure 1). Rural water systems are commonly affected by functionality issues that limit service levels.

Inadequate operation and maintenance of water supply infrastructure threatens to undermine improved water sources in rural areas. Many water supplies are functioning but provide sub-standard service in terms of water quality, reliability, availability, or quantity.

Meanwhile, disadvantaged individuals and groups often receive lower service levels than others in their own community and are excluded from decision-making processes. Publicly available disaggregated monitoring data on water access for disadvantaged groups, aside from the poorest, is lacking, but anecdotal and case study evidence abounds.[2]

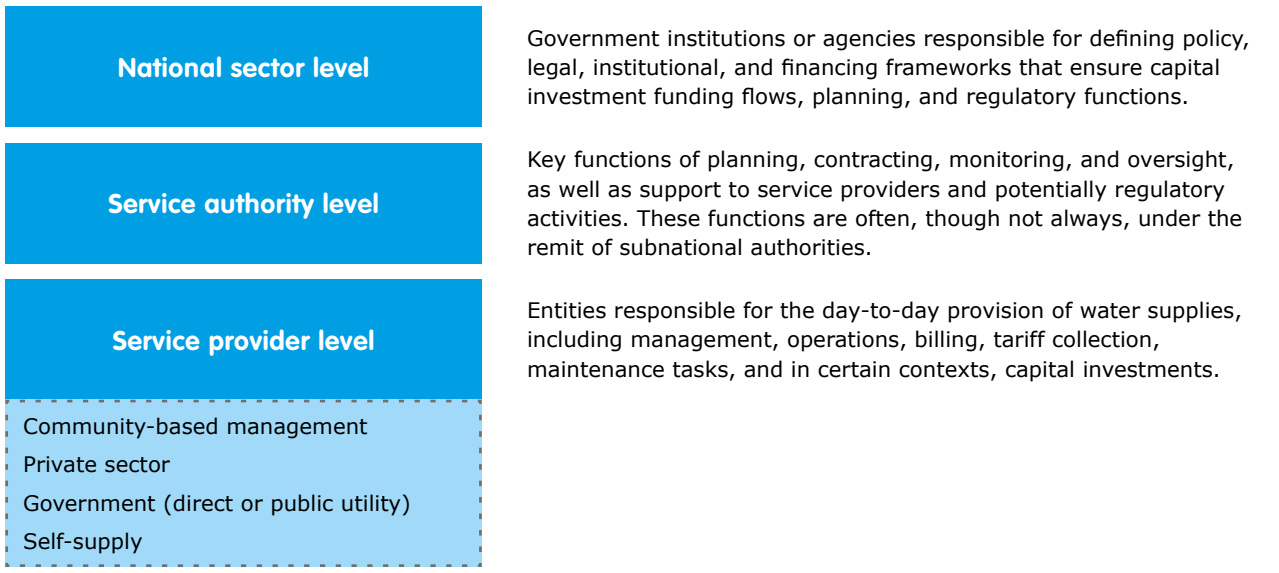
Rural water management models and equality

The increased attention of the global WASH sector on long-term service delivery has deepened scrutiny of rural water service delivery models. These are often classified into four broad, simplified management models – private sector, government, community-based, and self-supply – each of which operates under a service authority and national actors[3] (Figure 2).

All management models have potential to reproduce inequalities. The service authority plays

[1] WHO/UNICEF, *Progress on household drinking water, sanitation and hygiene, 2000-2017: Special focus on inequalities,* Geneva, WHO/UNICEF, 2019.
[2] 16 illustrative case studies across 13 countries are available at https://www.inclusivewash.org.au/case-studies/.
[3] World Bank, *Sustainability Assessment of Rural Water Service Delivery Models: Findings of a Multi-Country Review,* Washington DC, World Bank, 2017.

Figure 2: Service delivery model comprising rural water management models operating under a service authority and national actors[4]



a critical role in ensuring that service equality is supported. They must implement mechanisms to incentivise service providers to deliver equal services to hold them accountable. Policy, legal, institutional, and financing frameworks are necessary for guiding and enabling service authorities.

