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Evaluation of WFP's R4 Rural Resilience Initiative in Zambia (2014–2025)

Decentralized Evaluation Final Report

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Smallholder farmer participating in the R4 project in Zambia

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Executive summary

1. This report presents findings from the evaluation of WFP's R4 Rural Resilience Initiative in Zambia, commissioned by the WFP Zambia Country Office. The evaluation covers the full programme lifecycle from June 2014 to June 2025, with data collection conducted in November 2025. Over three phases, R4 reached 17,835 smallholder farmers across six drought-prone districts of Southern province, delivering an evidence-based response to the climate and food security challenges facing Zambia's most vulnerable rural communities.

Context

2. During the evaluation period, Zambia experienced significant economic and climatic volatility. Gross domestic product (GDP) growth slowed between 2022 and 2024, inflation exceeded 16 percent in late 2024, and the Russia–Ukraine war drove fertilizer prices up by 40–60 percent. The COVID-19 pandemic of 2020–2021 severely affected interaction between staff and beneficiaries, and the 2023–2024 El Niño drought - the worst in forty years - destroyed approximately one million hectares of maize and drove 5.8 million Zambians into integrated food security phase classification (IPC) Phase 3 or worse. R4 continued to deliver planned activities throughout this unprecedented convergence of shocks.

Subject of the evaluation

3. R4 operated across three phases with total programme funding of approximately USD 6 million from the Swiss Agency for Development and Cooperation (SDC), with complementary funding from the Korea International Cooperation Agency (KOICA). The initiative employed an integrated risk management approach comprising conservation agriculture (CA) for risk reduction; weather-indexed micro-insurance for risk transfer; microcredit for risk-taking; village savings groups for risk retention; market linkages for diversification; and government capacity building. The Theory of Change (ToC) posited that this integrated strategy would enable smallholder farmers to transition to self-reliant, agriculture-based livelihoods. Implementation was conducted through implementing partners[1], including Development Aid from People to People (DAPP), Heifer International, Self Help Africa (SHA), and Vision Fund.

Methodology

4. The evaluation employed a mixed-methods design combining a household survey of 591 households (558 R4 beneficiaries, 33 control households), 43 key informant interviews, and 16 focus group discussions across all six districts. A desk review incorporated 52 programme documents. The small control group constrains statistical precision; findings were triangulated across multiple sources to strengthen conclusions.

Findings

Relevance

5. **R4 demonstrated strong alignment with Zambia's national development priorities**, mapping directly onto Vision 2030 and the Eighth National Development Plan (2022–2026). Its risk management interventions aligned with Zambia's National Adaptation Plan and Nationally Determined Contributions, contributing to multiple SDGs. WFP's positioning of R4 within successive country strategic plans ensured

[1] The report deliberately uses 'implementing partner' instead of 'cooperating partner.' Globally, WFP applies 'cooperating partner' to non-governmental organizations (NGOs) engaged through field-level agreements, but in Zambia the term denotes a broader set of development partners. For clarity, 'implementing partner' is therefore used to refer specifically to the NGOs WFP worked with during the R4 initiative.

coherence with the broader UN system response.

Effectiveness

6. **R4 components delivered benefits to beneficiaries, particularly through CA, savings groups, and climate information services**. Conservation agriculture techniques provided meaningful protection during drought years, although adoption was typically confined to small portions of farmland due to labour intensity and input costs. Livelihood diversification and savings interventions emerged as a critical pathway linking R4 participation to improved dietary diversity, particularly through enhanced income stability and income sources, reducing dependence on rain-fed agriculture alone.

7. **The savings component and climate services proved transformational**, providing rural communities with affordable credit and financial safety nets. Climate information services were rated highly reliable by 95 percent of beneficiaries, with over 75 percent using rainfall data to optimize planting decisions. Where challenges arose, WFP demonstrated adaptive capacity by redesigning delivery models and pivoting to the Savings for Change (SfC) approach.

8. **In Phase 3, R4 placed women's economic empowerment at its centre**, with women representing around two thirds of beneficiaries and holding over 42 percent of leadership positions. Savings groups enabled transitions from subsistence piecework to small business ownership.[2] Gender-transformative training shifted household decision-making towards joint financial planning, and some women leveraged R4 leadership experience to assume formal governance roles. Early intra-household tensions were successfully addressed through couples-based training. Efforts to include persons with disabilities, youth, and elderly populations remained uneven.

9. **R4 achieved or approached its core outcome targets despite challenges**. Food security outcomes deteriorated sharply during the 2023-2024 El Niño crisis - acceptable food consumption scores (FCS) declined to 34.4 percent - before recovering to 92.8 percent at endline (103.1 percent of target). Conservation agriculture adoption reached 99.1 percent for at least one technique against a 70 percent target, and 71.9 percent of households accessed climate information services (102.7 percent of target). Income diversification was the strongest outcome area, with 88 percent of households diversifying income sources against a 60 percent target (146.7 percent of target for women-headed households). Over 50 percent of beneficiaries interviewed reported livestock sales as a primary source of income, and are increasingly moving towards livestock husbandry instead of crops as a hedge against erratic rainfall.

10. **Insurance enrolment reached 82.1 percent against an 80 percent target, and savings group participation at 66.8 percent substantially outperformed the control group (39.4 percent).** Women-headed households outperformed men-headed households in savings participation (72.1 versus 65.3 percent) and insurance payout receipts (52.7 versus 46.4 percent). Post-harvest losses declined from 49 percent at baseline to 14.2 percent by the Phase 2 endline. The main underperformance was commercial credit access (20.1 percent against a 50 percent target), where harsh debt recovery practices limited uptake. Coping strategy reduction targets were not achieved, reflecting the severity of Phase 3 shocks.

11. **The Maano virtual farmers market platform grew from approximately 7,000 registered farmers in 2021 to over 105,000 by late 2023**, over two thirds of whom were women and youth. WFP successfully handed the platform to the private sector operator Digital PayGo. The micro-aggregator model, while constrained by liquidity challenges, produced success stories where aggregators grew into multi-district commercial operators.

[2] Business was reported as the primary income source by 47.5% of the Early Cohort and 54.7% of the Late Cohort. The proportion of women beneficiaries reporting business as their primary income source rose from 36.2% at baseline to 57.1% at endline.

Efficiency

12. **Activities were delivered within intended timeframes.** Early cohort beneficiaries demonstrated deeper engagement with resilience infrastructure - higher savings and insurance enrolment and stronger CA adoption - while later cohorts reported better immediate food security outcomes, suggesting financial inclusion pillars require extended multi-year engagement. Community-embedded staffing models proved most effective. The termination of one implementing partner agreement mid-programme underscored the importance of rigorous pre-implementation capacity assessment.

Impact

13. **R4's most significant achievement was supporting the Government's integration of crop insurance into the Farmer Input Support Programme (FISP),** bringing coverage to over one million smallholder farmers nationally. WFP leveraged institutional credibility to align Government, insurers, and technical partners, provided technical assistance improving insurance design, secured value added tax (VAT) waivers, trained officials across 116 districts, and facilitated a USD 34.4 million insurance payout in 2024.

Coherence

14. **While R4's integrated design was conceptually strong, operational integration at community level was only partially realised**. Participation across components highlighted the need for more structured coordination mechanisms and integrated beneficiary tracking systems. Short-term field-level agreements (FLAs) of six months to one year were not well aligned with the multi-year timescales required for sustained resilience programming. Knowledge management within WFP was not optimised to enable lessons learned to inform programme adaptation.

Sustainability

15. **The SfC model emerged as R4's most sustainable intervention.** Groups achieved high loan repayment rates, developed robust governance systems, opened bank accounts, and enabled members to invest in housing, livestock, education, and small businesses. With average household savings balances over USD 100, many groups will function independently after programme closure. Some have formalized as registered cooperatives or accessed the Constituency Development Fund (CDF).

16. **A major threat to sustainability was high staff turnover and frequent transfers of trained government and implementing partner personnel**. High staff turnover and frequent staff transfers weakened sustainability by disrupting continuity, limiting institutional memory, and reducing the long-term impact of capacity-building across R4 operational areas.

17. **Sustainability prospects are strongest in components designed for community ownership**. 265 rain gauges were installed over the duration of the project. Climate information infrastructure has been integrated into Ministry of Agriculture advisory services, with rain gauge minders submitting data to the Ministry. The FISP insurance integration has potential for lasting systemic impact. Sustainability is more constrained for components requiring ongoing technical support, particularly given high partner staff turnover and persistent knowledge management gaps.

Conclusions

18. R4's integrated risk management concept proved sound as a theoretical framework, but a gap between ambition and reality affected overall results. The ToC's central assumption – that integrated delivery would generate synergistic outcomes – was undermined by uneven participation across all four risk management pillars. The SfC model delivered the most transformational outcomes, requiring no ongoing donor subsidy. Climate information services were trusted and used by farmers.

19. The crop insurance component was undermined by persistent structural issues around beneficiary comprehension, highlighting the inherent difficulty of delivering index-based insurance in smallholder contexts and pointing to the need for stronger financial literacy approaches and complementary delivery mechanisms such as savings groups. With CA, near-universal uptake of at least one technique sat alongside the reality that labour intensity confined practice to small plot areas. The credit component's initial design exposed farmers to harsh debt recovery, and the market access component was undermined by aggregator liquidity constraints (the share of households selling to WFP-supported aggregators fell from 19.3 percent to 4.6 percent in Phase 3).

20. Structural issues limited the programme's ability to realise its ToC. Difficulties in renewing field-level agreements with implementing partners created gaps in field presence, while a lean staffing model contributed to knowledge gaps in insurance. The monitoring system was oriented towards external reporting rather than internal learning, lacked integrated databases for tracking multi-pillar participation, and did not systematically monitor shock exposure.

21. The ToC's assumption of a stable operating environment was tested beyond reasonable expectation. The Russia–Ukraine war drove fertilizer prices up by 40–60 percent, and the 2023–2024 El Niño drought overwhelmed household resilience mechanisms. The strong recovery to 92.8 percent acceptable FCS by endline demonstrates meaningful adaptive capacity was nonetheless built. These shocks raise questions about whether a model conceived for moderate, recurrent shocks is sufficiently robust for accelerating climate change and sustained economic volatility.

22. On gender, R4 achieved real progress in women's leadership, joint household decision-making, and membership of VSLAs with significantly higher proportions of female farmers accessing credit and savings than their male counterparts. However, the programme focused primarily on improving women's access to benefits rather than addressing structural drivers of gendered vulnerability. Design choices, such as labour-intensive CA and complex insurance products, inadvertently disadvantaged women.

23. Sustainability prospects vary by component: savings and climate information are self-sustaining by design; the FISP insurance integration represents policy-level impact; but components requiring ongoing subsidy (e.g. paying insurance premiums) are less sustainable.

24. R4 is best understood as a portfolio of components with differential performance profiles. The programme delivered measurable resilience gains for over 17,000 households across a decade of exceptional shocks. Its most significant legacy – integrating crop insurance into FISP at national scale, covering over one million farmers – demonstrates the multiplier potential of WFP's convening role. Future programmes should prioritize validated elements, particularly savings groups and climate information services, while investing in operational coordination infrastructure, knowledge management systems, and shock-responsive mechanisms from the outset.

Lessons learnt

25. Multi-component resilience programmes require operational integration mechanisms – unified beneficiary tracking, coordinated partner scheduling, and monitoring of interaction effects between pillars – to translate conceptual frameworks into practice.

26. The zero-capital-injection SfC model demonstrated stronger durability and empowerment outcomes, suggesting future programmes should position savings groups as the foundational financial inclusion layer, with commercial credit and insurance as supplementary layers for groups that have demonstrated savings discipline.

27. Technical products requiring specialist knowledge transfer should not be channelled through lean field structures. Where adequate private-sector field presence is commercially unsustainable, resources should

be redirected to advocating for government-led delivery with insurance staff embedded in national extension systems. The mismatch between donor commitments and short-term FLAs requires a policy-level institutional response; multi-year partner engagement periods aligned to donor cycles support more efficient delivery.

28. Institutional capacity strengthening produces limited durable gains through training alone. Without centralised documentation and standardised handover protocols, training investment dissipates as staff rotate. This gap was identified in the 2019 midterm review and remained unaddressed at programme closure.

29. Gender transformation requires deliberate engagement of male household members and community power structures from programme inception. Targeted training and engagement with traditional authorities demonstrably reduced backlash and improved outcomes. Social norms change strategies are essential conditions for empowerment programming's safety, sustainability, and effectiveness.

30. Market access interventions must be grounded in rigorous pre-implementation value chain analysis identifying commercial bottlenecks and working-capital constraints. The aggregator model had potential, but unresolved liquidity constraints limited its effectiveness; the Zambia Breweries sorghum arrangement demonstrates what is achievable with an adequately capitalised off-taker. Private sector partnerships require financial stress-testing and contractual service standards. WFP's comparative advantage lies in convening market actors and facilitating policy reform, not in directly providing market services.

Recommendations

31. The evaluation generated nine recommendations for WFP Zambia and relevant stakeholders:

- **Redesign resilience programme delivery to embed synergy** through unified beneficiary management systems tracking multi-pillar participation; coordinated partner scheduling; field staff managing holistic component delivery; and monitoring frameworks assessing pillar interactions. (Medium priority)
- **Prioritize community savings models as the primary financial inclusion strategy**, scaling the SfC approach as a foundational intervention. Where appropriate, facilitate district-level savings group federations and link apex bodies to government cooperative registration platforms. (High priority)
- **Integrate gender-transformative programming and community power structures** through couples-based financial training, traditional authority engagement on property rights, and protection mechanisms addressing asset-grabbing risks. (Medium priority)
- **Maintain WFP's policy advocacy role regarding crop insurance** while phasing out direct premium subsidies and redirecting resources to technical assistance in improving FISP insurance design - particularly around farmer awareness, payout timeliness, and product accessibility. (High priority)
- **Explore the feasibility of adopting multi-year Field-Level Agreements with implementing partners for resilience interventions**, establishing durations aligned to donor commitments, and streamlining renewal processes to prevent delivery gaps at critical seasonal windows. (Medium priority)
- **Establish mandatory knowledge management systems** including centralized digital repositories of data and reports, regular synthesis of monitoring findings, and designated staff responsibility for institutional memory and knowledge transfer. Develop "how-to" guides which are regularly updated and circulated to all project delivery stakeholders to ensure consistent delivery of project activities in different contexts (High priority)

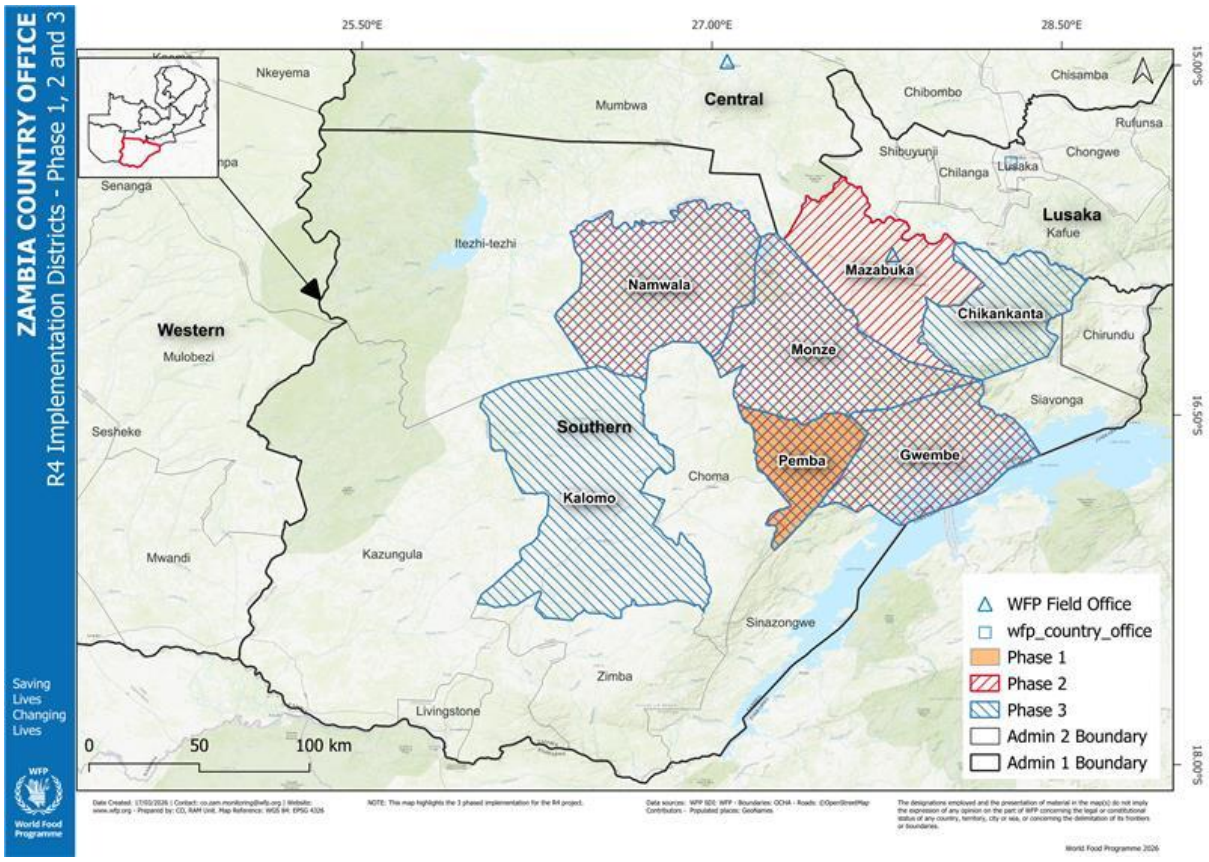
- **Conduct comprehensive market systems analysis before designing market access interventions**, mapping value chain constraints - especially aggregator liquidity - and adopting facilitative approaches that strengthen existing commercial structures rather than creating parallel systems to those which may already exist in the private sector. (Medium priority)
- **Strengthen qualitative data collection and shock exposure monitoring**, implementing adaptive management systems with decision rules specifying indicator thresholds that trigger programme adjustments, including crisis modifier components to protect accumulated assets during severe shocks. (High priority)
- **Conduct rigorous pre-implementation capacity assessments of private sector partners**, including financial sustainability and stress-testing. (Medium priority)

1. Introduction

1.1. Evaluation features

32. This decentralized evaluation was commissioned by the WFP Zambia Country Office with support from the then Regional Bureau for Southern Africa in Johannesburg, The evaluation covers all three phases of the R4 Rural Resilience Initiative carried out by WFP and targeting 17,835 farmers over three phases from June 2014 to June 2025 in six districts (Chikankata, Gwembe, Kalomo, Monze, Namwala, and Pemba) (Figure 1) (Note: Mazabuka district was part of Phase 2 but dropped for Phase 3). The evaluation is timely for informing the mid-term review of the current Country Strategic Plan (CSP) 2023–2028 and shaping the design of ongoing and future resilience-building activities in Zambia.

Figure 1: Map of R4 operational area by phase



33. The evaluation was intended to address the dual and mutually reinforcing objectives of accountability and learning, giving equal consideration to both:

- **Learning:** The evaluation determines the reasons why certain results occurred or did not occur to draw lessons, derive good practices, and provide pointers for learning. Findings will be actively disseminated to inform operational and strategic decision-making and incorporated into relevant lesson-sharing systems.
- **Accountability:** The evaluation assesses and reports on the performance and results of the R4 initiative and the extent to which it contributed to building the resilience of targeted communities from 2014 to 2025, ensuring accountability to donors, the Government, and beneficiaries.

34. As defined in the evaluation Terms of Reference (ToR) (see Annex 1, Volume 2 for the summary ToR), the evaluation was specifically commissioned to:

- Assess the relevance, effectiveness, efficiency, impact, coherence, and sustainability of the R4 interventions.
- Generate evidence on the intended and unintended outcomes of the programme, identifying key success factors and gaps to design more efficient and sustainable future interventions.
- Understand the extent to which the design and implementation of R4 activities incorporated gender equality and women's empowerment (GEWE), equity, protection, and wider inclusion principles.
- Assess the effectiveness of the strategies utilized to build resilience among vulnerable, targeted smallholder farmers.

35. The main stakeholders and users of the evaluation are the WFP Zambia Country Office, the WFP Global HQ, the Government of Zambia through ministries that directly participate in R4 activities (such as Agriculture, Green Economy and Environment, and Community Development and Social Services), other development partners and non-governmental organizations (NGOs) involved in implementation (such as DAPP, Self Help Africa, and Vision Fund), private sector actors who partnered with WFP for market and financial services (such as aggregators, Natsave, Mayfair Insurance, and Digital Paygo), the UN Country Team, and the project's donor, the Swiss Agency for Development and Cooperation (SDC). Smallholder farmers are also primary stakeholders. WFP Headquarters divisions may use the evaluation evidence for wider organizational learning. Furthermore, the Office of Evaluation (OEV) and the Executive Board (EB) may use the evaluation findings to feed into centralized evaluations, evaluation syntheses, and overarching corporate learning processes.

36. The evaluation was conducted by an external evaluation firm, Tana Copenhagen, composed of an international team leader, a mix of national and international evaluators, and a national emerging evaluator, bringing specialized expertise in agriculture, climate change adaptation, rural finance, and gender. Data collection in Zambia took place from 15th November 2025 to 9th December 2025.

1.2. Context

General overview

37. From 2015 to 2025, Zambia experienced profound economic and climatic volatility, with moderate but inconsistent GDP growth, significant inflation, the COVID-19 pandemic, and repeated currency and debt crises. GDP growth initially hovered between 5.5 and 7.4 percent, but by 2022–2024, per capita growth had slowed to 2 percent.[3] Inflation fluctuated frequently, exceeding 16 percent in late 2024, compounded by external shocks like commodity price instability and power shortages affecting millions.[4] The country's rain-fed agriculture left smallholder farmers particularly vulnerable, as overlapping disasters – including the devastating 2018/2019 and 2023/2024 droughts and recurrent floods – caused catastrophic crop losses and deepened poverty for millions. In 2020, there was a default on the EUR 42.5 million Eurobond.[5] This precipitated a 38-month International Monetary Fund (IMF) programme marked by strict fiscal benchmarks.[6]

[3] Worldometer. 2026. Zambia GDP 2026. https://www.worldometers.info/gdp/zambia-gdp/
[4] ACAPS. 2025. Zambia: Update on Impact of Drought. https://www.acaps.org/fileadmin/Data_Product/Main_media/20250116_ACAPS_Zambia_-_Update_on_the_impact_of_drought_.pdf
[5] Mbewe, M., et al. 2023. The Road to Zambia's 2020 Default. Public Debt Network. https://www.publicdebtnet.org/pdm/.content/PaginaInternaConDocuments/GOALS/Debt-Policy/Documents/Document-20240115.html
[6] Hinfelaar, M. 2025. Political economy analysis of pro-poor policies in Zambia. Institute of Development Studies and partner organisations. https://opendocs.ids.ac.uk/articles/report/Political_Economy_Analysis_of_Pro-

Policy responses included monetary and fiscal reforms, investment in power and agriculture, and targeted social protection measures.

38. Against this challenging backdrop, and in response to the transition from the Seventh National Development Plan (7NDP) to the Eighth NDP (8NDP) in 2022, WFP Zambia shifted its support strategy from direct aid towards building resilience and improving food security and nutrition, providing emergency assistance, and strengthening national systems and partnerships. The organization's resilience-building work encompassed climate-smart agriculture, post-harvest management, weather index insurance, and the promotion of village savings and lending associations. By 2024, over 1,000,000 farmers benefited from insurance payouts,[7] and thousands participated in training and savings groups each year. WFP's integrated interventions, including digital market platforms and support for government social protection and disaster response, aimed to tackle the root causes of food insecurity and enhance self-reliance. These efforts were closely aligned with the United Nations Sustainable Development Cooperation Framework (UNSDCF), national development priorities and the Sustainable Development Goals (SDGs),[8] particularly supporting the most vulnerable rural communities against mounting climate and economic shocks.

Economic and climate shocks

39. Over the past decade, Zambia has experienced multiple overlapping climate and economic shocks which significantly impacted livelihoods and the resilience of households. Being on the edge of the Inter-Tropical Convergence Zone,[9] the southern part of Zambia is affected by recurrent droughts and erratic rainfall, and this repeatedly challenged smallholder communities between 2014 and 2025. Ngoma et al. (2021)[10] report that drought characterizes the dominant climate shock in Southern and Western provinces, noting that 76 percent of smallholder farmers – particularly households headed by women – are highly vulnerable. Thurlow et al. (2009)[11] employ a drought index in dynamic computable general equilibrium modelling and estimate that climate variability has cost Zambia between USD 4.3 billion and USD 7.1 billion over a decade. Their projections suggested that persistent drought conditions would continue to depress economic performance and keep over 300,000 people in the region below the poverty line by 2025.

40. Zambia's reliance on rain-fed agriculture amplifies its vulnerability to climate shocks. The 2014–2015 El Nino drought triggered localized yet severe reductions in maize yields (e.g. over 15 percent in Southern province), undermining rural food reserves (Ministry of Agriculture, 2015). Subsequently the 2018–2019 drought delivered a huge blow, slashing national maize production from 2.4 million tons to 1.6 million tons and inflicting deeply felt losses in some districts such as Mpongwe and Mkushi (FAO, 2020; Programme Development Unit [PDU], 2024).

41. During 2020–2022, flash floods in Eastern province destroyed over 10,000 hectares (ha) of cropland and displaced farming communities, straining local food systems already weakened by prior droughts (Disaster Management Unit, 2017), and in 2023–2024, the most severe drought in living memory destroyed approximately 983,000 ha of maize and drove production down by nearly 50 percent. These sequential crises

poor_Policies_in_Zambia/29335901

[7] Including under FISP (WFP ACR 2024)

[8] Notably: SDG 3: Good Health and Well-being; SDG 4: Quality Education; SDG 5: Gender Equality; SDG 7: Affordable and Clean Energy; SDG 8: Decent Work and Economic Growth; SDG 9: Industry, Innovation and Infrastructure; SDG 12: Responsible Consumption and Production; SDG 13: Climate Action; SDG 15: Life on Land; SDG 17: Partnerships for the Goals.

[9] African Climate. n.d. Zambia Climate. https://africanclimate.net/zambia/

[10] Ngoma, H., Finn, A., & Kabisa, M. 2024. Climate shocks, vulnerability, resilience and livelihoods in rural Zambia. Climate and Development, 16(6), 490–501. https://doi.org/10.1080/17565529.2023.2246031

[11] Thurlow, J., Zhu, T. & Diao, X. 2009. The Impact of Climate Variability and Change on Economic Growth and Poverty in Zambia. International Food Policy Research Institute. https://gtap.agecon.purdue.edu/uploads/resources/download/4425.pdf

prompted a national disaster declaration and affected 5.8 million Zambians who entered IPC Phase 3 or worse (UN Zambia, 2024; ACAPS, 2024; The *Guardian*, 2024).

42. Economic shocks such as the 2014–2015 Zambian Kwacha (ZMW) depreciation resulted in inflation of around 21 percent, causing staple food and farm input costs to skyrocket and weakening rural livelihoods. Between 2016 and 2019, macroeconomic instability persisted although inflation eased slightly, and rural real incomes continued to stagnate.[12] The COVID-19 crisis struck between 2020 and 2021, abruptly disrupting supply chains and causing incomes to collapse, particularly in peri-urban and rural areas. Surveys reveal that 61 percent of households lost income, and 41 percent ran out of food. Finally, from 2022–2024, global commodity shocks, mounting debt servicing and rising fuel prices sustained inflationary pressures, further undermining rural households' access to food, particularly in Southern, Central and Eastern provinces.[13]

Food and nutrition security

43. The food security and nutrition situation in southern Zambia between 2015 and 2025 has been characterized by persistent challenges with some improvements, followed by recent deterioration. National stunting prevalence decreased from 40.1 percent in 2013–14 to 34.6 percent in 2018, with wasting declining from 6.0 percent to 4.2 percent, and underweight from 14.8 percent to 11.8 percent.[14] By 2024, stunting still affected 32 percent of children under five, while wasting affected 3 percent.[15] Southern province specifically showed concerning trends, with wasting reaching 6.2 percent in 2024, more than double than during the 2019-20 drought.[16] Studies in Southern province found 38 percent of children were stunted, with mothers often overestimating their children's development despite high malnutrition rates.[17] Emergency food insecurity (IPC Phase 4) surged from 58,400 people in 2023–24 to 236,000 in 2024–25, while 3.62 million people are projected to face crisis-level food insecurity driven by climate shocks and rising food prices.[18]

National policies and SDGs

44. Zambia's overarching national economic development policy framework is the Vision 2030 in which the country aspires to become "A Prosperous Middle-Income Nation by 2030". This means that by 2030 Zambia aims to be a strong, dynamic, competitive country and to have self-sustaining middle-income status. The strong economic development is expected to be driven by industrialization across the key sectors, with the agricultural sector being the engine for economic growth through its provision of raw materials for accelerated industrialization.

45. Vision 2030 and the R4 are aligned with the 2030 Agenda for Sustainable Development, which aims to end poverty, fight inequality and injustice, and tackle climate change through the pursuance of the UN SDGs.[19] Notably, R4 itself aims to support SDG 1 (No Poverty), SDG 2 (Zero Hunger), SDG 5 (Gender Equality), SDG 13 (Climate Action), and SDG 17 (Partnerships for the Goals). R4 is also aligned with UN-Government UNSDCF for Zambia (2023–2027) which is the UN's combined approach to support Vision 2030 in Zambia.

[12] World Bank Group. (2016). Zambia economic brief: Beating the slowdown—Making every kwacha count (Issue 7). World Bank. https://documents1.worldbank.org/curated/en/804591467989562427/pdf/106508-WP-P157243-PUBLIC.pdf
[13] Zambia Statistics Agency.2021. Socio-economic Impact Assessment of COVID-19 on Households in Zambia (SEIA)
[14] Central Statistical Office Zambia, Ministry of Health Zambia, & ICF International. 2014. *Zambia Demographic and Health Survey 2013–14*.
[15] Central Statistical Office Zambia, Ministry of Health Zambia, & ICF. 2024. *Zambia Demographic and Health Survey 2024*
[16] Republic of Zambia. n.d. Zambia Vision 2030. UNEP Law and Environment Assistance Platform (LEAP). https://leap.unep.org/en/countries/zm/national-legislation/zambia-vision-2030
[17] Zambia Vision 2030.
[18] Integrated Food Security Phase Classification. 2024. Zambia: Acute food insecurity situation, October 2024–March 2025 and projection, April–September 2025 (IPC Acute Food Insecurity Analysis). IPC. https://www.ipcinfo.org/ipc-country-analysis/en/?country=ZMB
[19] United Nations. n.d. The Sustainable Development Goals. United Nations. https://sdgs.un.org/goals

46. Vision 2030 integrates agriculture and climate resilience as fundamental components of achieving middle-income status, including expanding land under irrigation to 400,000 hectares and preserving the agricultural resource base. R4 aligns with Vision 2030's goal to establish a modern agricultural sector based on sustainable development by aiming to boost smallholder productivity and financial inclusion.

47. The building blocks of Vision 2030 goals and aspirations are the National Development Plans (NDPs), which are medium-term, 5-year development frameworks. The current NDP (8NDP 2022–2026) provides an avenue for catalysing the nation's response to addressing the developmental challenges over the 2022–2026 period. The R4 programme directly supports the 8NDP's theme of socioeconomic transformation by aiming to improve agricultural productivity and enhancing smallholder farmers' resilience and adaptation to climate risks, in alignment with environmental sustainability goals.

Agriculture

48. The agriculture sector in Zambia has performed poorly in recent years, contributing 3.4 percent of GDP in 2024, down from 9.3 percent in 2012.[20] This low performance is despite a favourable climate, abundant water, and fertile land of which less than 14 percent of 40 million hectares is cultivated annually. The country also has a huge potential for irrigated agriculture. Currently, only 5.7 percent of the total irrigable land is irrigated annually. Both crop and livestock production are central, with signs of recovery following recent drought and El Niño shocks. Maize is the country's staple crop; output rose from 1.51 million metric tons in 2023/2024 to 3.66 million metric tons in 2024/2025. Alongside this increase, there were smaller increased volumes of cassava, millet and groundnuts.[21]

49. The livestock sub-sector is becoming increasingly important in the country's agricultural development, providing enhanced resilience to smallholder farming systems in the face of recurring droughts and dry spells across the last three decades. The livestock sub-sector contributes 42 percent of agricultural GDP and employs half of the rural population. Nonetheless, the livestock sub-sector remains dominated by low productivity among smallholder production systems, which are largely traditional free-range grazing, with cattle production being most prominent, followed by poultry, goats, sheep and pigs.[22]

50. Smallholder farmers (SHFs) constitute the largest of the three broad categories of farmers in the country, the other two being emergent and large commercial farmers. There are nearly two million small-scale farmers who constitute the largest part of the rural population and account for approximately 54 percent of the total population. Agriculture is the primary source of livelihood of the small- and medium-scale farmers, who make up nearly 90 percent of producers and remain the backbone of the agricultural sector. However, persistent structural challenges, including low public investment in agriculture (averaging 10 percent of the national budget between 2015 and 2025),[23] inadequate extension services (with a farmer-to-extension officer ratio estimated at 1:1,500), and high vulnerability to climate change, continue to undermine the productivity and resilience of small- and medium-scale farmers. Poor rural infrastructure, significant post-harvest losses (which range from 30 to 40 percent), and limited access to finance (which affects nearly 70

[20] Food and Agriculture Organization. 2024. Hand-in-Hand Investment Forum 2024: Zambia country investment engagement. FAO. https://www.fao.org/hand-in-hand/previous-editions/hih-IF-2024/en

[21] Muchanga, M., Mubanga, K. H., Hachigonta, S., & Lemba, J. 2022. Climate change, agriculture and food security in Zambia: Policy and institutional dimensions. Agriculture & Food Security, 11, Article 38. https://agricultureandfoodsecurity.biomedcentral.com/articles/10.1186/s40066-022-00382-5

[22] Analysis of the National Livestock Policy. PMRC. https://pmrczambia.com/analysis-of-the-2020-national-livestock-policy/

[23] Between 2015 and 2025, Zambia's public agricultural investment ranged from 6 percent to 9 percent of the national budget, falling below the 10 percent Maputo Declaration target. In 2025, the allocation stood at 7.1 percent. (https://www.elibrary.imf.org/downloadpdf/view/journals/002/2023/257/article-A003-en.pdf)

percent of rural smallholders) are other key constraints.[24]

51. The National Agriculture Policy (NAP 2012–2030) aims at increasing the annual rate of growth of real crop GDP; increasing the value and growth rate of crop exports; contributing to the reduction of poverty; and ensuring food security among small-scale farmers.[25] The main thrust of the NAP is liberalization, commercialization, promotion of public–private partnerships, and provision of effective agricultural services that will ensure sustainable agricultural growth. The Comprehensive Agriculture Transformation and Support Programme (CATSP) (2022–2033), which serves as Zambia's Second National Agriculture Investment Plan (NAIP II), is the sector's overarching agricultural policy framework. It aims to raise productivity, enhance climate resilience, and increase output for regional export markets. It succeeds the First National Agriculture Investment Plan (NAIP I) implemented from 2014 to 2018.

Index-based crop insurance and conservation agriculture

52. Since the 2017/2018 season the Government of Zambia has implemented an agricultural index insurance programme for smallholder farmers under the Ministry of Agriculture's Farmer Input Support Programme (FISP), with support from WFP (who convened the initial technical working group), eventually covering nearly 4 million farmers.[26] Since 2016, the Global Index Insurance Facility has provided technical assistance to Mayfair Insurance, a private insurer, to build capacity in developing weather-based agricultural insurance products, resulting in over 2 million contracts reaching approximately 10 million beneficiaries. The Climate Risk Insurance and Information in Zambia (CRIIZ) project, implemented by the German Agency for International Cooperation (GIZ), delivered over 30,000 climate risk insurance policies, with 30 percent for women, integrating insurance into contract farming arrangements with companies like Louis Dreyfus Company Zambia.[27] Private insurers, including Hollard, have partnered with Financial Sector Deepening Zambia to offer area yield index insurance, with payouts increasing from ZMW 1.7 million (2021–2022) to ZMW 16.1 million (2022–2023).[28]

53. Zambia leads Africa in conservation farming adoption by crop area, though predominantly within the large-scale commercial sector rather than among smallholders.[29] The Conservation Farming Unit's £25 million Climate Smart Agriculture Zambia Programme (2016–2021), supported by Britain's Department for International Development (DfID), covered 43 districts and trained 216,000 farmers in 2017. The World Bank-supported Common Markets for Conservation (COMACO) Landscape Management Project promoted climate-smart agricultural practices through partnership between the Government and COMACO.[30] Private sector participation has strengthened through linkages with mechanization innovations and CA-friendly equipment.

[24] African Development Bank Group. 2023. Zambia: Country food and agriculture delivery compact. ADB Group. https://knowledge4policy.ec.europa.eu/publication/dakar-2-zambia-country-food-agriculture-delivery-compact_en
[25] International Monetary Fund. 2023. Boosting productivity and enhancing climate resilience in Zambia's agriculture sector. In Zambia: Selected issues (IMF Country Report No. 23/257). International Monetary Fund. https://www.elibrary.imf.org/view/journals/002/2023/257/article-A003-en.xml
[26] International Research Institute for Climate and Society. 2023. Zambia Farmer Input Support Programme (FISP) yield audit. Columbia Climate School, Columbia University. https://fist.iri.columbia.edu/publications/docs/zambia_FISP_yieldaudit_2023/
[27] European Microfinance Platform. n.d. Strengthening resilience through weather index-based crop insurance: Lessons from Zambia's R4 contract. https://www.e-mfp.eu/post/strengthening-resilience-through-weather-index-based-crop-insurance-lessons-from-zambia-s-contract
[28] IPP Media. 2024. Insurance role in driving Zambia's sustainable farming. The Guardian. https://www.ippmedia.com/the-guardian/business/read/insurance-role-in-driving-zambias-sustainability-farming-2024-08-17-104900
[29] Global Center on Adaptation. 2023. Scaling up climate adaptation solutions for Zambia's smallholder farmers. https://gca.org/scaling-up-climate-adaptation-solutions-for-zambias-smallholder-farmers/
[30] A social enterprise in eastern Zambia.

Climate change and vulnerability

54. Smallholder farmers in Southern Zambia face severe climate vulnerabilities, with drought being the most prevalent climatic shock alongside periodic floods.[31] Projections indicate declining rainfall and rising temperatures by 2050, with southern and western regions most affected.[32] These climate shocks are associated with increased vulnerability and reduced resilience among farming households, particularly affecting households headed by women.[33] Recent droughts, including the 2015–2016 and 2023-2024 El Niño seasons, have reduced maize yields by approximately 20 percent and household incomes by up to 37 percent,[34] while erratic rainfall patterns, mid-season dry spells, and prolonged droughts continue to threaten rain-dependent agricultural production systems.

55. Historical climate records (1971–2000) show Zambia's annual mean and maximum temperature varied with an upward trend between 29.9 and 31.9°C in the southern part of the country; 28 and 29.7°C in the central part, and 27.4 and 29 °C in the northern parts of the country. The corresponding annual mean precipitation varied between 420 mm and 766 mm in the southern; 675 mm and 904 mm in the central, and 1040mm and 1300mm in the northern parts respectively.[35]

56. Zambia is increasingly experiencing extreme weather events[36] such as heavy rain (annual intensity averages 28 mm/day); dry spells (mean duration of 26 days); heat waves (8 days), and cold spells (11 days). Large flood events occur rather frequently (e.g. 2001, 2004, 2007 and 2009). For instance, in the 2005/2006, and 2019/2020 agricultural seasons, 1.2 million people were negatively affected by floods. In 2007, about 1.4 million people were affected along the Zambezi, Kafue and Luangwa Rivers.[37] In addition, serious droughts have been occurring. Staple food (specifically maize) production decreased significantly. Prices of maize in 2019/2020 agricultural season increased by 60 percent compared to the 2018/2019 season, while maize meal price increased by 20–40 percent. This led to 954,000 people falling into the IPC Phase 3 or worse.[38]

57. Future projection reveals an increase in temperatures by an average of 0.34°C per decade and a decrease in rainfall at an average of 1.9 mm per month per decade.[39] These climatic changes threaten livelihood impacts through waterlogged fields, water shortages, destruction of crops, and higher incidences of crop (maize, beans, cotton, millet and groundnuts) and livestock disease occurrence.[40] Over the next 10 to 20 years, climate change-related losses in agriculture are expected to total between USD 2.2 billion and USD 3.1 billion.[41] Zambia contributes only three quarters of a percentage point to global greenhouse gas

[31] Ngoma, H., Finn, A. & Kabisa, M. 2024. 'Climate shocks, vulnerability, resilience and livelihoods in rural Zambia'. *Climate and Development*,16(6).
[32] Ngoma, H., Lupiya, P., Kabisa, M.et al. 2021. 'Impacts of climate change on agriculture and household welfare in Zambia: an economy-wide analysis'. *Climatic Change* 167, 55.
[33] Ngoma, H., Finn, A., & Kabisa, M. 2024. Climate shocks, vulnerability, resilience and livelihoods in rural Zambia. Climate and Development, 16(6), 490–501
[34] Global Center on Adaptation. 2023. Scaling up climate adaptation solutions for Zambia's smallholder farmers. https://gca.org/scaling-up-climate-adaptation-solutions-for-zambias-smallholder-farmers/
[35] Third national communication to UNFCCC.
[36] International Monetary Fund. 2025. Zambia: building resilience to climate shocks. (IMF Selected Issues Paper No. 2025/127). https://www.imf.org/en/Publications/Selected-Issues-Papers/Issues/2025/09/23/Zambia-Building-Resilience-to-Climate-Shocks-570665
[37] German Climate Services Centre
[38] IPC. 2019; FAO – FEWS. 2019.
[39] European Commission, Joint Research Centre. n.d. Drought resilience profile: Zambia (Science for Adaptation to Drought Risk [SADRI]).
https://knowledge4policy.ec.europa.eu/sites/default/files/sadri_drought_resilience_profile_zambia.pdf
[40] Ngoma, H., Finn, A., & Kabisa, M. 2024. Climate shocks, vulnerability, resilience and livelihoods in rural Zambia. Climate and Development, 16(6), 490–501
[41] European Commission, Joint Research Centre. n.d. Drought resilience profile: Zambia (Science for Adaptation to Drought Risk [SADRI]).

emissions. However, in terms of the national picture, agriculture contributes 86 percent of the total country's greenhouse gas emissions while land use, land-use change, and forest (LULUCF) contribute 6 percent of the total greenhouse gas emissions.[42] In light of this alarming picture, Zambia must accelerate coordinated efforts to implement its Climate Smart Agriculture Strategy and Investment Plan (CSAIP); the National Drought Plan,[43] the National Adaptation Planning roadmap in the agriculture sector (NAP-Ag), and Nationally Defined Contributions (NDC) to support the agricultural sector to adopt low carbon development pathways.