In this section, we discuss challenges for equality within communities associated with each type of service provider.

Community-based management

Community-based management (CBM) continues to be the dominant management model in rural low- and middle-income countries despite intensifying criticisms relating to sustainability.[5,6] In its most basic form, management responsibilities lie exclusively with users via a community organisation such as a water committee.

Without oversight from government or civil society organisations, CBM models tend to replicate existing hierarchies and inequalities in communities. Social norms may lead to the exclusion of certain groups from community decision-making on rural water management, or even accessing water points. For example, in Nepal, people have been excluded from local water committees on the basis of gender, age, and disability status, and have been denied access to communal water taps on the basis of caste.[7] Non-governmental organisation (NGO) or government water supply implementation projects that do not actively account for community power dynamics may inadvertently only engage community elites in design and management training. This can lead to water supplies that provide higher levels of service to elite groups to the neglect of less powerful groups.[8]

Private sector

The aim of private sector service delivery is not only to bring greater professionalism, but also a commercial logic, through entrepreneurs or businesses acting as service providers.

[4] Adapted from World Bank, *Sustainability Assessment of Rural Water Service Delivery,* 2017.

[5] E. Chowns, 'Is community management an efficient and effective model of public service delivery? Lessons from the rural water supply sector in Malawi' *Public Administration and Development,* vol. 35, no. 4, 2015, pp. 263-276.

[6] L. Whaley and F. Cleaver, 'Can 'functionality' save the community management model of rural water supply?' *Water resources and rural development,* vol. 9, 2017, pp. 56-66.

[7] M.B. Sarwar and N. Mason, *How to reduce inequalities in access to WASH: Rural water and sanitation in Nepal,* London, ODI, 2017.

[8] B. Van Koppen, V.C. Rojas and T. Skielboe, 'Project politics, priorities and participation in rural water schemes', *Water Alternatives,* vol. 5, no. 1, 2012, p. 37.

However, the commercial logic of private sector service providers may skew their decisions and priorities towards a more commercially attractive or lower-risk customer base that excludes the poorest.[9] Moreover, piped water service provision is often monopolistic and regulation that might otherwise protect customers is largely absent in rural areas of low- and middle-income countries. For example, research in rural Vietnam demonstrates that poor households often receive lower service coverage from privately operated piped water supplies than non-poor households.[10] They are also likely to pay higher fees. Further, women and disadvantaged groups often have less decision-making influence on service delivery under private sector models due to norms around who should run a water enterprise. For example, women in Southeast Asia are underrepresented in WASH entrepreneurship and face additional challenges to men, such as lower access to financing.[11]

Government direct service provision or public utility

Government service delivery allocates the majority of day-to-day management and operational responsibilities to local or sub-national government actors, or a government corporate entity. This could be in the form of a publicly-owned utility covering a rural town or multiple communities, or local government departments or village governments that manage more discrete, community-scale water supplies.

In theory, the state (acting as service authority) can more easily mandate that government-managed water supplies provide equal levels of service compared to other service providers. However, local governments continue to be beset with low human resource capacity, weak financing, poor coordination and regulation, and even conflict of interest that hinders their ability to deliver adequate water services,[12] let alone address inequalities, especially in more remote rural areas.

Self-supply

Self-supply models are present where a household or a small group of households invest in, maintain, and partially or wholly meet their water needs through a household-scale water supply, such as a private well or a domestic rainwater harvesting system.

Although direct evidence is limited, unregulated self-supply models are theoretically problematic in terms of equitable service. Self-supply models are generally more favourable for wealthier households that can afford to construct and maintain good quality systems. The highly decentralised and sometimes informal nature of self-supply water systems also presents challenges for monitoring, making it difficult to identify disadvantaged users that may require support.

[9] World Bank, 2017.