Gender, equity, and wider inclusion considerations shaping women's participation in agriculture

58. Zambia ranks 79th globally on the 2025 Global Gender Gap Index,[44] which is a significant improvement, up 13 places from the previous year, indicating improvement in gender equality outcomes. In Zambia, the 2023 National Gender Policy provides a framework for addressing gender inequalities and for achieving an equitable society. Amongst the important key objectives of relevance to the R4 project are reducing gender-based violence (GBV) and increasing women's access to land, finance and entrepreneurial opportunities, and social protection. Additionally, the policy also recognizes unpaid care work and the need for utilization of gender-sensitive approaches that intentionally attend to cultural and traditional barriers that hinder women's rights including land ownership. However, although the R4 Phase 2 and Phase 3 baseline reports (2016 and 2022 respectively) indicate that around 80 percent of households are headed by men, the WFP Zambia CSP (2019–2024) notes that women make up 64 percent of the rural population and nearly 80 percent of food producers. Despite women's central role in smallholder farming, they face systemic barriers to wealth accumulation and autonomous livelihood provision. For example, they are less likely than men to own land, and when they do, their holdings are often smaller.[45] Men retain control over cattle and land allocation under customary systems, restricting women's bargaining power, ability to invest, and resilience to shocks.

59. Gender, location, age, marital status, disability, and socio-economic status interact to create unique power dynamics and constraints that influence how different groups – particularly women and other marginalized populations such as persons with disabilities (PWD), people living with HIV/AIDS (PLWHA), and other disadvantaged social groups – experience drought and engage with agricultural systems. These intersecting factors often produce layered disadvantages in food security, access to resources, and participation in agricultural activities.[46] Although the R4 initiative targets vulnerable rural farmers, reports from implementing partners such as DAPP show that a substantial proportion of participants are adult and young women – representing more than half of all beneficiaries. However, women's experiences in agriculture are shaped by multiple intersectional factors including land ownership, and control over productive assets. Many women, particularly those with disabilities, face restricted land ownership, insecure land tenure and limited access to agricultural inputs and larger farm plots compared to men.[47]

60. Women with disabilities or those belonging to marginalized social groups face further barriers, including restricted mobility, limited access to information, and discrimination – challenges that are often compounded by remote geographic locations. Young, single, widowed women, and households headed by women also encounter distinct constraints in building social networks, establishing creditworthiness, and

[42] European Commission, Joint Research Centre. n.d. Drought resilience profile: Zambia (Science for Adaptation to Drought Risk [SADRI]). https://knowledge4policy.ec.europa.eu/sites/default/files/sadri_drought_resilience_profile_zambia.pdf
[43] Mwitwa, J. 2018. Zambia national drought plan. https://www.preventionweb.net/publication/zambia-national-drought-plan
[44] UNDP. 2025. Human Development Report 2025: A matter of choice: People and possibilities in the age of AI. New York.
[45] WFP. 2019. *Zambia country strategic plan (2019–2024).* Rome: WFP. https://docs.wfp.org/api/documents/WFP-0000104710/download/
[46] Tavenner, K., Crane, T. A., Bullock, R., & Galiè, A. 2022. Intersectionality in gender and agriculture: Toward an applied research design. Gender, Technology and Development, 26(3), 385–403. https://doi.org/10.1080/09718524.2022.2140383
[47] WFP R4 Outcome Reports.

exercising decision-making power. These factors collectively shape their capacity to participate in and benefit from agricultural actions, including R4.[48]

1.3. Subject being evaluated

Subject evaluated

61. R4 in Zambia operated across three phases from June 2014 to June 2025, with an overall budget of about USD 6 million from the Swiss Agency for Development and Cooperation (SDC), with complementary funding by the Korea International Cooperation Agency (KOICA).

62. R4 was initiated in June 2014 with a project design phase. Implementation started in 2015 in Pemba district, expanding in 2018 to Namwala, Mazabuka, Monze and Gwembe, and, in its third phase (2021–2025), adding Kalomo and Chikankata, while removing Mazabuka to focus on six districts: Pemba, Namwala, Monze, Chikankata, Gwembe, and Kalomo. The initiative specifically targeted vulnerable smallholder farmers (SHFs) as both key beneficiaries and stakeholders, increasing from 3,867 farmers in Phase 1 to 17,835 households in Phase 2, and aiming for 15,000 households in Phase 3. In some cases, farmers participated in more than one phase.

63. Overall, R4 sought to build resilience among 17,835 SHFs through a six-component approach: conservation agriculture (CA) for risk reduction, weather-indexed micro-insurance for risk transfer, microcredit access for prudent risk-taking, village savings groups for risk retention, enhanced market linkages for livelihood diversification, and government capacity building. The programme was implemented in collaboration with implementing partners DAPP, Heifer International, Self Help Africa, and Vision Fund. R4 targeted vulnerable, food-insecure smallholder farmers in drought-prone areas. Beneficiaries were selected based on having sufficient labour capacity to engage in conservation agriculture, with a strong, deliberate focus on women.[49]

64. The evaluation was commissioned at the project's closure (2025) to serve the dual, mutually reinforcing objectives of accountability and learning. In terms of accountability, it fulfils donor commitments to SDC by assessing indicator performance and overall resource utilization across the programme's complete 2014–2025 lifespan. For learning, it generates evidence to inform the current CSP's mid-term review and shape future resilience interventions and the subsequent CSP from 2028. The evaluation scope covers all three phases of R4 across six targeted districts, applying OECD-DAC criteria while deliberately mainstreaming GEWE and inclusion considerations. Expected users include WFP Zambia, Global HQ, government ministries, the UN Country Team, implementing partners, SDC and other donors, private sector actors, and smallholder farmers. Crucially, R4 Zambia has not been subject to a discrete evaluation since its inception, although it was included in a 2019 regional evaluation of R4 programmes alongside Zimbabwe and Malawi. [50]

R4 Theory of Change

65. The Theory of Change (ToC) (Annex 12, Volume 2) postulates that combining complementary risk management strategies enables vulnerable populations to strengthen their capacity to deal with shocks and improve food security, with the ultimate aim that SHFs will transition to self-reliant, agriculture-based livelihoods after sustained WFP support. The six components work synergistically: CA promotes climate-resilient farming techniques; micro-insurance protects against drought losses; credit facilitates investment in inputs and diversification; savings through village savings and loan association schemes (VSLAs) build financial reserves; market access links farmers to favourable markets; and government capacity building

[48] WFP R4 Outcome Reports.
[49] WFP R4 Funding Proposal.
[50] WFP. 2019. R4 Rural Resilience Initiative in Southern Africa (Phase II) Midterm Review 2019 Final Report

integrates strategies into national systems.

66. Gender equality and inclusion were prioritized with the project making efforts – particularly in Phase 3 – to enrol women, youth, and people with disabilities and measure achievement of targets for youth inclusion. The proposal for Phase 3[51] states that women were enabled through gender-sensitive value chain approaches identifying market barriers, and VSLAs serving as financial literacy entry points. Leadership quotas ensured women's representation in project management committees. Persons with disabilities were explicitly included through mandated targeting of their specific needs, integrated platforms combining financial services with HIV/AIDS awareness, and dedicated protection and accountability mechanisms ensuring safe assistance access, while young people were incorporated via targeted protection frameworks for adolescents and deliberate credit market monitoring, tracking financial inclusion gaps. These approaches were informed by the Gender, Leave No One Behind and Governance Analysis, the 2020 Vulnerability and Needs Assessment, stakeholder consultations, the 2019 R4 mid-term review, participatory community screening tools, and alignment with the Second National Agricultural Policy (2016–2020).

67. Expected outcomes include increased household enrolment in savings groups, greater access to credit and insurance, increased CA adoption, reduced post-harvest losses, improved food consumption and dietary diversity, and ultimately farmer "graduation" into self-reliant livelihoods. The ToC's success depends on critical assumptions: Externally, the project presumed a stable political and economic environment free from major disasters or shocks that could disrupt progress. Internally, it relied on the genuine integration of risk management components, strong institutional memory, and sufficient capacity among partners. Beneficiaries were assumed to be open to adopting new agricultural practices and financial services, with financial products and insurance being accessible. Market conditions were assumed to remain functional, with logistical challenges mitigated through post-harvest handling, aggregation and market linkages. For sustainability, it was assumed that beneficiaries will eventually achieve financial independence, while government and private sector stakeholders would integrate risk management strategies into national systems after programme completion.

R4 Programme evolution

68. R4 evolved from a localized pilot through three distinct phases. Phase 1 (2014–2017) focused on testing the integrated risk management model in Pemba district, targeting 3,867 farmers through four core components: conservation agriculture, micro-insurance, credit, and savings. Phase 2 (2018–2021) scaled operations to five districts, targeting 17,835 households, and introduced market access as a fifth component to link farmers to buyers via platforms like the Maano virtual farmers market, and introduced government capacity building. Phase 3 (2021–2025) optimized the geographic footprint by entering Kalomo and Chikankata while exiting Mazabuka. This final phase shifted strategic focus toward strengthening government systems for sustainability and developing blended insurance products. Additionally, Phase 3 explicitly mainstreamed cross-cutting priorities, specifically gender, nutrition, youth, and disability inclusion, to foster broader systemic resilience.

69. The log frame also evolved significantly from Phase 1 to Phase 3. Phase 1 tracked basic food security metrics (FCS, DDS, CSI), household assets, and resilience thresholds. Phase 2 continued with these indicators while adding measures for income diversification and market access. Phase 3 refined indicators to emphasize systemic change, introducing Climate Capacity Scores, Resilience Capacity Scores, and metrics tracking policy integration of climate change priorities. Output indicators became more targeted, measuring specific premium payments, establishment of markets and platforms, and government official training.

[51] WFP Project Proposal Part I: Building Resilience for Smallholder farmers in Zambia Through Integrated Climate Risk Management Project.

Budget

70. Total funding from SDC for R4 totalled USD 6 million. Table 1 includes a breakdown by year.

Table 1: SDC funding to R4 Zambia, 2014 – 2025

Year	Amount (USD)
2014	474,110
2015	512,370
2016	573,619
2017	470,528
2018	
2019	647,913
2020	934,765
2021	732,885
2022	540,546
2023	705,947
2024	431,029
2025	-
Total	**6,023,712**

Source: WFP Zambia Office

1.4. Evaluation methodology, limitations and ethical considerations

Evaluation approach

71. The evaluation employed a sequential explanatory mixed-methods design combining quantitative household surveys, qualitative inquiry through key informant interviews (KIIs) and focus group discussions (FGDs), direct observation of programme infrastructure and practices, and comprehensive desk review of programme documentation. This methodological approach enabled triangulation of evidence across multiple data sources while testing the theory of change assumptions underpinning R4's integrated risk management model. The full methodology is presented in Annex 3, Volume 2.

Desk review

72. The evaluation team conducted extensive secondary data analysis incorporating 52 programme documents including: baseline reports across all three phases; annual outcome monitoring reports; implementation progress reports; implementing partner assessments; donor reports; and technical studies. This document analysis provided essential context regarding programme evolution, adaptive management decisions and institutional learning over the ten-year implementation period. The desk review identified methodological inconsistencies across the three baseline studies – particularly concerning sampling frameworks, indicator definitions and data collection tools – that constrained longitudinal analysis and necessitated careful interpretation of trend data.

Evaluability assessment

73. The evaluability assessment (full text in Annex 3, Volume 2) revealed significant structural challenges in assessing the R4 programme's performance over its ten-year duration. A primary constraint was the lack of longitudinal comparability due to shifting geographical scopes – expanding from one district (Pemba) to five districts and eventually six districts – and evolving indicator metrics, which transitioned from household economy analysis thresholds in Phase 1 to standard WFP methodologies later. Consequently, aggregating

results across all three phases required careful reconstruction rather than direct statistical comparison. Efficiency was identified as the weakest evaluative criterion, as missing financial data and reporting gaps prevented a robust value-for-money analysis. Assessments of effectiveness and impact were expected to be complicated by severe external shocks, particularly the 2023/2024 El Niño drought. Furthermore, the regional R4 rural resilience initiative mid-term review of 2019[52] revealed that, while the programme's logic relied on the synergistic integration of components like insurance and conservation agriculture, these often operated in silos, complicating the judgements on the effectiveness of a holistic approach. A final issue identified during the evaluability assessment was the importance of conducting data collection before the onset of the main rains, after which farmers are typically at work in their fields and not available for interviews.

Evaluation questions

74. Evaluation questions (EQs) and criteria covered by this evaluation are presented in Table 2.

Table 2: Evaluation questions

Criteria	Evaluation Question	Sub-Questions
EQ1: Relevance	**To what extent did R4 remain relevant to the evolving needs and priorities of targeted communities over time?**	**1.1** How relevant is the R4 initiative to resilience building in the Zambian context (key focus on the districts of implementation)? **1.2** To what extent were R4's objectives and integrated activities aligned with the needs of diverse beneficiary groups, and to what degree were beneficiaries consulted in the design and subsequent adaptation of activities? **1.3** How effectively did the R4 initiative adapt and respond to emerging needs and changing external contexts?
EQ2: Effectiveness	**To what extent were R4 and its components effective in achieving expected resilience and food security outcomes, and what were the significant drivers and inhibitors of performance?**	**2.1** To what extent did the activities implemented perform against their expected outputs and outcomes and what factors (both internal and external) significantly influenced the achievement and non-achievement of the objectives? **2.2** To what extent did R4 intervention groups perform differently from non-intervention groups on indicators of interest, and what are the significant technical and operational drivers and inhibitors of achieving outcomes? **2.3** How did the effects of the activities differ across social groups and especially vulnerable or marginalized populations and which components did beneficiaries find most effective at meeting their needs, and why? **2.4** To what extent did WFP activities address root causes of gender inequality and exclusion of disadvantaged social groups and what were the opportunities for improvement? **2.5** To what extent were protection and inclusion considerations integrated into the analysis, design, implementation and monitoring of WFP activities? And were protection or exclusion risks mitigated as a result?

[52] WFP. 2019. R4 Rural Resilience Initiative in Southern Africa (Phase II) Midterm Review 2019 Final Report

Criteria	Evaluation Question	Sub-Questions
		2.6 To what extent did the project promote women's financial inclusion, skills enhancement and decision making? (In accordance with the goals outlined in the project's gender strategy).
EQ3: Efficiency	**How efficiently were R4 resources utilized over the 10-year period?**	**3.1** How were the activities delivered? Were the activities carried out within the intended timeframe? If not, what factors caused delays in their implementation? If yes, what are the influencing factors? **3.2** To what extent were the resources provided adequate and utilized efficiently? (e.g. appropriate operational methods, staffing, etc.)? What could have been improved in the planning and execution of the activities to enhance resource efficiency?
EQ4: Impact	**What were the intended and unintended impacts of the R4 initiative on household resilience capacity, and what factors drove transformational change over the intervention period?**	**4.1** To what extent did the outputs and outcomes contribute or likely to contribute to progress towards building resilient communities? **4.2** To what extent are the beneficiaries utilizing the knowledge acquired through the different learning platforms/activities that were offered by the initiative (dietary diversity; income generation; women's empowerment; market access and availability; social networks; and power balance of households)? How did these differ for men and women in target and non-targeted communities, if at all? **4.3** What factors within the different activities have driven change on key outcome parameters (within the target communities), specifically: dietary diversity; income generation; women's empowerment; market availability; social networks; and power balance of households and communities, and what factors have been less successful? **4.4** In terms of gender inequality, what level of impact did WFP activities achieve with regard to the Reach, Benefit, Empower and Transform (RBET) framework?
EQ5: Sustainability	**To what extent are the benefits and systems-strengthening effects of the R4 programme likely to be sustained?**	**5.1** How effective were the measures put in place to guarantee the continuation of benefits from the programme and local ownership after the programme has ended, and why were they effective/not effective? **5.2** What opportunities exist to guarantee the continuation of benefits from the programme and local ownership after the programme has ended?

Quantitative data collection and analysis

75. The household survey employed mobile data collection through Open Data Kit (ODK), enabling real-time data quality checks, programmed skip patterns, and validation protocols. The sample comprised 591 households including 558 R4 beneficiaries (472[53] from the early cohort enrolled pre–2019 and 86[54] from the

[53] 340 households headed by men (HHM) and 132 households headed by women (HHW).
[54] 67 HHM and 19 HHW.

late cohort enrolled post–2019) and 33 control households from Pemba district. Simple random sampling from R4 beneficiary lists ensured that every household across the three phases and six implementation districts had equal probability of selection, providing unbiased estimates of programme outcomes.

76. The quantitative analysis tracked impact and outcome indicators including food consumption score; livelihood-based and consumption-based coping strategies; adoption of climate-smart agricultural techniques; access to climate information services; credit access; income diversification; savings group enrolment; and weather-indexed insurance participation. All indicators were disaggregated by sex of household head and compared against programme targets and baseline values. Statistical analysis employed frequency distributions for categorical variables; cross-tabulation to examine relationships between predictor and outcome variables; chi-square tests to assess significance of differences across sub-populations; and summary statistics including means and medians for continuous variables. Data were disaggregated by sex of household head, cohort enrolment period, and district to enable intersectional analysis of differential programme impacts at differing levels of statistical power.

Methodological and data limitations

77. The evaluation confronted several significant quantitative limitations that constrained analytical rigour. The data collection team had challenges in accessing camp extension officers and farmers. A number of camp extension officers could not be reached through phone calls and text messages to help with mobilization of farmers. It transpired later that the camp extension officers were attending a workshop during the same period. Equally, a number of farmers were not available, mainly for one of two reasons, either: a) they had travelled to district centres for Food Reserve Agency (FRA) payments for the maize crop sold the previous season or b) they were extremely busy with farming operations given that the rainy season had started. Most of the farmers the evaluation team managed to contact could only be available either towards the end of the day or at night. This slowed down the data collection exercise considerably to almost double the initially planned days. Consequently, the evaluation team prioritized data collection from target camps.

78. As a result, the control group design suffered from inadequate statistical power, with only 33 control households compared to 558 target households, increasing margin of error and Type II error risks. Critically, control households were drawn exclusively from Pemba district whereas target households spanned six districts, introducing selection and geographical bias whereby observed differences potentially reflected local Pemba conditions only rather than programme impact. However, this is not seen as a major concern as the district is similar to other R4 districts from a climatic (being drought-prone) and cultural point of view. But it is arguably more rural, despite being intersected by a main road corridor. Small district-level sub-samples constrained disaggregation capacity; for instance, Kalomo district contained only three households headed by women, rendering gender-specific inferences for that location statistically unreliable. For this reason, where differences between districts are mentioned in the report, they should not be considered as statistically significant. Additionally, inconsistencies across the three baseline studies – including missing data collection tools from Phase 1, variations in asset ownership questions affecting wealth classification, and differential specificity in chronic illness and disability questions – prevented full replication of baseline methodologies and limited longitudinal trend analysis.

79. The evaluation maintained awareness of recall bias given the ten-year programme duration, acknowledging that participants might not accurately remember past events or food consumption patterns, and addressed this limitation through triangulation across multiple data sources rather than relying exclusively on beneficiary recall.

Qualitative data collection

80. The evaluation conducted 43 KIIs with WFP staff; implementing partner personnel; government

officials at national and district levels; insurance company representatives; and commercial credit providers (Table 3). These semi-structured interviews explored programme design rationale; implementation challenges; coordination effectiveness; policy influence outcomes; and sustainability prospects from diverse institutional perspectives.

81. Sixteen FGDs were conducted across the six implementation districts in November 2025, engaging beneficiaries in sex-disaggregated and age-differentiated groups to create safe spaces for honest sharing about programme experiences, household decision making, and differentiated impacts (Table 3). Women's focus groups were facilitated by woman team members fluent in local languages, enabling exploration of sensitive topics, including financial autonomy, intra-household conflict and social restrictions limiting agricultural participation. Men's focus groups examined agricultural productivity outcomes, livelihood resilience and changing attitudes toward women's economic participation. Youth focus groups captured perspectives on employment aspirations and farming viability, while discussions with elderly farmers preserved institutional memory regarding traditional risk management practices. Where possible, persons with disabilities were purposively sampled with assistance from camp extension officers to examine access barriers and inclusion effectiveness.

Table 3: Stakeholders interviewed

District	KIIs		FGDs					
	Target	Actual	Men		Women		Both	
			Target	Actual	Target	Actual	Target	Actual
Gwembe	3	2	1	1	1	1	0	1
Pemba	5	3	2	2	2	2	0	1
Monze	6	9	2	2	2	2	0	1
Namwala	3	2	1	0	1	0	0	1
Kalomo	3	4	1	0	1	0	0	1
Chikankata	3	3	1	0	1	0	0	1
Total	23	23	8	5	8	5	0	6

Lusaka/virtual interviews			
Govt stakeholders	NGOs/other partners	WFP	Total
9	3	8	20

82. Several qualitative data collection sessions encountered disruptions. Diesel shortages in Gwembe necessitated rescheduling interviews with district officials, while heavy rains prevented focus group discussions at Kanchomba North in Pemba district. In Lukonde Camp (Gwembe district), no youth focus group was held because attending youth lacked awareness of R4.

83. Direct observation through structured transect walks with knowledgeable community guides verified reported outcomes regarding conservation agriculture practice adoption, post-harvest storage facility functionality, and community ownership of programme infrastructure. These observations preceded FGDs, providing empirical grounding for subsequent triangulation of beneficiary claims.

Qualitative data analysis

84. Qualitative analysis employed thematic analysis moving from data cleaning through deductive coding based on evaluation questions and ToC assumptions, complemented by inductive coding capturing emergent themes and unexpected findings. The analysis examined power dynamics, social relationships and

institutional arrangements shaping programme outcomes, with particular attention to gender analysis, exploring how underlying social norms influenced differentiated impacts on men and women. Light-touch contribution analysis systematically tested theory of change assumptions against empirical evidence while considering alternative explanations for observed outcomes.

Triangulation and evidence-based judgments

85. The evaluation systematically triangulated quantitative monitoring data, household survey results, qualitative interview and focus group findings, direct observation evidence, and programme documents review to establish convergent validity. Where data sources revealed inconsistencies, the evaluation team investigated alternative interpretations and sought additional evidence to resolve ambiguities. Sensemaking discussions with programme stakeholders during the preliminary findings presentation enabled validation, correction and elaboration of evaluation conclusions. The team established criteria for determining when available evidence was sufficient to support specific conclusions, acknowledging uncertainty where triangulation revealed persistent ambiguity or contradictory findings across data sources.

Ethical considerations

86. The evaluation adhered to United Nations Evaluation Group (UNEG) 2020 Ethical Guidelines, ensuring informed consent from all participants, protecting privacy and confidentiality through anonymization of individual responses, respecting cultural sensitivities in discussion facilitation, and ensuring fair recruitment including deliberate inclusion of women and socially excluded groups. The evaluation team remained alert to potential harm from raising expectations or exposing participants to criticism, implementing safeguards including confidential feedback mechanisms and careful framing of sensitive topics.

2. Evaluation findings

RELEVANCE

2.1. EQ 1 To what extent did R4 remain relevant to the evolving needs and priorities of targeted communities over time?

EQ 1.1 How relevant is the R4 initiative to resilience building in the Zambian context (key focus on the districts of implementation)?

1) Finding: R4 demonstrated alignment with Zambia's national development priorities, policy frameworks and international commitments across multiple levels.

87. From a design perspective R4 was supportive of Zambia's long-term and medium-term strategic planning frameworks.[55] Its poverty reduction, economic diversification, and strengthening smallholder capacity objectives were congruent with Vision 2030's aspiration to transform Zambia into a "Prosperous Middle-Income Nation by 2030". The aim of improving access to affordable credit and financial services for smallholders is strongly aligned with Vision 2030's goal of promoting inclusive financial sector development.

88. At the operational level, R4's objectives were aligned with the Eighth National Development Plan (8NDP, 2022–2026), which prioritizes "Socio-Economic Transformation for Improved Livelihoods". Interventions mapped to the 8NDP's strategic areas, especially the mainstreaming of environmental sustainability and climate change adaptation and improving agricultural productivity. Earlier phases of R4 (and indeed WFP's Transitional Interim Country Strategic Plan and Country Strategic Plan [CSP 2019–2024]) were consistent with the Seventh National Development Plan (7NDP, 2017–2021) which had a focus on poverty and vulnerability reduction, economic diversification and job creation.

89. Similarly, R4's core components were directly responsive to climate vulnerabilities prioritized in Zambia's National Adaptation Plan (NAP) and Nationally Determined Contributions. It recognized climate risk as the most significant threat to the national food system, given the country's reliance on rain-fed agriculture and high levels of rural poverty and promoted CA and provision of weather and climate information services as a means of building resilience to droughts and floods identified in the NAP.

90. Efforts in the domain of risk management[56] echo the NAP's advocacy for agricultural insurance, and lessons from R4's experience with index insurance played a role – along with other institutions[57] – in informing the design of national agricultural insurance products which are now integrated into the FISP.

91. R4 was positioned within WFP's CSP to maximize its contribution to the global 2030 Agenda for Sustainable Development, notably SDG 1 (No Poverty), SDG 2 (Zero Hunger), SDG 5 (Gender Equality), SDG 13 (Climate Action), and SDG 17 (Partnership for the Goals). The CSP itself contributes to the United Nations Sustainable Development Cooperation Framework (UNSDCF) in Zambia, and this policy document was designed to align with Vision 2030 and 8NDP.

[55] Government of the Republic of Zambia. 2006. Vision 2030: A prosperous middle-income nation by 2030. https://www.mofnp.gov.zm/?wpdmpro=the-vision-2030 and Government of the Republic of Zambia. 2022. Eighth National Development Plan (8NDP), 2022–2026: Socio-economic transformation for improved livelihoods. https://www.cabinet.gov.zm/newsite/wp-content/uploads/2023/12/8NDP-2022-2026.pdf

[56] Weather-indexed micro-insurance for smallholders and technical support to the Government of Zambia in enhancing the FISP.

[57] Including the World Bank's Global Index Insurance Facility (GIIF), and the International Research Institute for Climate and Society (IRI) (https://cgspace.cgiar.org/server/api/core/bitstreams/26fa6c09-a661-481b-943d-640d7c37c718/content)

2) Finding: R4 components were contextually relevant but faced implementation barriers due to economic constraints, liquidity constraints and institutional limitations on the ground.

92. R4's approaches were aligned with smallholder farmers' underlying vulnerabilities and livelihood strategies in Zambia's drought-prone Southern province. However, implementation encountered significant barriers where project assumptions about affordability, market functionality, and climate shock magnitude clashed with the realities of the operating context, which included a particularly severe drought (2023/2024) and increases in the prices of agricultural inputs. After Russia's invasion of Ukraine in 2022, fertilizer prices soared as supply chains were disrupted, with a 50 kg bag rising from ZMW 600 to over ZMW 1,000. This forced smallholder farmers to reduce usage, impacting yields.[58] The crisis worsened with the 2023/2024 El Niño drought, which brought the lowest mid-season rainfall in four decades and destroyed around 1 million hectares of maize. Maize production fell by over 50 percent, shifting Zambia from a regional breadbasket to an importer. Water shortages crippled hydroelectric power generation, causing 21-hour daily outages and further damaging agriculture and processing. These combined shocks drove food inflation to 17.4 percent in 2024, leaving over 6 million Zambians needing humanitarian aid.[59]

93. The core principles of CA – minimizing soil disturbance, mulching, etc. – were relevant to farmers in that they are largely reliant on rain-fed agriculture and as such are vulnerable to drought / dry spells. Some farmers who adopted these CA methods were protected to an extent from drought: for example, men in Lukonde Camp (Gwembe district) told the evaluation team that those using the ripping method managed to harvest maize during the worst drought of 2023/2024 while others got nothing. However, despite recognizing these benefits, widespread CA adoption was constrained by the economic reality of smallholder purchasing power and associated labour demands. Farmers reported that conservation farming practices entail upfront input costs, particularly for herbicides, which posed affordability challenges for some households. In addition, the labour demands associated with key activities, such as ripping and potholing, were perceived as high, especially by women for whom these tasks represented unfamiliar and physically demanding work. These factors influenced adoption levels and sustained participation, highlighting the importance of labour-saving options, gender-responsive support, and context-appropriate extension to facilitate uptake. Consequently, many farmers often practiced CA only on small portions of their farms.[60]

94. The risk reserves component (savings) strongly resonated with rural people's needs for local access to credit / financial safety nets and was widely cited as a game changer by both programme staff and beneficiaries.[61] The VSLA/SfC model was highly aligned with community needs because it provided affordable credit to farmers who previously "*used to borrow money from local lenders who charged 100 percent interest*". Furthermore, the savings groups provided financial literacy for members.[62]

95. The prudent risk-taking (credit) component was instigated in response to the recognized need[63] for farmers' access to credit by linking them to microfinance institutions (MFIs) such as Vision Fund and Agora. In some cases, the arrangement also created challenges for farmers following the significant crop losses experienced in 2023. When households were unable to repay input loans after crop failure, this placed additional financial pressure on already vulnerable farmers, highlighting the importance of carefully

[58] International Food Policy Research Institute. 2023. Russia-Ukraine war after one year: Impacts on fertiliser production, prices and trade flows. https://www.ifpri.org/blog/russia-ukraine-war-after-year-impacts-fertilizer-production-prices-and-trade-flows/#:~:text=Russia%20and%20Belarus%20are%20important,of%20global%20trade%20in%20potash
[59] Save the Children. 2024. Drought devastates Zambia's food crops.https://www.savethechildren.org.uk/news/media-centre/press-releases/2024/drought-devastates-zambias-food-crops--#:~:text=Farming%20families%20are%20particularly%20hit,the%202023%2D2024%20rainy%20season.
[60] Interviews with camp extension officers and FGDs with farmers.
[61] Interviews with WFP and CP staff, and FGDs with beneficiaries.
[62] FGD, men, Nteme Camp, Monze; FGD, mixed, Nansenga Camp, Chikankata.
[63] Zambia Development Agency. 2020.

balancing credit-based input access with risk protection mechanisms in highly climate-exposed environments. As reflected in feedback from implementing partner informants, some credit recovery practices were perceived as overly stringent, with reports that assets such as livestock, household items and farm equipment were at times used as collateral for loan recovery. While these approaches may reflect standard risk management practices within certain lending models, they also highlight the sensitivity required when introducing formal credit mechanisms in vulnerable rural contexts. This experience offers important lessons for future programming. It underscores the need for clearer safeguards, strengthened oversight, and enhanced financial literacy among beneficiaries to ensure informed borrowing decisions. It also reinforces the value of more flexible and community-based financial models - such as savings groups - which can provide access to finance while minimizing exposure to potentially adverse recovery practices.[64]

96. Crop insurance (risk transfer) was highly relevant, given the increasing intensity of climate shocks, which frequently devastate rain-fed agriculture. Over the course of the programme, R4 farmers received payouts on four occasions – after a dry spell in 2017, a drought in 2019, a dry spell in 2020, and the 2023/2024 drought (Table 4).

Table 4: Crop insurance payouts to R4 farmers

Date / Season	Number of Farmers / Beneficiaries	Gender Breakdown (Male / Female)	Average Amount per Farmer	Total Payout	Source of information
2018 (Following 2017/2018 dry spell)	3 835 enrolled, no record of number receiving payout	unknown	unknown	unknown	Insurance payout report 2017 - 2018
2019 (Following 2018/2019 drought)	7 821 smallholder farmers	49% women	USD 72	USD 450 000	ACR 2019 CSP 2019-2024
2020 (Following 2019/2020 early-season dry spells)	7 016 smallholder farmers	Not specified	ZMW 153.65 (USD 7.3)	USD 57 199	ACR 2020 CSP 2019-2024
2024 (FISP and R4 Weather Index Insurance combined)	722 335 farmers (722,000 FISP + 335 R4 farmers)	R4 cohort was 60% women; FISP split not specified	Not specified	USD 34.4 million	ACR 2024 CSP 2023-2028

97. Although these payouts were welcomed, the appropriateness of the specific design was not fully aligned with the financial and operational realities of smallholder farmers. In line with findings from the study and evaluation of R4 in Malawi and Zimbabwe respectively, the intangible nature of index-based insurance was difficult for farmers in Zambia to grasp. The evaluation also found that farmers' understanding, and expectations of the insurance component sometimes differed from how payouts were triggered under the index-based system. In situations where payouts were not triggered despite visible localised crop losses, some farmers expressed frustration or questioned the fairness of the scheme. Even when payouts were made, the amounts were occasionally perceived as insufficient to fully compensate for losses or cover the cost of replacement inputs. These experiences underscore the importance of continued investment in farmer

[64] Mixed FGD, Nansenga Camp, Chikankata.

awareness, transparent communication on how index insurance functions, and calibration of payout structures to strengthen confidence and perceived value among participating households. Consequently, demand dropped drastically once WFP ceased subsidizing premiums, as farmers could not justify the cost against the uncertain return. Operationally, the lack of physical presence of insurance agents in rural camps meant farmers had nowhere to report grievances, and payouts were frequently delayed past the critical planting window, diminishing their utility for agricultural recovery. Thus, while the insurance provided a vital theoretical buffer, the commercial product was not aligned with the knowledge and liquidity constraints of the beneficiaries. These challenges were not unique to the R4 pilot context: a WFP presentation to then WFP Regional Bureau for West Africa (RBD) leadership in October 2022[65] explicitly acknowledged that the national scale-up from 5 to 116 districts encountered the same difficulties - poor product design, limited capacity for pre- and post-performance assessment, poor payout distribution channels, and lack of awareness among farmers and government extension staff - indicating that the root causes of farmer dissatisfaction were systemic rather than location-specific.

98. Supporting aggregators and facilitating farmers' access to markets was again highly appropriate for the Zambian context, being designed to overcome the logistical isolation of smallholder farmers. By establishing micro-aggregators at the community level, the programme allowed SHF to aggregate their crops within their areas reducing the need to transport crops to markets outside their villages. This mechanism theoretically enabled farmers to benefit from economies of scale and to access prices offered in urban centres without incurring prohibitive transport costs.

99. Despite these benefits, the component faced a significant functional gap: the financial incapacity of the aggregators. Implementing partners noted that while training was effective, aggregators did not have cash to pay farmers on the spot.[66] Where aggregators had access to savings group loans, they were better able to mobilize working capital and pay farmers on time, which strengthened trust and improved the effectiveness of the aggregation model. This highlights savings groups as a critical financial support structure that can enhance aggregator performance, particularly in contexts where formal credit is limited.[67] Without such linkages, the level of engagement was limited.

100. The appropriateness of the component was further tested by the dominance of maize and the lack of buyers for alternative crops. Although the R4 initiative promoted crop diversification into commodities such as groundnuts, cowpeas and sorghum, women in Gwembe reported limited market opportunities for these crops. In particular, the absence of consistent government procurement – notably because the Food Reserve Agency (FRA) does not purchase most alternative crops – reduced incentives to sustain production. However, in cases where reliable off-takers were present, such as Zambian Breweries' purchase of sorghum, production levels increased. The WFP Zambia Crop Marketing Season Dashboard for 2022/2023 confirms this: the Zambia Breweries sorghum arrangement was the programme's standout market linkage success in that season, with 777 metric tons aggregated against a target of 200 metric tons, substantially exceeding expectations and demonstrating the potential of committed off-taker partnerships to activate farmer production of non-maize crops. This suggests that diversification efforts are more likely to succeed when supported by assured markets and structured value chain linkages.

101. To modernize market access, WFP deployed the Maano virtual farmers market (VFM) App, which allowed aggregators to register as buyers and to view off-takers who buy bigger amounts. This digital

[65] WFP. 2022. Social protection and micro-insurance: Zambia country case study. Rome: WFP. https://reliefweb.int/report/zambia/social-protection-and-microinsurance-zambia-country-case-study-december-2022

[66] KII, aggregator, Chikankata Pemba; KII, aggregators and camp extension officer Nteme Agric Camp, Monze; KII, aggregator; Lead farmer, rain gauge minder headman Mulunje B. Kalomo.

[67] KII, DAPP staff.

approach aimed to create "predictable and stable markets", and the evaluation team was told by users that when it worked the platform was effective. However, implementation was at times affected by administrative and coordination delays, as well as limited clarity around some financial products and occasional gaps in the timely availability of resources. These factors influenced the pace at which certain activities could be rolled out in some locations.[68]

3) Finding: R4's use of implementing partners and government systems for delivery was well aligned with sustainability objectives and, overall, functioned effectively in embedding programme delivery within existing national and local structures

102. The appropriateness of farmer interaction varied significantly by partner. DAPP's model was cited as particularly effective because they employed "*project leaders who were interfacing with the government extension staff at community level*",[69] ensuring a consistent presence. Indeed, districts managed by DAPP consistently outperformed those managed by SHA. DAPP areas reported significantly higher participation in capacity-building trainings, greater access to credit, higher savings rates, better dietary diversity, and higher average incomes than in SHA-managed districts. Reliance on government camp extension officers and volunteer lead farmers was a cornerstone of the delivery strategy. This was appropriate for long-term sustainability, as these structures remain post-project, and are often underpinned by the fact that members are part of the same savings group. However, the effectiveness was constrained by the volume of work required of them as they were expected to handle all the components. Consequently, some farmers felt that the training was not practical or interactive enough.[70]

103. The evaluation also identified timeliness as an important factor influencing delivery appropriateness. In some cases, implementing partners reported delays in the preparation and finalisation of partnership agreements, [71] which contributed to activities starting later than originally planned and occasionally missing critical seasonal windows. Stakeholders noted that when farmer training extends into the land preparation period, farmers may have limited time and resources to immediately apply the practices being promoted.

104. WFP staff acknowledged that internal systems for managing field-level agreements caused a "*three-month gap at the critical time of the season*" when farmers most needed information and inputs. This administrative lag trickled down to beneficiary level. Farmers in Kalomo told the evaluation team that they were promised tools and seeds that were never delivered, [72] although the evaluation team did not hear this complaint from other respondents.

105. The delivery approach for financial services revealed a stark contrast between the appropriateness of savings versus insurance and credit. The SfC model was highly appropriate and successful because it was self-managed and did not rely on external actors, creating a sustainable culture of financial management,[73] but the delivery of insurance sensitization was widely regarded as inadequate. Insurance technical expertise was largely provided through periodic visits rather than continuous field presence, which sometimes limited opportunities for farmers to fully engage with and understand the more complex features of index-based insurance products.[74] It should be noted that WFP did support a structured national extension effort at government level: a 2020 Capacity Building Concept Note records that WFP supported the Ministry of Agriculture to conduct inter-ministerial working group training that was designed to cascade insurance awareness to district marketing and development officers, with planned reach across all 2,370 camp

[68] KII, aggregator, Chikankata Pemba and KII with WFP staff.
[69] KII, WFP staff.
[70] FGD, women, Masempela Camp, Kalomo; FGD, youth, Munyumbwe Gwembe; FGD, men, Masempela Kalomo.
[71] DAPP and SHA.
[72] FGD, women, Masempela Camp, Kalomo.
[73] KII, SDC programme officer.
[74] WFP staff member.

extension officers in all 10 provinces via three deployment teams. The two-day curriculum covered climate variability, coping strategies, finance basics, insurance principles, and weather index insurance content. However, this training was directed at extension staff rather than farmers themselves and - as evaluation evidence makes clear - was insufficient to bridge the comprehension gap at household level, particularly given the high staff turnover among camp extension officers.[75] This highlights the importance of sustained farmer engagement and simplified communication approaches when introducing financial risk management tools in rural contexts.

106. At the household level, the delivery of "gender transformative" training was highly appropriate. R4 group members reported that it successfully shifted decision making from being the preserve of men to a joint household activity, with both women and men reporting that men became more transparent with finances and planned budgets with their wives.[76] The savings component was particularly well-suited to women's needs, enabling them to establish businesses (e.g. trading in dry fish, making and selling fritters / muffins, and buying and selling goats) and to improve household conditions.

EQ 1.2 To what extent were R4's objectives and integrated activities aligned with the needs of diverse beneficiary groups, and to what degree were beneficiaries consulted in the design and subsequent adaptation of activities?

4) Finding: R4 design placed a strong emphasis on women's empowerment; however, attention to the differentiated needs of other vulnerable groups, including youth, persons with disabilities, the elderly, and the chronically ill, was less consistently reflected in programme delivery.

107. R4 demonstrated a strong commitment to gender equality and women's economic empowerment in its design and implementation. However, the consideration of other vulnerable groups, including youth, persons with disabilities, the chronically ill, and the elderly, was less evident compared to the strong approach that ensured women's participation. This created gaps in inclusivity that limited the programme's reach among Zambia's most marginalized populations, although it should be noted that the programme was designed for households with sufficient labour availability to engage in agricultural activity, and support of these labour-constrained vulnerable groups is often better provided by different interventions, including social safety nets.

108. Although no gender analysis was conducted at the start of the R4 project, an analysis was conducted in 2021to better understand the needs and interests of women and other disadvantaged groups. The design explicitly prioritized the participation of women through multiple strategic entry points, but implementation was not conducted in a structured way, and there were no specific gender indicators aligned to the analysis done. While WFP Zambia recognizes both the National Gender Policy and the WFP Global Gender Policy, implementing partners – contracted in part because of their relative strengths on gender programming – were left to use their own approaches to gender mainstreaming. Women's economic empowerment utilized the VSLA as an entry point because women constituted the majority of participants. This focus yielded tangible results, with women gaining access to financial resources that enabled entrepreneurship and household improvements. Interviews with government officials in Gwembe, corroborated with FGDs with men in Lukonde Camp, indicate that their gender training fostered shifts in household power dynamics, with evidence of men and women increasingly planning financial resource use together,[77] suggesting progress toward more equitable decision-making structures.