[10] N. Carrard, B. Madden, J. Chong, M. Grant, T.P. Nghiêm, L.H. Bùi, H.T.T. Hà and J. Willetts, 'Are piped water services reaching poor households? Empirical evidence from rural Viet Nam', *Water Research*, vol. 153, 2019, p. 239-250.

[11] C. Leahy, J. Lunel, M. Grant and J. Willetts, *Women in WASH Enterprises: Learning from female entrepreneurship in Cambodia, Indonesia and Lao PDR, Enterprise in WASH – Working Paper 6*, Sydney, Institute for Sustainable Futures, University of Technology Sydney, 2017.

[12] J. Boulenouar, *Capacity support to local governments*, The Hague, IRC, 2015.

Table 1: Summary of service delivery actors and examples of opportunities and challenges for equality in water service delivery

Service delivery actor	Description	Challenges for equality	Opportunities to support equality
Community management	Water supply is managed primarily by users living within the community, although support may be provided by external actors	• Management structures may mirror traditional roles and power relations, resulting in limited opportunities for women and marginalised groups to influence decision making • Intra-community power dynamics can create unequal levels of water access across households	• Challenge social norms that exclude certain groups from leadership and decision-making roles • Ensure implementers consult a range of community groups to design a water supply that reaches all, and provide a mechanism for making complaints to the service authority if service levels are not being met
Private sector	A private entrepreneur or business manages, or provides critical management functions for, the water supply following commercial principles	• Poor communities and households may not be serviced because service providers see them as less profitable customers • Communities distant from urban centres may be systematically excluded from services due to location and service providers seeking economy of scale of service • Potential for private service delivery to be dominated by traditionally powerful groups	• Mandate or provide incentives to private providers to deliver services to poorer households and communities • Establish a tariff scheme that subsidises services to poorer customers while also recovering costs • Promote participation in entrepreneurial opportunities (appropriately supported) for women and marginalised groups
Government	Water supply is managed primarily by mandated government actors via a publicly owned utility or local departments	• Limited resources for reaching rural areas far from urban centres • Limited resources for ensuring services are adequate for all	• Mandate government service providers to target under-served areas, and mobilise subsidies or cross-subsidy mechanisms to ensure everyone is reached
Self-supply	A single household or small group of households manage a water supply that only services the household(s) that manage it	• Favours wealthier households that can afford their own high quality water supplies • Generally more difficult to monitor and target support than water supplies under other models	• Develop stronger policy direction on how government can support self-supply, for example by subsidising self-supply for unserved households and regulating private borehole drillers

Note: Across the four rural water supply management models, the service authority is responsible for ensuring actions to support equality, and may be the most appropriate entity to carry these out. However, other actors (e.g., from service providers or development agencies) could also carry these out depending on the context.

Service delivery innovation and equality in the rural water sector

Despite limited systematic documentation, there exist many potential options for supporting equitable service level outcomes in an area and inclusion in decision-making for rural water. In this section, we share five generic steps for supporting equality that will be applicable to most rural water service delivery models.

Monitor equality of water services on an ongoing basis

The Human Rights to Water and Sanitation framework requires the state to ensure that monitoring of access to water services for all is carried out, including monitoring inequalities.[13] Monitoring mechanisms often assume that the presence of a water supply in a community means everyone receives an equal level of service from it, but this is not always the case.

One way to assess the standard of service that different households are receiving is through household surveys, conducted by the service authority or service provider. NGOs and governments can support the development of simple monitoring and evaluation indicators for measuring equality. Surveys of the service providers could also be used to assess gender and social inclusion among water managers and operators. Monitoring data makes it possible for governments to make evidence-based decisions about where to invest resources.

Commit financing to ensure that services are affordable for all

Management model innovation is often underpinned by the logic that operational improvements will bolster users' willingness-to-pay. However, in some instances, the introduction of new or increased users' fees to cover the costs of management innovations have led users to shift to using alternative unimproved water sources.