109. However, the programme's delivery mechanisms did not address some areas regarding women's

[75] WFP staff member.
[76] FGD, women, Nteme Camp, Monze; FGD, women Lukonde Camp, Gwembe; FDGs, Men, Lukonde Camp, Gwembe.
[77] FGD, men Lukonde Camp, (Gwembe); FGD, men, Munyumbwe Camp; FGD, women, Lukonde Camp; FGD, women, Manungu-B (Monze); FGD, Nansenga Camp, (Chikankata).

specific constraints. Conservation agriculture techniques, while beneficial, imposed significant labour burdens that disproportionately affected women. Women farmers interviewed at Lukonde Camp (Gwembe district), Nteme Camp (Monze district) and Masempela Camp (Gwembe district) all reported that the labour requirements involved in CA were a disincentive to adoption. This suggests that while women were targeted as beneficiaries, the practical demands of certain interventions were not adequately adapted to their circumstances.

110. Furthermore, the technical design of the weather-indexed insurance product demonstrated insufficient attention to women's specific agricultural realities. The index triggers – using 10 km by 10 km resolution[78] – did not adequately capture micro-level variations of the small, fragmented plots often managed by women, creating equity concerns and potentially excluding women from insurance benefits despite their participation in the programme.[79] Women in Nteme Camp (Gwembe district) reported being given vague explanations for fluctuating payout amounts that did not align with their visible losses. For example, in 2020, they received only ZMW 150 and were told this was because "*our harvest was not as bad as the 2019 harvest*", despite their perception of the season. This left them "*confused about how all this was being done*".[80]

111. Although women-headed households were implicitly reached through targeting and results-tracking in Phase 3,[81] they were not explicitly differentiated in programme design. This is despite them facing unique vulnerabilities including time poverty, labour constraints and social marginalization, which may require specific interventions beyond general women's empowerment approaches.

112. Young people (under 35) were particularly targeted in Phase 3 and data indicates that they comprised about 30 percent of beneficiaries in some areas.[82] WFP embedded youth inclusion as a cross-cutting priority by setting quotas, promoting active participation in agriculture and savings, and ensuring youth representation in project monitoring and evaluation through dedicated focus group discussions. In terms of particular benefits to young people, the provision of inputs and seed capital was mentioned,[83] and some reported that the knowledge gained through CA and savings groups helped them start small businesses and gain independence. The project was also successful in enabling young people to assume leadership positions.

113. The needs of persons with disabilities, the chronically ill, and elderly populations received a level of consideration in programme design – for example the 2018 project proposal identified quotas for the participation of PWD. Focus group discussions with beneficiaries indicated that the elderly and PWD were not specifically excluded from groups. Generally speaking, the elderly and PWD face distinct barriers to participation in agricultural activities and financial services. The labour-intensive nature of CA, for instance, poses challenges for elderly farmers or those with physical disabilities, and while no alternative modifications to the approach were evident, at the community level disability champions and HIV/AIDS champions were designated to support PWD and PLWHA in accessing services. Communities reported that gender training led to choosing leaders based on competence, which meant that "*women and persons with disabilities become leaders in our communities*",[84] and a R4 farmer living with a disability reported that savings groups helped him better plan the use of money.[85]

[78] Insurance products being designed at the time of the evaluation use a much higher resolution.
[79] KII, Mayfair insurance staff.
[80] FGD, women, Nteme Camp, Monze.
[81] E.g. "Improved (or stabilized) food security situation for vulnerable populations (including specific groups such as households headed by women)".
[82] Development Aid from People to People. n.d. Rural Resilience (R4) end-of-project report (2015–2025). Unpublished programme report.
[83] FGD, youth, Munyumbwe Gwembe.
[84] FDG, men, Lukonde Camp, Gwembe.
[85] FGD, men, Nteme Camp, Monze.

5) Finding: Beneficiary participation mechanisms existed but feedback loops were not always effective, limiting adaptive management and community ownership in some areas.

114. The R4 initiative established formal structures for beneficiary engagement, yet the effectiveness of these mechanisms at shaping programme decisions and enabling adaptive management remained limited. While R4 incorporated consultation mechanisms to engage communities, the experience highlights an opportunity to further strengthen the transition from consultation to more consistent and meaningful participation. In some cases, limited direct interface between implementing partners and beneficiaries constrained the depth of engagement, affecting opportunities for feedback.[86] While the project employed community-based structures – especially VSLAs – as primary delivery platforms, community feedback into decision-making processes was patchy.

115. The Integrated Climate Risk Management Programme (ICRM) review (2023) corroborates this pattern of non-responsiveness. While the ICRM review does not detail the specifics of Agora's 2023 debt collection practices, it identifies insufficient preparation and contextual analysis - including a failure to understand and address the specific motivations and barriers for different targeted groups - as a negative internal factor undermining programme outcomes throughout Phase 3. The report also notes that the M&E system did not gather adequate qualitative data on household-level power dynamics or GBV, which would have been essential for detecting and responding to protection risks associated with MFI debt recovery.

116. The CA component, while technically sound and recognized as an effective way of protecting crops against droughts and floods, continued to be delivered in labour-intensive formats, despite recognition that high labour requirements were a deterrent to adoption.[87] The ICRM review made the same observation, noting that despite high CA awareness, application remained limited due to the lack of necessary tools and labour-intensive weed management, observing that inadequate access to labour-saving mechanisation tools and machinery, including tractors and drip irrigation systems, limited the impact of the component, and recommending that groundwork on value chains and income-generating activities should be done to assess return on investment before selection. There is no evidence that the ICRM review's observations on mechanisation access translated into corrective investment during the remainder of Phase 3, and with limited roll-out of mechanized rippers[88] or herbicide sprayers continuing, CA adoption was limited to small portions of farms.

117. The 2022 WFP outcome monitoring report found that while farmers cultivated an average of 3.3 hectares, CA adoption was often restricted to smaller portions due to labour and input constraints.[89] Women farmers in Masempela Camp (Kalomo) stated that they restrict CA practices to a small, specific, unit of land known as a "Lima" (approximately 0.25 hectares or 50m x 50m). According to monitoring data,[90] ripping adoption as a conservation agriculture technique varied significantly across the six targeted project districts. Pemba achieved the highest incidence, with 87 percent of households applying the method. Gwembe and Monze followed closely with solid adoption rates of 70 percent and 69 percent, respectively. In contrast, Kalomo and Namwala both reported a moderate usage rate of 55 percent. Finally, Chikankata reported the lowest ripping adoption rate at just 35 percent.

118. Interestingly, the provision of sprayers may have had the additional benefit of reducing women's workloads as these gadgets are typically used by men, whereas hand weeding is considered women's work. As participants in an FGD with men at Nteme Camp, Monze reported: '*Weeding used to be a gender role for*

[86] FGD, men, Masempela Kalomo; FGD, youth, Munyumbwe Gwembe.
[87] 2018 logframe and the end of Phase 2 Outcome Monitoring Report.
[88] About five were reportedly given out to farmers by a loan-based pilot in Monze, and farmers in Masempela Camp (Kalomo district) reported that they had been promised special "chaka" hoes and rippers, but these were not delivered.
[89] WFP. 2022. R4 outcome monitoring report. Unpublished monitoring report.
[90] Outcome Monitoring 2022

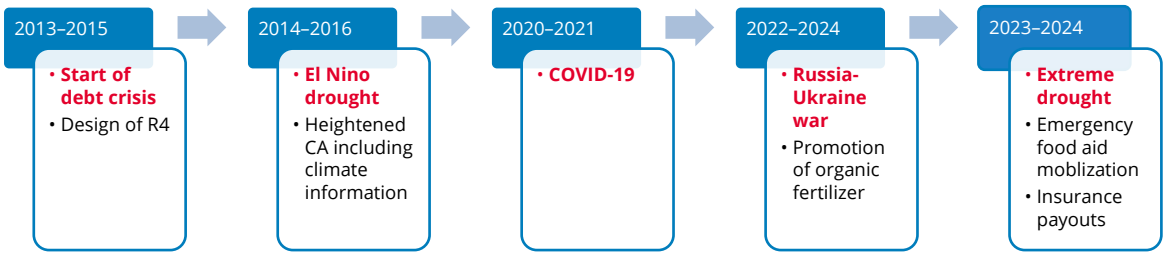
women and children but when herbicides were introduced, weeding has become a responsibility of men'.

6) Finding: In some cases, targeting criteria may have led to unintended exclusions, with potential implications for the inclusion of some of the most vulnerable or marginalised community members.

119. R4 targeted "vulnerable but viable" households - specifically women, youth, and persons with disabilities – to build resilience. Deliberate efforts were made to register "differently abled" beneficiaries for the first time in Phase 3, when a target of registering 1,000 differently abled farmers was set.[91] This is commendable, but the programme's core interventions embedded resource requirements (largely labour and inputs) that made it difficult for PWD and poorer households (although it should be noted that able-bodied members of households that included a disabled person were encouraged to participate). The labour-intensive nature of CA techniques makes it challenging for able-bodied farmers, let alone those with physical disabilities, and the requirement to buy herbicides in order to optimize productivity is a financial barrier that prevented the most resource-constrained households from realizing full benefits.

EQ 1.3 How effectively did the R4 initiative adapt and respond to emerging needs and changing external contexts?

Figure 2: Main shocks occurring over the R4 implementation period



7) Finding: R4 demonstrated adaptive capacity during COVID-19 but faced significant constraints responding to severe economic shocks and extreme drought events.

120. R4 operated during a decade characterized by multiple severe disruptions including the COVID-19 pandemic, significant economic deterioration (in part caused by the economic shock of the Russia-Ukraine war), and extreme climate shocks culminating in the devastating 2023/2024 El Niño-induced drought (Figure 2). The programme's adaptive responses to these crises revealed both capacity for operational adjustment and fundamental limitations in addressing the magnitude of compounding shocks.

121. COVID-19 adaptations included suspension of large gatherings and a "door-to-door" interface model. While this allowed activities to continue, it significantly increased operational costs and reduced the number of contacts partners could make. The evaluation team found some evidence of pivoting to reduce the impact of economic shocks: to support economic resilience during the pandemic, Heifer International provided grants of ZMW 10,000 to about 20 savings groups to help maintain their capital base and allow members to continue borrowing during the economic downturn. The ICRM review confirmed both dimensions of this: it found little evidence of a pivot to reduce the impact of the spike in fertiliser prices arising from the Russia-Ukraine war.

122. The 2023/2024 farming season was affected by severe drought, and while the R4 project itself was unable to provide support during this crisis as there was no inbuilt crisis modifier component, WFP as a

[91] 80 percent of this target was reached (Outcome 1 Report Phase 3 August 2022).

Country Office mobilized to provide humanitarian cash and in-kind food assistance to affected populations, effectively acting as a shock-responsive safety net. Furthermore, some microfinance providers introduced loan restructuring, extending repayment periods and freezing interest accumulation to prevent farmers from losing assets due to default. By the time of the 2024 drought R4 farmers were insured (up to a maximum of one Ha) under the Government's FISP.[92]

8) Finding: Programme adaptations across credit, insurance and market access components demonstrate a strong commitment to learning and continuous improvement, with adjustments made to better align delivery models to evolving contextual realities.

123. When the hazards associated with tightly enforced debt recovery emerged in Phase 1, WFP pivoted towards the SfC model (where loans are secured against group savings). The shift was prompted by the severe difficulties encountered during Phase 1 (2015/2016) when farmers accessed loans through Vision Fund Zambia (VFZ). Following a devastating drought many were unable to repay their debts, and recovery methods – including the seizure of livestock and household assets – exacerbated poverty, social friction, and even disrupted children's schooling. The group liability system, further, penalized non-defaulters, intensifying community resistance to external credit. In response, the programme pivoted in 2018 to the SfC model. This approach emphasizes building internal savings before introducing any borrowing, enabling groups to self-capitalize and establish risk reserves. Only after groups demonstrated strong savings and repayment practices were they linked to external microfinance institutions.[93]

124. Nevertheless, this new approach was more closely aligned with the principle of "do no harm". That some farmers were still being chased by debt collectors in later stages of the programme indicates that the terms and conditions of MFI loans were still not widely understood, although there is no evidence that loans taken out with MFIs after the move to the SfC model were facilitated or endorsed by R4 partners. Over the course of the programme autonomous VSLA groups emerged as the primary source of R4 beneficiaries' credit, despite having higher interest rates than products available from MFIs as discussed above.

125. Several adaptations were made to the insurance product. The first was a move from a purely index-based insurance to a combination of index and area-yield in an attempt to more accurately reflect losses experienced by farmers, especially on smaller plots. The payouts system was also changed from physical payments (that occurred at distant sites and involved long waiting times)[94] to digital payments through a mobile money platform operated by MTN.

126. However, an October 2022 WFP RBD leadership presentation documents a broader set of adaptations to the insurance component than was visible to farmers in the field. These included: creation of the first National Spatial Data and digital mapping of agricultural blocks and camps to improve insurance product targeting and responsiveness; establishment of a digital seasonal monitoring platform for pre- and post-season product performance assessment; a dry-run of Area Yield Index insurance in the 2018/2019 season, resulting in Government on-boarding of 40 percent of FISP districts under Area Yield Index in 2019/2020 and full 100 percent coverage by 2021/2022; development of blended products incorporating yield, livestock, and weather indices; and awareness creation materials produced in seven local languages. WFP also partnered with IFAD to pilot the first index-based livestock insurance for 5,000 farmers at Government request. By 2022, WFP's adapted by establishing private sector partnerships with Syngenta for maize and soyabean input-based weather insurance, Sanlam for a hospital cash-back product integrated into savings groups, and Zambia Breweries for a crop-specific sorghum weather insurance product. Taken together, these represent a more systematic strategic evolution at national level than was apparent from community-level evidence,

[92] Farmers contribute cash in order to receive the FISP inputs package, a portion of which buys crop insurance.
[93] Interview – CP DAPP and VFZ; Interview – WFP Policy Officer; R4 Zambia MTR 2017; FGD, men, Munyembe, Gwembe.
[94] WFP. 2017. *R4 Insurance payout report.* Unpublished programme report.

highlighting the significant gap between the sophistication of national-level insurance development and the quality of product understanding experienced by beneficiary farmers.

127. The gradual withdrawal of the WFP subsidy to cover insurance premiums (from 100 percent to zero over four years) in an attempt to wean farmers on to paying for it themselves was limited: few farmers purchased the product autonomously because it did not meet their expectations regarding the value of protection, or they had more pressing needs for their cash. Farmers who continued to insure their crops generally did so through the facility included in FISP.

128. The market access component was well designed in an attempt to address low farm gate prices faced by farmers but faced infrastructure and digitalization challenges. Poor network coverage limited the effectiveness of digital tools,[95] with rain gauge minders and farmers unable to reliably communicate weather information or conduct online transactions, leading to increased travel and negating efficiency gains. The Maano VFM App struggled due to low smartphone ownership,[96] unstable technology,[97] and sustainability issues[98] after donor funding ended.

129. The Maano VFM platform underwent significant evolution from a basic market-linkage tool into a comprehensive, private sector-led digital ecosystem, though implementation faced some challenges. Originally conceived to facilitate aggregation and provide a transparent trading space, the platform underwent major redevelopment and a re-launch in 2021 with support from WFP and the Ministry of Agriculture.

130. During Phase 3 it evolved from a sole focus on market access to supporting an integrated value chain approach and incorporated additional modules for access to finance through e-wallets, insurance, e-learning and extension services, weather information, and transport services. To address the digital divide affecting smartphone-limited farmers, the platform included Unstructured Supplementary Service Data (USSD) functionality.[99]

131. The platform achieved significant scale, with the user base growing fifteenfold from approximately 7,000 smallholder farmers in 2021 to over 105,000 by late 2023, over two-thirds of whom were women and youth.[100] It also transitioned from a WFP-supported platform to private sector ownership under financial service provider Digital PayGo (Zanaco[101]), with WFP retaining supportive oversight.

[95] Self Help Africa. 2022. Partner Report. SHA October 2022
[96] WFP. 2022. R4 Outcome Monitoring Report. August 2022. Unpublished programme report.
[97] Self Help Africa. 2023. Integrated Risk Management Programme (R4) Phase 3: Monthly reports (August–December 2023. Unpublished programme reports.
[98] KII, aggregator, Chikankata, Pemba.
[99] Enabling users with basic feature phones to onboard and trade rather than relying exclusively on app interfaces.
[100] WFP, Maano VFM: Digitalizing Zambia's Farming Ecosystem
[101] Zambia National Commercial Bank

EFFECTIVENESS

2.2. EQ 2: To what extent were R4 and its components effective at achieving expected resilience and food security outcomes, and what were the significant drivers and inhibitors of performance?

EQ 2.1: To what extent did the activities implemented perform against their expected outputs and outcomes and what factors (both internal and external) significantly influenced the achievement and non-achievement of the objectives?

9) Finding: To a large extent, R4's activities achieved the intended outcome and output targets, although the absence of targets for some indicators makes measurement of achievement difficult

132. As seen in Table 5, the programme demonstrates success at targeted outcome level (building resilience for vulnerable rural populations to manage climate risks using community-oriented and market-based approaches), with structural capacity improvements outpacing immediate welfare gains. Target households achieved 92.8 percent acceptable FCS (103.1 percent of target),[102] indicating strong food security performance. However, 37.8 percent of beneficiaries still employ crisis-level livelihood coping strategies, which at face value indicates enduring vulnerability despite programme participation. 77.2 percent of targeted households reported selling livestock as a coping strategy versus 63.6 percent of control group.[103] On the face of it this could indicate more frequent recourse to a coping strategy, but a more likely explanation is that it reflects higher levels of livestock ownership, and livestock sales becoming increasingly important as part of a livelihood strategy rather than a reflection of stress. Indeed, livestock ownership has increased since baseline: over 50 percent of beneficiaries interviewed reported livestock sales as a primary source of income,[104] and are increasingly moving towards livestock husbandry instead of crops as a hedge against erratic rainfall.[105] Furthermore, there were observable differences in the performance of these indicators across districts.[106] For instance, more than double the target households adopted crisis coping in Gwembe[107] (49 percent) compared to those in Chikankata (21.7 percent), p-value 0.009.

Table 5: Achievement against logframe indicators

Indicator	Target (2018 logframe)	R4 Beneficiaries			Status (Nov 2025)
		Overall	HHM[108]	HHW	
Outcome 1					
1. Acceptable FCS	90%	92.8%	93.5%	90.7%	Achieved
2. Reduced coping strategy index	<6	4.2	4.2	4.1	Achieved
3. Adopting "stress" coping strategies	<15%	67.2%	66.4%	69.8%	Partially Achieved
4. Adopting "crisis" coping strategies	<10%	37.8%	39.9%	31.0%	Partially Achieved
5. Adopting "emergency" coping strategies	<5%	38.4%	39.2%	35.7%	Partially Achieved
6. Access to climate information	70%	71.9%	74.8%	61.9%	Achieved

[102] 103.9 percent of target for HHM, 100.8 percent of target for HHW.
[103] Given the small size of the control sample, these findings should be interpreted as indicative of a trend rather than a precise statistical difference.
[104] WFP. 2022. R4 outcome monitoring report. August 2022. Unpublished programme report.
[105] DAPP. n.d. Rural Resilience (R4) end-of-project report (2015–2025). Unpublished programme report.
[106] It should be noted that the sample size was big enough to infer statistical significance.
[107] WFP staff note that Gwembe has had the highest frequency of drought occurrence in the last ten years.
[108] HHM: Households headed by men; HHW: Households headed by women

Indicator	Target (2018 logframe)	R4 Beneficiaries			Status (Nov 2025)
		Overall	HHM[108]	HHW	
Outcome 2					
7. Accessing agricultural credit	50%	20.1%	21.0%	17.1%	Partially Achieved
8. Diversified income sources	60%	88.0%	88.2%	87.3%	Achieved
9. Enrolled in savings schemes	80%	66.8%	65.3%	72.1%	Partially Achieved
10. Enrolled in weather index insurance	80%	82.1%	81.6%	83.7%	Achieved
11. Paid insurance premiums	60%	47.8%	46.4%	52.7%	Partially Achieved

Source: R4 Logframe 2018 and Evaluation Household Survey November 2025[109]

133. While previously noted quantitative data limitations should be noted, the programme achieved its strongest performance on information dissemination (Output 1.1), with 71.9 percent of target households accessing climate information services (102.7 percent of target overall).[110] Critically, chi-square analysis confirms uniform geographic delivery, demonstrating scalable implementation regardless of district-level infrastructure variations. However, households headed by women (HHW) show lower levels of attainment than households headed by men (HHM) in several key indicators: they are more likely to resort to "stress" coping strategies, and less likely to access agricultural credit primarily due to possessing fewer productive assets that could serve as collateral. Monitoring reports[111] consistently show that women farmers have lower household asset scores. A lower proportion of women had acceptable FCS, and lower levels of adoption of CA and agroforestry, both linked to productivity constraints. Despite lagging in formal credit, HHWs outperform HHMs in participation in savings schemes. Qualitative data[112] suggests women favour savings groups due to more manageable repayment and debt recovery conditions, whereas formal microfinance is perceived as unmanageable. This reliance on informal risk reserves, rather than risk-taking with credit, is a strategic response to their higher vulnerability. These results are consistent with WFP Zambia CSP evaluation report findings.[113]

134. The near-universal CA adoption rate (99.1 percent adopting at least one CA technique, albeit on small plots of land) by R4 farmers implies effective extension delivery mechanisms, likely facilitated through operational producer groups, and easily surpasses the project target of 70 percent.[114] The geographic consistency of CA adoption shows farmer groups function equivalently across districts. Specific practice adoption includes crop rotation: 91.4 percent (average across gender); ripping: 73.4 percent (average); intercropping: 81.5 percent (average) and using planting basins: 55.9 percent (average). However, as noted earlier in the report, farmers rarely apply these practices at scale on their farms (usually just to a small portion)[115] because of labour and resource constraints. So, while R4 was successful in supporting uptake in the sense that most farmers did something, the desired effect was not achieved because farmers could not do enough. In a sense, application of CA techniques can be seen as farmers using a kind of coping strategy whereby, they invest time in the expectation of getting at least some level of production should rains fail at some point over the growing season. Further, the R4 project surpassed its targets of supporting smallholder

[109] All indicators represent the percent of households that participated in the project
[110] HHM 106.8 percent, HHW 88.6 percent.
[111] Outcome 5 Monitoring Report 2018 and 2017.
[112] R4 MTR Report 2019; several FGDs
[113] WFP. 2025. Country strategic plan evaluation: Zambia (2019–2024). Rome: WFP Office of Evaluation. https://www.wfp.org/evaluations/zambia-country-strategic-plan-evaluation-2019-2024
[114] HHM 141.9 percent of target, HHW 140.6 percent of target.
[115] R4 had a target of one acre of land per farm.

farmers to diversify their sources of income (147.0 percent of target overall; 145.5 percent HHM, 146.7 percent HHW).

135. The target for Outcome 2 (Financial services utilization) was partially achieved. 90.1 percent of HHMs and 54.4 percent of HHWs reported the sale of farm produce as a source of income. This represents achievement rates of about 146 percent against the R4 target of 60 percent. KIIs, FGDs and project documentation identified several key drivers of R4's performance in realizing its outcome and impact targets in this area, including the promotion of smallholder farmer market access through support to the micro and intermediate aggregator model, which was established as a complementary mechanism to support market access. The R4 Summary Report (2022) indicates that 150 smallholder farmers were identified and trained as micro-aggregators (against a target of 750). Additionally, 16 intermediary aggregators were trained (against a target of 60). These aggregators supported the operation of 44 established rural aggregation centres. The DAPP End of Project Report (2015–2025) shows a total of 143 aggregators were engaged on an annual basis (Monze: 51; Namwala: 33; Gwembe: 32; Pemba: 27). In Gwembe, government officers reported that 20 farmers were initially identified and trained as aggregators under Heifer International. The total number of aggregators is higher – monitoring data from August 2023 recorded three active aggregators in Kalomo and seven active aggregators in Chikankata.[116]

136. However, sales to aggregators were limited, with the channel consistently lagging behind sales to private traders, neighbours, and the Zambia Food Reserve Agency (FRA), although access to the latter was supported and facilitated by WFP, particularly by ensuring farmers' grain was of an acceptable quality. Phase 2 endline outcome monitoring found that 19.3 percent of households sold to WFP-supported aggregators.[117] This was significantly lower than sales to private traders (57.9 percent) and the Government FRA (44.3 percent). In Phase 3 aggregator usage dropped further. Only 4.6 percent of households sold to micro-aggregators, and 1.3 percent sold to intermediary aggregators. In contrast, 34.7 percent sold to private traders and 49.3 percent sold to neighbours / community members.[118] Despite this, a few micro aggregators ended up being nurtured into intermediate aggregators and have since expanded their activities to several districts and others have taken their aggregation activities beyond the provincial borders, to the Copperbelt and Northern provinces.

137. Issues with the Maano VFM platform constrained effectiveness. System reliability proved problematic, with the mobile App reportedly "down for a year or so" due to developer issues, and in districts like Chikankata, aggregators reported it was closed or discontinued. Poor network connectivity in rural areas created barriers, with farmers unable to complete online transactions due to network failure, necessitating costly physical travel. Additionally, micro-aggregators often lacked liquidity to purchase advertised produce, while low digital literacy increased fraud risks despite USSD accessibility features. Farmers interviewed for this evaluation were impressed with the Maano platform while it was operational but have now reverted to transacting with off-takers through text messages.[119]

138. Only 20.1 percent of beneficiary households accessed commercial credit (Output 2.2), representing the programme's weakest financial inclusion metric (36.5 percent of the overall target).[120] This low absolute penetration means targets were substantially underachieved and set at unrealistic levels, although in mitigation, engagement with autonomous savings institutions (VSLAs) was very widespread and may have offset the desire to take commercial credit. Targets did not take into account the historical poor access to

[116] Self Help Africa. 2023. Integrated Risk Management Programme (R4) Phase 3: Monthly reports (August–December 2023. Unpublished programme reports
[117] WFP. n.d. *R4 outcome monitoring report: End of Phase 2.* Unpublished programme report
[118] WFP. 2022. R4 outcome monitoring report. August 2022. Unpublished programme report
[119] FGD, mixed, Pemba.
[120] HHM 41.7 percent, HHW 29.1 percent.

commercial credit by smallholder farmers. According to the World Bank, in 2017, only eight percent of agricultural credit issued in that year went to small and medium farms, seven percent to non-farm agribusiness, and the rest went to large commercial farms.[121] The lower performance by more than 12 percentage points of HHWs was as a result of higher illiteracy levels in women, resulting in less assertiveness because of lower confidence.[122] As reported earlier, farmers had numerous bad experiences with commercial credit companies' debt recovery practices, which proved to be a strong deterrent to using commercial credit products. Geographic variation indicates large differences, with 4.3 percent of farmers in Chikankata reporting using credit versus Gwembe's 27.5 percent, and HHWs were less likely to take loans than HHMs because they have fewer assets that can be collateralized.

139. Savings enrolment for beneficiaries (Output 2.3) achieved 66.8 percent group engagement.[123] This represents reasonable performance, although it is below the R4 target of 80 percent, and geographic variation reveals implementation disparities, with Monze achieving 75.8 percent versus Kalomo's 42.5 percent. Notably, enrolment levels for HHWs are higher than those for HHMs, which is in full agreement with findings from other evaluations which show higher performance by women in savings groups than for men.[124] According to the IFAD CSPE,[125] better performance by women is attributed to women being more trusting than men, who also tend to have a greater propensity to spend.

140. Insurance enrolment (Output 2.4) reached 82.1 percent (against a target of 80 percent) among R4 households. This represents a good achievement but also reflects the insurance industry modus operandum whereby working through established groups of the type formed by R4 is a prerequisite for efficiency purposes, and the fact that many farmers would be covered by insurance as it is bundled into the FISP package, of which many R4 farmers are also beneficiaries. 47.8 percent of enrolled households received payouts although, as mentioned earlier, many of the payouts were below what farmers expected and of insufficient size or timing to replace lost inputs.

141. The R4 logframe does not include targets for Outcome 3 (Environment and climate change integrated in national agricultural systems) although qualitative evidence from numerous sources suggests that WFP played an important role in supporting the Government to integrate crop insurance into FISP by documenting the technical requirements, premium structures, and trigger parameters that underpinned the R4 programme. This enabled a compelling "pitch product," which was instrumental in advocating for policy-level integration, and also for the insurance industry to organize themselves to respond effectively to this demand. WFP was also a critical intermediary linking the private insurance industry with the Government. A KII with a major insurer in Zambia described WFP's role as a "game changer," leveraging its reputation and convening power to bring together stakeholders who otherwise lacked the authority or means to collaborate effectively. WFP played an important administrative role in facilitating insurance payouts, including a record USD 34.4 million payout in 2024.

[121] World Bank. 2019. Agriculture finance diagnostic: Zambia. Washington, DC: World Bank Group. https://documents.worldbank.org/en/publication/documents-reports/documentdetail/780681566065437764/agriculture-finance-diagnostic-zambia

[122] Climate Action Africa. 2025. Training of trainers: Gender mainstreaming in community forest management groups, Central Province, Zambia. https://climateactionafrica.ca/projects/training-of-trainers-gender-mainstreaming-in-community-forest-management-groups-central-province-zambia-102/

[123] HHM 65.3 percent, HHW 72.1 percent.

[124] International Fund for Agricultural Development (IFAD). 2025. Country strategy and programme evaluation: Republic of Zambia. Rome: IFAD Independent Office of Evaluation. https://ioe.ifad.org/documents/38714182/51463436/Zambia+CSPE+final+report+formatted+for+Gov+DCO+unedited+revised.pdf

[125] ibid

142. On the technical front, WFP collaborated with the Government and other important stakeholders (beneficiaries, NGOs, etc.) to embed weather-index insurance into national agricultural systems, chiefly through integration with the FISP, and supported the establishment of technical working groups (TWGs) comprising key government ministries and agencies. These groups facilitated the design and review of insurance products in collaboration with Columbia University.[126] WFP also trained government officials in 116 districts to develop their expertise in insurance management. Extension services were strengthened by training camp extension officers to sensitize and educate farmers, embedding knowledge within government structures. Policy advocacy was conducted, and WFP was successful in lobbying for VAT waivers and reduced insurance levies, making agricultural insurance more affordable for smallholders.[127] Working with the Pensions and Insurance Authority, WFP helped develop micro-insurance products and improve regulatory oversight.[128] Furthermore, WFP convened collaboration between private insurers and the Government, addressing industry concerns and standardizing product delivery by allocating specific companies to manage insurance provision in designated provinces.[129]

10) Finding: Economic and climate shocks, particularly from 2010 onwards, impacted on programme delivery through government staff, and on beneficiaries' ability to afford inputs like fertilizer.

143. Having enjoyed a decade of economic growth averaging GDP of 7.4 percent per annum from 2000 to 2010 driven by a copper production boom from increased investments in the mining sector, the next decade (2011 to 2021) was characterized by sluggish economic performance. GDP declined by more than half, from 7.4 percent to 3.6 percent and suffered a further decline to 2.2 percent year-on-year in the first quarter of 2024, induced by the El Niño phenomenon.[130] During this latter period a considerable proportion of Zambia's revenue went towards debt servicing. This constrained fiscal space led to a drastic decline in Government's capacity to provide financial resources for its departments, including the government extension system whose capacity to support R4 activities at community level was undermined. Furthermore, the war in Ukraine sharply increased global prices of fuel, fertilizer and grain, and these shocks fed through into Zambia's input markets from 2022 onward.[131] Zambia is heavily reliant on imported fertilizer, so higher international gas and fertilizer prices raised the cost of government procurement and private imports, pushing up retail prices for smallholders. Combined with kwacha depreciation and higher transport costs, this eroded farmers' margins and limited their ability to purchase adequate fertilizer and seed packages, undermining production despite continued subsidy efforts.[132]

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[126] Government of the Republic of Zambia, International Fund for Agricultural Development (IFAD), International Research Institute for Climate and Society (IRI), & World Food Programme (WFP). 2021. Technical report on FISP index insurance product improvement – Zambia. https://reliefweb.int/report/zambia/technical-report-fisp-index-insurance-product-improvement

[127] McCarthy, N., Mookerjee, A., Hess, U., & Kuhn, S. 2020. *Assessment of agriculture insurance linked to contract farming and government input subsidy scheme in Zambia.* 3ie. https://www.3ieimpact.org/sites/default/files/2020-07/PE-TW13.I.1091-subsidy-scheme-Zambia.pdf.

[128] ibid

[129] Mayfair Insurance Interview.

[130] International Fund for Agricultural Development (IFAD). 2025. Country strategy and programme evaluation: Republic of Zambia. Rome: IFAD Independent Office of Evaluation. https://ioe.ifad.org/documents/38714182/51463436/Zambia+CSPE+final+report+formatted+for+Gov+DCO+unedited+revised.pdf

[131] Between August 2021 and May 2022, retail urea prices in Zambia rose by about 64 percent. Over the same period domestic fuel prices increased by roughly 15–35 percent. Maize and mealie meal prices also rose sharply; the national average retail price of a 25 kg bag of mealie meal increased by more than 25 percent between February 2022 and February 2023. (https://www.ifpri.org/blog/russia-ukraine-war-after-year-impacts-fertilizer-production-prices-and-trade-flows/)

[132] Sustain Africa – Initiative for Sustainable Development in Africa. 2024. *Causes and consequences of the fertilizer price spike in sub-Saharan Africa.* https://sustainafrica-initiative.org/wp-content/uploads/2024/09/Causes-and-consequences-of-the-fertilizer-price-spike-in-SSA.pdf

11) Finding: At community level, the R4 programme's multiple components were sometimes implemented at different times and through different delivery channels. As a result, beneficiaries occasionally experienced the interventions more as parallel activities rather than as a fully integrated package.

144. Although the ToC posits that R4 components were integrated to optimize the achievement of results, this was less visible at subnational level, and particularly at the community level. Reporting by DAPP (R4 Report 2015–2025) indicates that the level of participation in all four components was over 90 percent,[133] although the limited quantitative data collected by the evaluation team finds that only about 20 percent of R4 beneficiaries participated in all four of the risk reduction components, with access to credit being the least favoured (although it should be noted that the savings groups performed this function in lieu of commercial providers in many cases). In reality, the true figure is likely somewhere between these two figures. However, it should be noted that siloing of components was flagged in the 2019 MTR and the ICRM review in 2023.[134]

145. While R4 was designed as an integrated and synergistic programme, implementation experience highlights important lessons on translating this vision into consistent field-level delivery. Evidence from KIIs and FGDs suggests that beneficiaries often engaged with programme components as distinct interventions rather than as a unified package, indicating opportunities to further strengthen operational integration. In some cases, coordination across implementing partners was constrained, resulting in parallel delivery schedules rather than a fully harmonised service offer. Similarly, internal implementation dynamics occasionally led to competing demands on field teams, which may have contributed to fragmented engagement with communities. The findings underscore the importance of reinforcing coordination mechanisms across partners, aligning activity planning to present a more integrated package to beneficiaries, and ensuring that programme messaging on integration is consistently translated into field practice. In addition, strengthening integrated monitoring systems such as household-level tracking of multi-component participation can enhance visibility of programme synergies and support more coordinated deliver.

146. However, while there is no hard quantitative data to statistically prove that adopting a greater number of R4 activities directly leads to better outcomes, qualitative evidence supports this conclusion. Consultations with beneficiaries revealed that the various risk management components provide powerful synergies and complementarities when implemented together, which cannot be achieved in isolation. Case studies conducted during the 2019 MTR highlight individuals who utilized all four strategies - to sustainably address both immediate and long-term food and income goals. Similarly, other beneficiaries emphasized the value of the integrated approach, with one comparing R4 to a chair: "if one leg is broken it will not balance," illustrating that adopting all components together provides optimal preparation against shocks.

12) Finding: WFP showed adaptive capacity by responding to identified constraints affecting achievement of project outcomes and strengthening the savings component. Nonetheless, persistent labour demands linked to conservation agriculture constrained the participation for some households, suggesting scope for additional design adjustments to improve effectiveness.

147. The decision to move to the SfC model, which provides no external seed capital, was highly resource-efficient and sustainable. A zero-capital-injection approach meant that every savings group established required no ongoing donor support. Project staff identified that the initial approach, where loans were provided to individuals without adequate collateral or financial literacy, resulted in asset seizures and low repayment rates. DAPP staff articulated the learning: "*We learnt a lesson that we should not promote loans when*

[133] Based on number of farmers reportedly participating in each component against overall targets, not intersections with each component.
[134] External mid-term review of the R4 Rural Resilience Programme 2021- 2023 and the Urban Food Security and Resilience Building Programme 2020-2023 Final report, August 2023.

farmers have nothing to fall back on." The shift was made to a group-based lending model linked to savings, which improved repayment rates to 90 percent[135] for individual loans.

148. Investment in the Maano VFM platform was well-informed and initially provided a good service to users. WFP correctly realized that "it has no business doing business",[136] and handed the platform over to Zanaco Digital PayGO, with WFP retaining a supportive and oversight role. Technical issues meant that the platform was taken offline in 2022, but the application was redesigned and relaunched in September 2023 with new, integrated modules including access to finance and insurance, some e-learning modules, and USSD functionality for use on feature phones. Financial sustainability is pursued by charging private entities (financial institutions, agro-input suppliers) for services like sending messages or advertising products on the platform. Poor rural network connectivity still poses a threat, and questions remain over whether this issue could have been identified through deeper due diligence. Nevertheless, the platform is now operational and in 2023 had over 100,000 farmers registered.[137]

149. High transportation costs and poor road conditions continued to hinder farmers, causing delayed market arrivals and increased post-harvest losses. Additionally, local aggregators lacked essential storage facilities, equipment, and liquidity,[138] meaning farmers often bypassed aggregation channels for immediate cash sales to private traders.[139] The same absence of adaptive response, was acknowledged in the ICRM review – it noted specifically that aggregators lacked sufficient finance to buy crops in bulk and that this had limited the scaling of aggregation services throughout Phase 3. It was further observed that insufficient groundwork had been done on value chains before opportunities were offered to farmers - meaning that some value chains did not offer reliable or attractive markets - and that the programme had not done sufficient due diligence to assess the return on investment of market linkage activities before committing resources to them. The ICRM review authors recommended building the capacity of farmers to supply the quality and quantity demanded by markets, and greater aggregation of inputs and market activities to realise economies of scale.

150. Problems of farmer comprehension of crop insurance products were recognized before R4 started: an assessment of the NWK cotton scheme (piloted 2013–2014) identified "*difficulty in understanding the concept of index-based insurance*" as a key hurdle to farmer uptake.[140] The issue became acutely visible in R4 during the first major payout event in 2017 when farmers had expectations of higher payouts that did not match the actuarial reality of the products they had purchased. They expected payouts to cover the full cost of inputs or lost revenue, but due to low premiums (and underinsurance relative to inflation), the actual payouts were often much lower than expected.[141] Although WFP did a commendable job in working with insurance companies and the Government on the technical design of crop insurance products, the investment in enhancing farmer awareness and education was not as strong, largely because the insurance component was handled by private sector entities who, as previously mentioned, had very limited field presence. The ICRM review[142] identified identical concerns for the Phase 3 period, noting that insurance service providers had no local agent on the ground to help communities understand the service and how payouts were structured, and that this left farmers and extension staff uncertain about the product. The

[135] DAPP staff interview.
[136] KII WFP staff.
[137] WFP staff interview.
[138] KII, aggregator, Chikankata, Pemba; Interview – CP SHA.
[139] WFP. R4 Outcome Monitoring Report, End Phase 2.
[140] McCarthy, N., Mookerjee, A., Hess, U., & Kuhn, S. 2020. Assessment of agriculture insurance linked to contract farming and government input subsidy scheme in Zambia. 3ie Process Evaluation Report. New Delhi: International Initiative for Impact Evaluation (3ie). https://doi.org/10.23846/TW13PE03
[141] KII, Mayfair Insurance.
[142] External mid-term review of the R4 Rural Resilience Programme 2021- 2023 and the Urban Food Security and Resilience Building Programme 2020-2023 Final report, August 2023.

evaluation further observed that it was unclear whether some farmers would have taken up insurance at all if they had not been bundled into the FISP package. That the same underlying comprehension issue[143]remained substantially unresolved at the midpoint of Phase 3 and persisted to the programme's conclusion in 2025, indicates structural non-responsiveness to an identified programme weakness.

151. Using mobile money for insurance payouts, while theoretically efficient and addressing the issue of farmers travelling long distances to collect small amounts of money, encountered practical complications. Frequent changes in farmers' SIM cards complicated fund transfers and often required manual interventions to complete payments.

152. WFP recognized early on in the project that CA is very labour-intensive, and the decision was made to pilot an approach whereby mechanisation centres (where power tillers etc. are available for rental) could be managed by members of the farming community. In the event, this approach was rolled out on a very limited scale in Monze and the vast majority of farmers continued to be affected by the labour bottleneck. Project staff were of the opinion that higher levels of productivity and resilience could have been achieved with strategic investments in promoting irrigation (for vegetable production).[144]

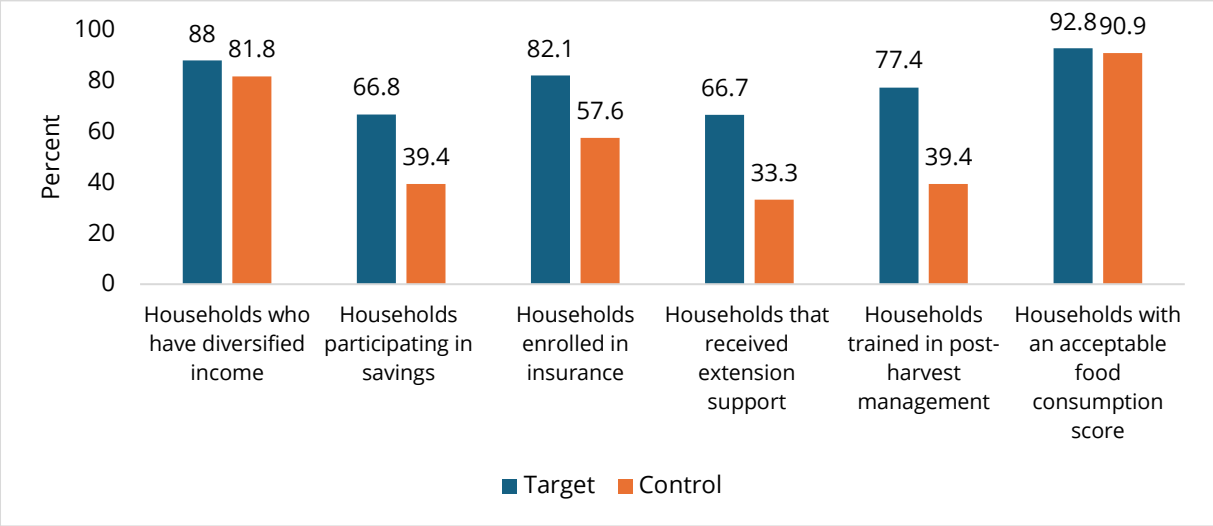
EQ 2.2: To what extent did R4 intervention groups perform differently from non-intervention groups on indicators of interest, and what are the significant technical and operational drivers and inhibitors of achieving outcomes?