A key question is how to target subsidies or other financing mechanisms to support households most in need. First, households requiring subsidies need to be identified. Second, there needs to be a mechanism for directing the financial support accordingly. Household-level cross-subsidies are not uncommon for piped schemes,[14] though for communal water points these have tended to be a more informal mechanism.[15] The best strategies for making water services more affordable to poor and disadvantaged groups depend on a range of contextual factors.[16]

Proactively meet the needs of people with different physical, sensory, and cognitive abilities

Many barriers prevent people with different physical, sensory or cognitive abilities (relating to disability, ageing, pregnancy, etc.) from accessing functional water supplies. Consequently, these people may receive lower levels of service than others in their community or household. They may also become dependent on others for water access, which can lead to a deterioration of their health and hygiene and put them in a position to be financially or sexually exploited.[17]

Management innovations can play an important role in facilitating the meaningful participation of people with disabilities to ensure barriers are identified and overcome. Below is a summary of the following essential elements for meaningful participation.[18,19]

- Involve potentially disadvantaged people in setting out the terms of engagement.
- Create space for participation: enable people to access the participatory process by addressing barriers (such as language, meeting venues, time, and information) and raise awareness among others of the value of their participation.
- Guarantee free and safe participation.
- Ensure access to information in a form and language they can understand.

[13] C. de Albuquerque, *Realizing the human rights to water and sanitation-A handbook by the UN Special Rapporteur Catarina de Albuquerque*. UN Special Rapporteur on the human right to safe drinking water and sanitation, Portugal, 2014.

[14] For example: N. Carrard, B. Madden, J. Chong, M. Grant, T.P. Nghiêm, L.H. Bùi, H.T.T. Hà and J. Willetts, 'Are piped water services reaching poor households? Empirical evidence from rural Viet Nam', *Water Research*, vol. 153, 2019, pp. 239-250.

[15] R. Carter, E. Harvey and V. Casey, 'User financing of rural handpump water services', in *IRC Symposium 2010: Pumps, Pipes and Promises*, The Hague, IRC, 2010.

[16] G. Hutton and L. Andres, 'Counting the costs and benefits of equitable WASH service provision' In Cumming, O. and Slaymaker T. (eds) *Equality in Water and Sanitation Services*, doi: https://www.routledge.com/Equality-in-Water-and-Sanitation-Services/Cumming-Slaymaker/p/book/9781138203518.

[17] World Bank. *Including persons with disabilities in water sector operations: a guidance note*. Washington DC, World Bank, 2017.

[18] J. Wilbur, L. Gosling and H. Jones, 'Breaking the barriers: Disability, ageing and HIV in inclusive WASH programming' In O. Cumming and T. Slaymaker (eds) *Equality in Water and Sanitation Services*, doi: https://www.routledge.com/Equality-in-Water-and-Sanitation-Services/Cumming-Slaymaker/p/book/9781138203518.

[19] C. de Albuquerque, *Realizing the human rights to water and sanitation*, 2014.

- Provide a real opportunity to influence decision-making and make sure people understand the process.

Communities, local governments, and private operators often do not have the experience, knowledge, and tools to ensure the above elements are achieved safely for people with disabilities, so the engagement of Disabled People's Organisations are critical for support.

Put in place contractual and regulatory safeguards, and support social accountability

As the duty-bearer of the human right to water and sanitation, governments are ultimately responsible for ensuring universal access to an adequate water service level within their jurisdiction. From an operational standpoint, private sector service providers are often incentivised and held to account by way of performance-based contracts, tied to achievement of defined performance indicators.[20] A similar contractual mechanism can be used to incentivise service providers to deliver equitable services, provided that relevant data are collected.