13) Finding: R4 intervention groups demonstrated better results than the non-intervention groups on selected indicators of interest although some results were lower than planned.

153. R4 intervention groups demonstrated better results than non-intervention groups on selected indicators, although several results fell short of plan and contradictory signals on coping and asset depletion temper the overall picture. The quantitative sample for the household survey conducted for this evaluation comprised 558 beneficiary households (pre–2019 entry n = 472 and post-2019 entry n = 86) and 33 control households who had no formal registration with R4. Noting the low statistical power associated with the small control group and the consequent risk of Type II errors,[145] quantitative analysis disaggregated by these typologies found that targeted households lead on engagement with resilience infrastructure: 88.0 percent have diversified income sources compared to 81.8 percent of control households, 82.1 percent are enrolled in insurance versus 57.6 percent, and 66.8 percent participate in savings compared to 39.4 percent. Target households also show higher engagement with agricultural support services - 66.7 percent received extension support versus 33.3 percent of control households, and 77.4 percent were trained on post-harvest management compared to 39.4 percent. However, the corresponding food security outcomes show much weaker differentiation: target households achieved 92.8 percent acceptable FCS compared to 90.9 percent for controls - a gap of only 1.9 percentage points (Figure 3) - suggesting that stronger engagement with resilience instruments has not yet translated into materially better immediate food security outcomes.

[143] First documented prior to R4's inception, visible in the 2017 payout event, and flagged in annual monitoring
[144] KIIs with two separate senior WFP staff.
[145] Where the null hypothesis is false, but the test fails to reject it.

Figure 3: Selected KPIs, target versus control samples



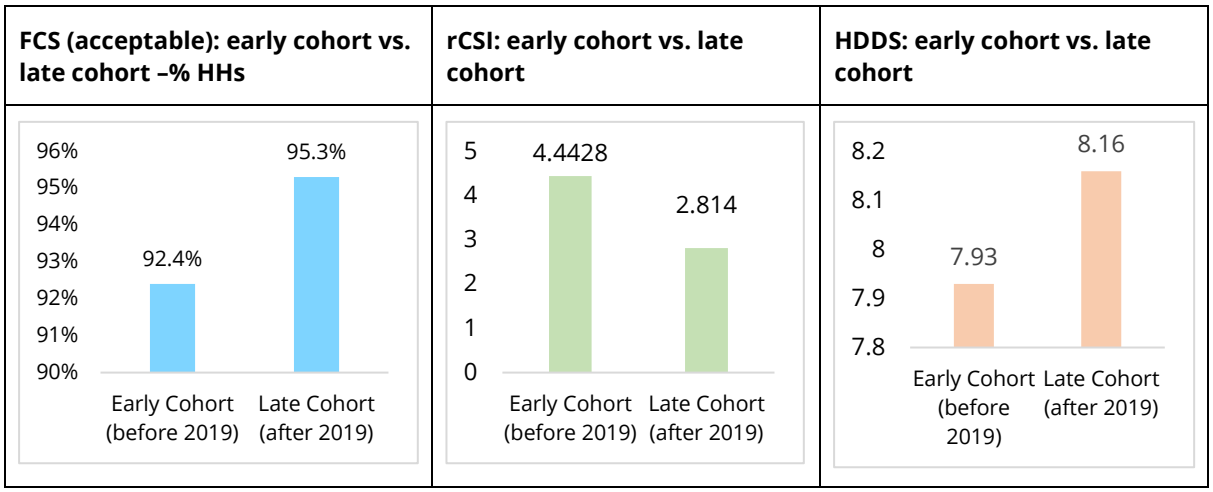
154. Out of the fifteen indicators selected to track the performance of resilience and food security interventions, the majority (8) demonstrated better performance for the target compared to the control population (all with significant Chi-Square test results ranging from 0.05 to 0.000). The R4 interventions which performed well for the target group were concentrated in the financial inclusion pillar - income diversification, savings, insurance, and credit. Households engaged in savings stood at 66.8 percent (target) versus 39.4 percent (control), p = 0.001; households with members enrolled on the FISP/R4 insurance reached 82.1 percent (target) versus 57.6 percent (control), p = 0.016; and more beneficiary households accessed inputs on credit (20.1 percent) than their counterparts in the control population (12.1 percent), p = 0.004. For details, see Statistical Tables 2-16 in Annex 10, Volume 2.

155. For the remaining indicators - those relating to negative coping strategies (stress, crisis, and the sale of livestock) - the control population performed *better* than the target group, and the difference was statistically significant (p-values ranging from 0.007 to 0.001). The higher prevalence of stress coping strategies among target households (67.2 percent versus 54.5 percent in the control group, p = 0.004) may in part reflect precautionary action, but it also points to continued reliance on coping behaviours and incremental asset depletion within the beneficiary population. Taken together with the marginal FCS differential, these results indicate that resilience gains to date are uneven: stronger on system enrolment and weaker on the behavioural and welfare outcomes that those systems are intended to protect.

14) Finding: Longer programme exposure was associated with greater adoption of key resilience-building practices and systems, but not consistently with better immediate welfare outcomes.

156. Comparing long-term beneficiaries with newer participants reveals the intervention's most instructive - and most cautionary - performance pattern: a possible (although weak) inverse relationship between resilience system adoption and immediate welfare outcomes, which runs counter to the hypothesis that longer programme engagement results in steadily improving resilience outcomes. Late-cohort households report superior immediate wellbeing despite shorter programme exposure. 95.3 percent of the late cohort had acceptable FCS versus 92.4 percent for the early cohort; HDDS stood at 8.16 for the late cohort versus 7.93 for the pre–2019 group; and the average rCSI score was 2.81 for the late cohort versus 4.44 for the early group (Figure 4).

Figure 4: Comparison of FCS (acceptable), rCSI and HDDS – early vs. late cohorts



157. Conversely, early-cohort households demonstrate substantially deeper engagement with resilience infrastructure: 69.7 percent of early-cohort members were in a savings group compared to 51.2 percent of the late group; 83.7 percent had crop insurance compared to 73.3 percent for the post-2019 group; and 20.6 percent of earlier enrolees had accessed credit compared to 17.4 percent of those enrolled later. Adoption of CA techniques was near-universal in both groups. The cohort divergence suggests that financial resilience tools require extended engagement periods to achieve meaningful penetration, with credit access in particular demonstrating time-dependency linked to creditworthiness built from multi-year savings histories and demonstrated repayment capacity. Chi-square analysis confirmed this stabilisation pattern: among early-cohort households, credit access shows geographic consistency, while late-cohort access remains highly variable by location ($p = 0.001$), indicating sporadic early-stage access that smooths over time. At the same time, the fact that deeper system adoption among the early cohort has not produced better welfare outcomes raises questions about whether the resilience instruments alone are sufficient to withstand the shocks these households face.

158. The 10.4 percentage-point insurance enrolment gap between cohorts (83.7 percent versus 73.3 percent) is attributable to several interconnected factors. Early cohorts benefited from experiential learning and peer observation: R4 beneficiaries in Zimbabwe who had witnessed payouts themselves or through trusted acquaintances developed greater trust in the scheme. Early entrants also had more time to understand the product's mechanisms, reducing the confusion and misconceptions common among newer participants. Access to FISP, which bundles insurance for farmers, was also more prevalent among early cohorts. Insurers favour mature groups because selling to scattered individuals is not cost-effective; these better-organised early cohorts were easier to reach, often already included in government registers and operating within geographical "lots" allocated to insurers. Index-based insurance remains an abstract concept for smallholders, and early-cohort members have witnessed payout events (47.8 percent received payouts overall), creating demonstration effects that newer entrants lack.

159. The divergence between early-cohort adoption rates and late-cohort welfare outcomes may also reflect the sequencing of programme delivery. Late-cohort households may be receiving more intensive risk-reduction support (climate-smart agriculture, climate information) that produces immediate food security gains, while the financial inclusion pillars (savings, insurance, credit) require longer operational engagement to take root. Indeed, early-cohort members experienced fragmented implementation across multiple years as different pillars rolled out asynchronously. Limited coordination among implementing partners meant that

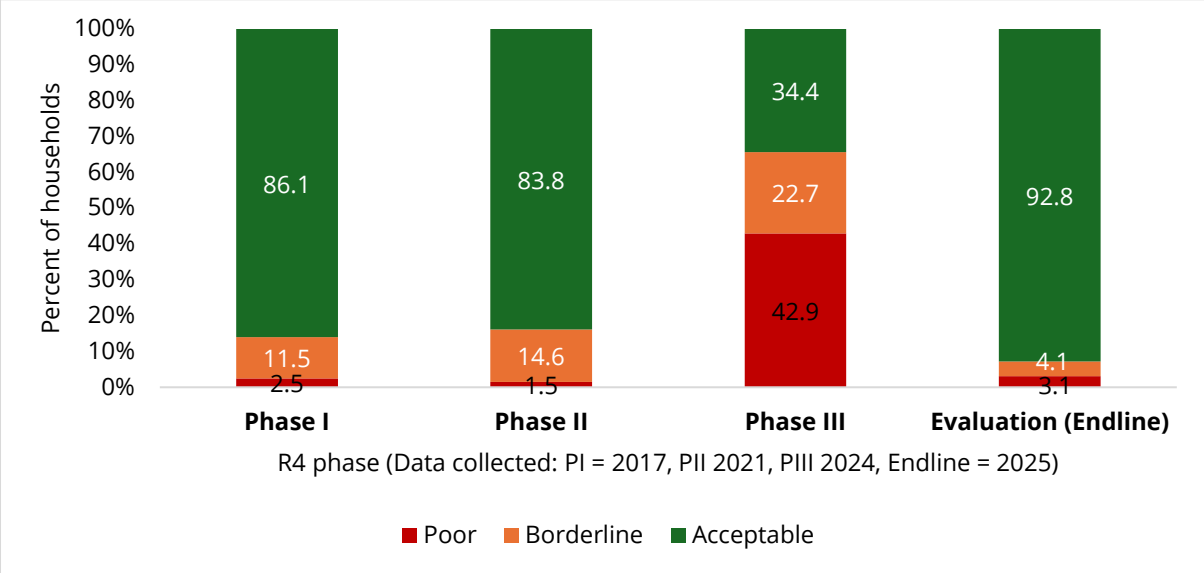
households encountered R4 as a "sequence of disconnected projects" rather than a unified progression, which may explain why adoption deepened without consistently producing the integrated risk-management mindset the model envisaged. It must also be acknowledged that the early cohort's lower welfare outcomes despite superior system adoption cannot be definitively attributed to shock exposure versus support withdrawal in the absence of longitudinal shock-exposure data, which is missing from WFP's ongoing monitoring. If early-cohort areas faced more severe recent climate events, their resilience systems may be working but proving insufficient against the scale of those shocks - a possibility that, on the available evidence, cannot be ruled out.

15) Finding: Trend analysis of R4 beneficiaries shows that severe external shocks in Phase 3 temporarily reversed gains from previous phases; recovery at endline points to adaptive capacity, but the depth and durability of resilience gains remain partial.

160. A secondary analysis of outcome monitoring data across the three phases of R4 was conducted to assess the evolution of key food security and resilience indicators over time, focusing on a harmonised set of indicators: FCS, coping strategies, dietary diversity, and financial inclusion metrics.

161. The FCS trend (Figure 5) follows a pattern of initial improvement, sharp shock-induced deterioration, and partial recovery at evaluation endline. During Phase 1 and Phase 2, the proportion of households with acceptable FCS remained consistently high at 86.1 percent and 83.8 percent respectively, reflecting improved dietary diversity and food access among programme beneficiaries. These gains suggest that the integrated resilience interventions were effective in strengthening household food security under relatively stable conditions.

Figure 5: Food Consumption Score-Trend



162. However, Phase 3 results[146] indicate a significant deterioration, with acceptable FCS declining sharply to 34.4 percent, alongside increases in both borderline (22.7 percent) and poor (42.9 percent) consumption categories. This represents a substantial erosion of food security outcomes, largely attributable to external climatic shocks - in particular, the prolonged dry spell associated with the El Niño phenomenon. The evaluation endline subsequently shows a strong rebound, with acceptable FCS recovering to 92.8 percent and only minimal proportions of households in the borderline and poor categories. This recovery is consistent with the programme having built a degree of adaptive capacity: households experienced acute

[146] May 2024

stress during Phase 3, but underlying resilience capacities - beneficiaries reported drawing on savings and selling livestock when crop production failed - appear to have supported recovery once conditions stabilised. At the same time, the scale of the Phase 3 collapse, and the persistence of negative coping behaviours observed in the cross-sectional analysis above, indicate that resilience gains remained insufficient to withstand the most severe shocks.

163. Outcome monitoring data indicate that a substantial proportion of households demonstrated strong resilience across multiple dimensions. Overall, 72.2 percent of households exhibited high anticipatory capacity, reflecting their ability to undertake preventive actions and minimise exposure to shocks; 75.3 percent reported high absorptive capacity, indicating relatively effective coping during and after periods of stress; 67.0 percent reported improved empowerment and access to supportive systems and governance structures, enabling them to pursue longer-term changes in livelihoods and institutional engagement (transformative capacity); and 69.3 percent demonstrated high adaptive capacity, indicating an ability to make informed and proactive decisions about alternative livelihood strategies in response to changing conditions.

164. However, these gains are not uniform. A significant proportion of households still exhibited low capacity levels, particularly on transformative capacity (23.6 percent) and adaptive capacity (22.9 percent) - the two dimensions most closely linked to the structural changes needed to withstand future shocks. These gaps suggest that while the programme has strengthened resilience for a majority of households, there remain meaningful pockets of vulnerability requiring targeted support, and that resilience outcomes overall should be characterised as partial rather than sustained. Addressing these disparities, particularly in systemic transformation and livelihood adaptation, will be critical to securing more inclusive and durable resilience outcomes in the face of future shocks.

165. High levels of participation in savings groups, continued access to financial services, and strong awareness and uptake of insurance mechanisms suggest that households retained critical elements of resilience. Data collected for this evaluation shows that a substantial proportion of households exhibited strong anticipatory and absorptive capacities (e.g. 74 percent of early-cohort beneficiaries using weather forecasting information, and 63 percent of early-cohort members using VSLAs for savings) - although, as the Phase 3 outcomes and the continued reliance on stress coping strategies make clear, these capacities were not sufficient to fully offset the scale and intensity of the shocks experienced.

166. Overall, the trend analysis suggests that R4 was effective in strengthening household resilience and improving food security outcomes during Phases 1 and 2, and that the Phase 3 deterioration does not constitute a reversal of programme gains but rather reflects the impact of severe external shocks - most notably the 2023/2024 El Niño drought - that exceeded household coping thresholds. The recovery observed at endline points to genuine adaptive capacity built through the programme. Taken together with the persistent reliance on negative coping strategies, the marginal FCS gap against controls, and the uneven distribution of transformative and adaptive capacity, however, the evidence indicates partial rather than fully sustained improvements in resilience.

EQ 2.3: How did the effects of the activities differ across social groups and especially vulnerable or marginalized populations and which components did beneficiaries find most effective at meeting their needs, and why?

16) Finding: Based on tracked indicators, R4 programme interventions benefitted more households headed by men than those headed by women, although benefits to both groups were realized over several indicators.

167. Based on the 15 tracked indicators, households headed by women (HHW) outperformed those headed by men (HHM) in only four indicators (insurance enrolment, payouts, savings engagement, and crisis coping)

(the differences in the results were all significant) (Table 6). These related to enrolment on FISP/R4 insurance (women 83.7 percent, men 81.6 percent, p-value 0.016); index insurance payout (women 52.7 percent, men 46.4 percent, p-value 0.000); engagement in savings (women 72.1 percent, men 65.3 percent, p-value 0.003) and; adoption of crisis coping strategies (women 31.0 percent, men 39.9 percent, p-value 0.009).

Table 6: Areas where women performed better than men

Indicator	Women (%)	Men (%)	p-value
Enrolment on FISP/R4 insurance	83.7	81.6	0.016
Index insurance payout	52.7	46.4	0.000
Engagement in savings	72.1	65.3	0.003
Adoption of crisis coping strategies	31.0	39.9	0.009

168. Although the index insurance payment proportion for households headed by women is higher than that of those headed by men, the higher female proportion may suggest greater uptake of insurance by women as they are more likely to be members of the farmer groups favoured by insurance companies for outreach purposes. In 3 out of the 15 tracked indicators (i.e. use of climate smart techniques and climate information and food consumption groups), there was no significant difference in performance between households headed by women or by men (the p-values ranged from 0.671 in terms of climate information to 0.060 regarding food consumption groups).

169. Households headed by men had better performance in the rest of the indicators. Although there was a notable improvement in some participation and empowerment indicators for women, KIIs and FGDs noted some persisting traditional gender norms that have continued to undermine full empowerment. Traditional gender norms continue to impede women's empowerment, with economic gains for women often triggering insecurity among men and leading to domestic conflict, including increased divorce rates and household disputes.[147] Asset ownership remains fraught, as women fear property grabbing upon divorce or widowhood, resulting in reluctance to invest in matrimonial homes.[148] Men are typically the primary decision makers in households, even as joint decision making slowly improves, and there is resistance to women's financial independence, sometimes manifesting as ridicule from peers.

170. Households headed by women face distinct structural barriers, including increased labour burdens, especially in CA where a lack of adult men exacerbates workload challenges.[149] Access to credit and agricultural inputs is also problematic, with women lacking collateral and assets required for formal financing, leading to poorer food consumption scores and higher stress levels compared to households headed by men.[150] Design side factors that may have contributed to the relatively lower performance of households headed by women include: a) limited gender analysis at design stage which resulted in insufficient understanding of the needs, interests and constraints of HHW, b) financial product design not responsive to the needs of HHW e.g. failure to accommodate HHW low and irregular income patterns and c) lack of gender-responsive safeguards such as grievance mechanisms accessible to women.

[147] FGD, men, Nteme Camp.
[148] FGD, men, Munyembe Gwembe; FGD, women, Manungu-B Monze.
[149] WFP. 2018. Zambia R4 Rural Resilience Initiative Outcome 5 Monitoring Report. Unpublished programme report.
[150] KII, WFP Staff.

EQ 2.4: To what extent did WFP activities address root causes of gender inequality and exclusion of disadvantaged social groups and what were the opportunities for improvement?

17) Finding: WFP activities intentionally sought to address the root causes of gender inequality and the exclusion of disadvantaged social groups. While positive progress was observed in shifting attitudes and improving access to certain resilience instruments, deeper structural drivers of inequality proved more complex and were only partially addressed within the programme timeframe.

171. Using the RBET framework of analysis R4 had minimal impact on fundamental structural drivers of gender inequality, particularly asset ownership and productive resource access. The land ownership disparity – men controlling 6.51 hectares versus women's 2.84 hectares – represents a 130 percent gap that persists unaddressed. This is a major inequality, as land determines household creditworthiness, long-term investment capacity, and negotiating power within agricultural value chains.

172. Similarly, the information access differential (men 75.1 percent vs. women 61.2 percent) indicates that knowledge provision remains biased towards men despite programme interventions, and women's lower access to climate data limits their capacity for informed risk management and adaptive planning.

173. Agricultural technology promotion inadvertently reinforces gendered divisions. Men dominate mechanized practices requiring capital assets – ripping adoption reaches 78.1 percent among men versus 61.2 percent among women. Women concentrate on labour-intensive techniques like planting basins (61.2 percent vs. 53.9 percent for males). Notably, women who adopt ripping apply it more intensively (1.55 ha vs. men's 1.27 ha), suggesting capability gaps do not explain lower adoption. Rather, asset constraints (oxen, tractor hire capital) create exclusion.

174. However, there is considerable evidence that R4 challenged gender norms, power dynamics and discrimination in target communities, even if not addressing the underlying root causes. KIIs and FGDs reported considerable change in power dynamics between husbands and wives in Gwembe and Namwala districts. Decision making regarding production, sale and use of household income was with full involvement of wives. Both men and women reported women's full participation in household livelihood activities. Women cited having been empowered to generate their own resources as well as to make decisions on their use. These positive results in favour of women were as a result of R4's targeted activities to promote women's participation and empowerment through focused training which emphasized balancing trainees between the two genders, balanced leadership positions in community structures and equal allocation of project resources, for example tents and weighing scales, to both female and male micro-aggregators.

175. The project aimed to promote the inclusion of PWD through quantitative targets and supportive actions. Specifically, in Phase 3 it sought to register 1,000 PWD (400 men, 600 women), achieving 821 registrations (82 percent of the target). For leadership roles, partners targeted 572 PWD in farmers' clubs and savings groups, but only 120 positions (21 percent) were filled. To support inclusion, implementing partners explicitly invited women, youth, and PWDs to participate in community meetings, ensuring open access. Dedicated clubs for PWD were established, such as Nansenga and Ching'ang'auka, each with 20 members in Chikankata district. Financial inclusion was promoted via savings groups, helping PWD better manage their finances.[151]

176. VSLAs were another strong gender-responsive component. Women's 72.1 percent participation, combined with geographic consistency (p=0.083), indicates VSLAs overcome formal financial sector barriers. However, this addresses symptoms (lack of savings vehicles) rather than causes (systemic financial discrimination such as property inheritance norms and men's control of livestock and other valuable assets).