However, in dispersed rural areas of low- and middle-income countries, regulatory arrangements for water services are typically weak or non-existent.[22] Social accountability mechanisms, whereby citizens are provided with the necessary tools and knowledge to hold the state accountable for ensuring their needs are met, are potential pathways to filling gaps in regulatory oversight. These can and should be designed to be inclusive of the voices of different users on advocating for their rights to adequate water services.[23,24]

More effectively address inclusion of women as rural water managers

The value of including women in water service management has been supported by the WASH sector for many years. However, a more nuanced understanding of what women's inclusion in rural water service delivery means and how to achieve it is needed. A common instrumentalist interpretation of the value of women's inclusion in decision-making is that their insights will lead to a more functional and efficient water service.[25] While there may be truth to this, it overlooks the opportunity for WASH to be an entry point to challenge unequal power relations and, if applied uncritically, can create burdensome obligations for women and even further entrench power of men over women.[26]

Therefore, it is important to remove the social, political, and economic barriers that inhibit women from naturally acting as service providers or influencing water management decisions. Water management interventions that seek to include women should go beyond mandating their equal representation to include mechanisms that proactively address the gendered barriers that women face.

Conclusion

There is growing interest and experimentation in service delivery innovations that improve the sustainability of rural water service delivery in low- and middle-income countries. However, comparatively less attention has been paid to what these innovations mean for equality. While there is emerging evidence of positive impacts of new management models on operational outcomes, less is known about how innovations influence inclusion and inequalities. Service providers, governments, and development actors must take steps to ensure operational improvements improve the equality of outcomes and not detract from them. Furthermore, innovations that focus on improving equality of services where sustainability is already strong deserve more consideration in research, policy, and practice.

[20] H. Lockwood, *Sustaining rural water: A comparative study of maintenance models for community-managed schemes*. Washington DC, USAID, 2019.

[21] H. Lockwood, *Sustaining rural water*, 2019.

[22] M. Naughton, R. Deshmukh, S. Ahrari and L. Gosling, *Social accountability for rural water services: Summary of RWSN e-discussion*, St. Gallen, RWSN, 2018.

[23] Future outputs from ongoing research on gender transformative social accountability for WASH will be made available at https://waterforwomen.uts.edu.au/social-accountability/

[24] K. Winterford, P.K. Panday, H.S. Baroi, A.H.M.K. Ahsan, T. Megaw and J. Willetts, *Learning Report from the Nobo Jatra Program: Gender-transformative social accountability for inclusive WASH*. Prepared for World Vision Bangladesh. Sydney, Institute for Sustainable Futures, University of Technology Sydney, 2020.

[25] S. Soeters, N. Carrard, M. Grant and J. Willetts, *Women's empowerment: sharpening our focus*. Water for Women: Gender in WASH - Conversational article 1, Sydney, Institute for Sustainable Futures, University of Technology Sydney, 2019.

[26] S. Soesters, N. Carrard, M. Grant and J. Willets, *Women's empowerment*, 2019.

There are many potential pathways to improving equality in rural water services in terms of supporting equal service levels in an area, and in terms of equal decision-making. The body of evidence on the operational impact of new management models will undoubtedly continue to grow. Documenting equality impacts and extracting the lessons from both successes and failures will be critical for the attainment of sustainable and inclusive water services for all.

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Beyond the Finish Line - Inclusive and Sustainable Rural Water Supply Services

BFL - Inclusive and Sustainable Rural Water Supply Services in Nepal aims to improve the health, gender equality and social inclusion, and well-being of 40,000 people in the rural districts of Dailekh and Sarlahi by supporting inclusive, sustainable and resilient rural water supply services and hygiene promotion.

SNV

SNV is a not-for-profit international development organisation that makes a lasting difference in the lives of people living in poverty by helping them raise incomes and access basic services. Focusing on three sectors – Agriculture, Energy and Water, Sanitation and Hygiene (WASH) – SNV has a long-term, local presence in over 25 countries in Asia, Africa and Latin America.

ISF-UTS

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Photos ©ISF-UTS
P1: A community water committee and users convene in Nepal (Jeremy Kohlitz)
P4: Collecting water at communal water point in East Timor (Juliet Willetts)

For more information

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