[151] WFP Outcome Monitoring Reports.

Women accessed formal credit at lower rates (17.1 percent vs. men 21.0 percent), limiting productive investment despite improved savings discipline. Insurance similarly provides effective safety nets without addressing why women need them more. Women's higher payout receipt rate (52.7 percent vs. 46.4 percent for men) reflects successful risk transfer but does not resolve the underlying asset poverty that creates disproportionate vulnerability.

EQ 2.5: To what extent were protection and inclusion considerations integrated into the analysis, design, implementation and monitoring of WFP activities? And were protection or exclusion risks mitigated as a result?

18) Finding: Protection and inclusion considerations were considerably integrated into the design, implementation and monitoring of R4 activities.

177. Protection and inclusion considerations were fundamentally integrated into the R4 project's analysis, design and execution, ensuring a gender and age marker (GAM) score of 4. From its pilot phase in Pemba, the project's targeting criteria deliberately attempted to include "vulnerable but viable" households, specifically targeting women, youth and persons with disabilities to build long-term resilience.

178. In the design and implementation phase, R4 addressed physical and financial safety by transitioning from cash-in-hand to digital payment modalities such as MTN mobile money and PlugPay. This mitigated the risk of beneficiaries travelling long distances with cash, which previously posed safety concerns. To ensure meaningful access for those with limited mobility, WFP established priority queues for the elderly and PWD and increased the number of distribution sites.

179. Stakeholder engagement[152] and literature review showed reasonable protection and inclusion considerations in the design of R4 activities as well as in their monitoring. Monitoring and evaluation (M&E) data collection and analysis was disaggregated by sex, and in a few cases, by disability. These considerations mitigated exclusion risks to a great extent. However, at an operational level, the inclusion of PWD lacked a sufficient analysis and categorization of disabled persons aimed at establishing the extent to which they could optimally participate in programme activities. Further, KIIs and FGDs did not present adequate evidence of the extent to which the disaggregated data by sex (and in some cases disability) were used to inform implementation decisions that addressed the concerns of the marginalized groups in a deliberate and specific way.

180. Protection and exclusion risks were mitigated through the establishment of community feedback mechanisms (CFM). These included help desks managed by community committees, suggestion boxes, and a toll-free hotline. These channels allowed WFP to detect and address issues such as agent fund shortages or lost SIM cards, which otherwise excluded those with limited digital literacy from benefits. Furthermore, the project's focus on gender-transformative training successfully reduced domestic disputes, as men and women began planning household budgets jointly. As a result, 42 percent of club leadership positions are now held by women.

EQ 2.6: To what extent did the project promote women's financial inclusion, skills enhancement and decision making? (In accordance with the goals outlined in the project's gender strategy).

19) Finding: R4 was deliberate in promoting women's financial inclusion. The project successfully drove financial inclusion through savings groups, enhanced skills, and it shifted cultural norms to foster joint household decision making.

181. The best performing intervention was the promotion of savings groups. According to KIIs and FGDs, these groups were dominated by women at both membership and leadership level. In the majority of cases

[152] KIIs with project staff.

more than 80 percent of the savings group members were women. As already noted above, in percentage terms, there were more households headed by women with a member engaged in savings (72.1 percent against 65.3 percent for households headed by men). This difference was significant (p-value 0.003). Savings groups were the primary means by which women were empowered to generate their own financial resources, and to use the funds to invest in income generating activities (IGAs) such as small businesses, to acquire assets (including construction of improved houses, purchase of livestock), improve household food security as well as support the education of children. According to the June 2024 outcome monitoring data, households borrowed money for various reasons. The most common investment was in small businesses, accounting for 38.3 percent of loans. Purchasing food followed at 28.2 percent, and agricultural spending 25.3 percent. Non-food essentials, education, and health accounted for 24.5, 14.1, and 7.2 percent respectively. This aligns with the household survey findings to the effect that savings groups were the most commonly cited facility which household members save with, cited by 90.4 percent (92.7 percent headed by women and 89.7 percent headed by men). This was followed by mobile money at only 3.9 percent (2.1 percent women and 4.5 percent men). As already touched on above, R4 contributed positive results towards skills enhancement, largely through targeted and balanced capacity building of women, alongside men, as well as equal provision of inputs and equipment to women and men.

182. While the R4 project has successfully promoted women's financial inclusion, skills enhancement and decision making, what has not worked well is exposing the VSLA to private banks given that the group savings increase the higher the risk of storing cash in homes. Banks such as Zanaco and First National Banks among others have introduced specific financial products appropriate for VSLAs.

EFFICIENCY

2.3. EQ 3: How efficiently were R4 resources utilized over the 10-year period?

EQ 3.1: How were the activities delivered? Were the activities carried out within the intended timeframe? If not, what factors caused delays in their implementation? If yes, what are the influencing factors?

20) Finding: The timely delivery of R4 activities was influenced by external factors such as COVID-19, economic shocks and climate events, with internal contracting factors also playing a lesser role.

183. The evaluation team found that with a few exceptions over the ten-year implementation period, activities were delivered within the intended timeframe.[153] However, there were some notable exceptions. Contracting and disbursement delays between WFP and implementing partners represented the primary internal constraint on efficient delivery. The fundamental issue was a mismatch between long-term donor funding commitments and short-term implementing partner contracts (field-level agreements, or FLAs). A donor informant told the evaluation team: *"SDC were funding WFP for four years, but actually the contracts for implementing partners are either six months or a year… for resilience programming… it really doesn't work."*[154] WFP were only allowed to contract implementing partners on a rolling one-year basis, and this contracting modality created gaps in field presence during critical agricultural windows. An implementing partner member of staff stated: *"There were long delays by WFP in preparing and signing of contracts – this resulted in projects taking long before starting – delays affected timelines for certain season-bound activities."* Notably, two recent WFP studies[155] have recommended that WFP develops a strategy that includes a specific commitment to transition to multi-year FLAs to meet localization commitments, and to using multi-year FLAs.

[153] ACRs, Outcome Monitoring Reports and KIIs with WFP and CP staff
[154] KII, DAPP
[155] WFP. 2024. Synthesis of Evidence and Lessons on WFP's Cooperating Partners from Centralized and Decentralized Evaluations and WFP 2021. Thematic Evaluation of Cooperating Partnerships in The Eastern Africa Region 2016–2020.

184. The seasonal nature of agriculture means that activities delayed by even a few weeks can become entirely ineffective for that production cycle, representing a loss of invested resources and opportunity. Partner selection and performance issues created significant delivery disruptions. WFP terminated its partnership with Heifer International due to performance deficiencies – principally insufficient time spent in the field with beneficiaries. This termination necessitated a transition to Self Help Africa, causing temporary delays in programme continuity, although WFP made efforts to ensure that government staff provided a level of service in the field.

185. The market access component encountered design flaws related to aggregator capacity, which impacted on the efficiency of this component. It was noted that some micro level aggregators have limited financial capacity and liquidity challenges resulting in limited farmer appetite to sell through the aggregators.[156] Although intermediary and larger level of off-takers and aggregators were better capitalised, the failure to adequately assess and address micro aggregator liquidity constraints before launching the component was a restriction, although the Maano VFM app widened the pool of potential buyers accessible to farmers.

186. COVID-19 forced a fundamental operational shift that significantly increased costs while reducing delivery efficiency. The prohibition on group gatherings eliminated the most cost-effective delivery modality. DAPP reported: *"COVID-19 affected implementation of activities – we were stopped from directly interfacing with farmers… Instead, we visited farmers via door-to-door interfaces which increased costs significantly."*[157] Despite these disruptions, the pandemic served to validate the importance of the savings component: savings groups enabled farmers to access emergency funds during the economic downturn.

187. Arguably one of R4's greatest efficiency gains – in terms of attaining reach – was the integration of insurance into FISP. WFP used evidence from the pilot to advocate for including insurance within FISP, and this policy integration enabled the insurance component to reach over one million farmers (albeit on a compulsory purchase basis), far exceeding what could have been achieved through direct implementation.

21) Finding: Coordination with government actors supported programme delivery at scale by facilitating engagement with national institutions. Collaboration with the private sector also enabled implementation in some areas.

188. Coordination between WFP and the Government was primarily structured through memoranda of understanding (MOUs), which defined roles but often failed to empower government partners to lead effectively, resulting in mostly monitoring rather than strategic engagement.[158] Operationally, collaboration involved government extension officers and joint monitoring with WFP and implementing partners. WFP also supported capacity building for government staff.

189. The most successful dimension of coordination was the alignment of objectives (CA, insurance, savings) between WFP, implementing partners, and government ministries. SHA reported: *"Government liked our approach which ensured that WFP, camp officers and SHA were speaking the same language… we had a training of trainers (TOTs) workshop which clarified everything."* This coordination drove policy influence, which led to government adoption of insurance as a mandatory component for input access. A WFP officer noted: *"Government and ourselves eventually came up with something which works, which has been integrated in the national programme."* This outcome represents effectiveness at the policy level, as it multiplied programme impact without proportional increases in WFP's spending. However, the integration of insurance placed additional burdens on government staff, who became the focal point for farmer complaints about delayed

[156] R4 End of Phase 2 Outcome Monitoring Report
[157] Interview with DAPP project staff member
[158] WFP. 2019. R4 Rural Resilience Initiative in Southern Africa (Phase II) Midterm Review 2019 Final Report

payouts, impacting trust.[159] The reliance on government camp extension officers to deliver extension support was efficient as it only required covering fuel and per-diem costs, although it occasionally created capacity challenges when government staff were overstretched.[160]

190. Coordination with insurance providers at the field level was limited to enabling insurers to sell insurance to WFP groups rather than ensuring that there was a reasonable level of service delivery throughout the whole insurance period. The insurance provider, Mayfair, lacked adequate local presence for effective coordination. DAPP noted that *"insurance experts were not available and only visited once in a while since they are based in Lusaka."* This absence meant that complex financial products were being explained to farmers by project officers who lacked technical understanding, resulting in misinformation and unrealistic farmer expectations. Coordination on payout processing was limited. The R4 Insurance Payout Report 2017–2018[161] found that 37.4 percent of households indicated they were "not satisfied" and 14.4 percent were "very dissatisfied" with the timeliness of the payout. When probed, they cited "*late disbursement of the money*" occurring "*way late after the window had closed*". This issue persisted: during the 2023/2024 drought, months after the trigger event. A District Agricultural Officer in Monze said: *"It's now months, I still have quite a substantial number of farmers that are not yet paid."* It should be noted that the late payouts are not the responsibility of WFP, but impact on the overall attractiveness of crop insurance to farmers.

191. Introduction of commercial credit suppliers (Agora, Vision Fund and Mico Loan Foundation) was primarily managed by implementing partners along with government extension staff. These institutions were scheduled to visit agricultural camps to conduct sensitization and awareness campaigns regarding their specific loan packages and conduct orientation trainings for project staff to explain how to link loan facilities to savings groups. In the case of Agora and Vision Fund, coordination was initially poor as they were facilitated to offer credit to beneficiaries who, when they defaulted, lost household assets. However, it improved over time as the project redesigned the model to prioritize savings groups as the primary clients under the SfC model. Vision Fund eventually established a presence in some of the agricultural camps to better respond to the needs of the savings groups,[162] but farmers are still very wary of commercial loan providers based on previous experience.

22) Finding: Operational coordination with implementing partners was compromised by administrative bottlenecks

192. The ICRM review found that short-term contracting arrangements caused significant programme downtime, with implementing partners spending months each year on proposal preparation and waiting for fund disbursement rather than field delivery, and that requirements placed on implementing partners - including reporting, proposal preparation, procurement, and accounting processes - were extremely demanding. A WFP interviewee described the consequences: "*If a training session is planned… that activity manager will try to interface with the two staff… it was more of a push being pulled in all directions. This week I'm being trained on savings, the next week on nutrition… I'm two months being trained.*" This lack of coordinated planning across technical units meant that field staff spent a disproportionate amount of time on their own training rather than on supporting farmers.

193. The ICRM review made three specific recommendations on contracting that directly address the failures identified here: that partner contracting should be longer-term; that implementation models should

[159] KII, district agricultural officer, Monze.
[160] R4 implementing partner reports.
[161] WFP. 2018. Outcome Monitoring Report.
[162] For example, in Muzoka Agricultural Camp, Pemba district, one savings group borrowed ZMW 10, 000 from VFZ and loaned it amongst members. The savings group was able to attract some of the better-off community members to join because of this liquidity injection, and eventually made ZMW 51, 000, part of which was used to repay the loan. After this, VFZ changed their model to lending to groups rather than individuals (WFP, 2019, R4 MTR).

provide for multisectoral actors to collaborate and coordinate regularly; and that contracting should include annual performance reviews and budget revisions based on programme adjustments. These recommendations were not implemented before the programme ended.

23) Finding: Monitoring systems generated substantial amounts of data and were effective in reporting programme outcomes; however, their use for informing rapid programme adjustments and adaptive management appeared more limited

194. Staff interviewed felt that monitoring feedback loops were too slow to enable real-time course corrections. One implementing partner staffer noted: *"Outcomes monitoring reports took long to be produced – which affected our ability to make corrective measures",* and it was also noted that outcome monitoring reports are largely descriptive. In response, in Phase 3, WFP introduced a recommendation tracker to ensure accountability for addressing identified issues. Another critical theme not tracked was that of "graduation" which was a key R4 concept: the criteria for graduation of farmers from the project were never clearly defined and sometimes based on time, rather than on data confirming that their households were more resilient. Crucially, there was no systematic study of the resilience of graduated households after they exited the programme.

195. These findings echo those of the ICRM review, which found that M&E data was insufficiently disaggregated to allow understanding of results for different types of beneficiaries, that reporting on outcomes was not always consistent with the ToC, and that some outcomes had changed over time without systematic documentation. It also noted a lack of common understanding between WFP and implementing partners about what M&E for resilience programmes should capture, limiting the ability to identify results for different groups including women, youth, and persons with disabilities.

EQ 3.2: To what extent were the resources provided adequate and utilized efficiently? (e.g. appropriate operational methods, staffing, etc.)? What could have been improved in the planning and execution of the activities to enhance resource-efficiency?

24) Finding: Lean staffing structures maximized reach but compromised technical quality, particularly for insurance, but supported government capacity building.

196. A comparison of staffing structure to programme outputs reveals a tension between cost efficiency (maximizing reach) and technical effectiveness (ensuring quality adoption). The programme utilized a lean staffing model that relied heavily on field coordinators, government extension officers, and volunteer lead farmers: implementing partners employed field coordinators responsible for all R4 components simultaneously. DAPP had two field coordinators per district, but to increase field presence the programme relied heavily on government camp extension officers and volunteer lead farmers. This structure was cost-efficient, allowing the programme to report high beneficiary numbers without proportional increases in staffing costs. The efficiency of this volunteer structure was, however, undermined by inadequate logistical support: lead farmers covered vast[163] geographic areas on a voluntary basis with no transport. This represents a false economy: training lead farmers without addressing logistical constraints reduces efficiency.

197. A critical inefficiency emerged in the insurance component staffing. The programme attempted to deliver complex financial products using generalist field staff, while technical experts remained centralized in Lusaka. This staffing approach is a consequence of the fact that crop insurance for smallholder farmers practicing rain-fed agriculture is a high volume / low value product that does not support a large field presence of staff who are able to explain the product in detail to farmers. Nevertheless, the consequence

[163] One lead farmer in Pemba reported that he was expected to travel 15km each way to reach and train other farmers and suggested that provision of a pushbike would have made his job much easier.

was that technical information was provided by project officers who did not fully understand the products, and farmers were not properly appraised of the product they were buying.[164] When payouts were lower than farmers expected there was no one locally available with the technical expertise to explain the index-based calculation. Farmers concluded they had been duped, harming trust and willingness to buy insurance again and ultimately undermining the resilience objective by eroding farmer confidence in the risk transfer mechanism.

198. Comparing staffing structures across implementing partners revealed that community-embedded models were more efficient than those that were weighted more at the district level. DAPP utilized "project leaders" at the community level who interfaced directly with government staff – a structure that was commended by WFP. In contrast, Heifer International operated primarily from district offices, with staff coordinating with lead farmers, with no dedicated community-level representation (which resulted in Heifer's partnership termination).

IMPACT

2.4. EQ 4: What were the intended and unintended impacts of the R4 initiative on household resilience capacity, and what factors drove transformational change over the intervention period?

EQ 4.1: To what extent did the outputs and outcomes contribute or likely contribute to the progress towards building resilient communities?

25) Finding: R4 outputs contributed to resilience outcomes to varying degrees.

199. As presented in previous sections, beneficiaries highlight three core components as the most significant contributors to their resilience in the face of environmental and economic shocks: savings groups, CA, and climate information services. Insurance and external credit are generally viewed with greater scepticism.

200. Savings groups and financial literacy training played a key role in household resilience, enabling beneficiaries to diversify livelihoods and providing a safety net. In recent droughts members relied on savings groups for borrowing, or on selling assets to manage crop failures. These groups also support asset accumulation, including better housing, livestock, and children's education. As one informant in Munyumbwe said: "*There is a huge difference between those that participated in R4 and those that did not, we that participated are able to care for our aged parents without many difficulties because we get some money from our saving groups.*"

201. While improved agricultural practices, including CA, were reported to help with soil moisture retention, they did not significantly boost crop yields. As one member of a FGD in Munyembe told us: "*We are still using what DAPP/Heifer taught us because here the rains are very low hence conservation farming allows us harvest something even when rains are low.*" Yields varied by season – average harvests fell from 57 to 52 bags per household between 2020/2021 and 2021/2022 due to erratic rains and high fertilizer costs.[165] In 2023/2024, the El Niño drought led to widespread crop failures that at least halved yields seen in the previous year,[166]and project monitoring indicating that many farmers harvested nothing.[167] However, WFP monitoring[168] showed that programme participants tended to grow a wider variety of crops than non-participants or recent enrolees, increasing resilience to climate shocks since these additional crops can be sold.

[164] FGD, men, Nteme Camp, Monze; FGD, mixed, Kabulamwanda Camp, Namwala; FGD, men, Kasikili Camp, Pemba; KII, headman, Suntwe Village, Pemba.
[165] WFP. 2022. R4 Outcome Monitoring Report. August 2022. Unpublished programme report.
[166] FEWSNET report Southern Africa Alert August 13, 2024
[167] Outcome Monitoring Report June 2024
[168] WFP. R4 outcome monitoring report: End of Phase 2. Unpublished programme report

202. While monitoring data do not provide a single project-wide average for maize yields in the 2023/2024 El Niño season, largely because crop failure was widespread, available evidence allows a comparison with output levels recorded in previous years. In relatively more favourable seasons, average maize harvests remained substantial. In 2020/2021, households in project camps harvested an average of 57.5 bags of 50 kg white maize per household, compared with 52.2 bags in control camps.[169] In 2021/2022, yields declined under less favourable rainfall conditions to 34.8 bags in project camps and 36 bags in control camps.[170] By 2022/2023, the June 2024 outcome monitoring report recorded an average of 49 bags per household. Against this backdrop, the 2023/2024 season marked a dramatic deterioration. The prolonged El Niño-induced dry spell led to severe crop losses across operational areas, with drought cited by all affected households as the principal cause of failure. A SHA report from February 2024 estimated that around 90 percent of farmers in districts such as Kalomo were affected, with many expected to harvest no maize at all, while in Chikankata crop conditions were reported to have deteriorated by as much as 80 percent.

203. FGDs in Gwembe similarly indicated that farmers relying on conventional cultivation methods harvested nothing during the season. However, qualitative evidence also suggests that the programme's resilience-building interventions helped some households avoid complete destitution. Men participating in discussions in Lukonde Camp, Gwembe, reported that farmers who applied CA techniques, particularly ripping combined with timely planting, were still able to harvest up to five bags of maize during the drought year. Although modest in absolute terms, this outcome was significant in a season when many other households harvested nothing, and it illustrates the protective value of climate-resilient practices under extreme stress conditions.

204. Although insurance and external credit were integral to the R4 design, their impact was more limited. Insurance payouts were often regarded as inadequate, failing to provide meaningful protection during severe shocks. External credit remains mistrusted due to past instances where assets were forcibly seized by private credit providers to recover loans – practices that were actually detrimental to resilience.

205. It should be noted that Shock Exposure Index scores are not provided consistently through WFP monitoring,[171] but the frequency with which drought is noted as the main threat to agriculture has increased over the years.

EQ 4.2: To what extent are the beneficiaries utilizing the knowledge acquired through the different learning platforms/activities that were offered by the initiative (dietary diversity; income generation; women's empowerment; market access/availability; social networks; power balance of households)? How did these differ for men and women in target and non-targeted communities, if at all?

26) Finding: Training adoption varied significantly by component, with savings groups proving most sustainable while labour-intensive CA practices faced persistent barriers.

206. R4 beneficiaries demonstrated differential utilization of training across three primary pillars – CA, financial management, and marketing – with application rates and sustainability varying significantly by component. While nearly all farmers adopted CA practices, the depth of conviction behind adoption and sustained usage beyond project supervision reveals more complex implementation dynamics.

207. CA training demonstrated high initial adoption, with beneficiaries shifting from traditional broadcasting methods to ripping and line planting. The practical application centres on erosion prevention, with farmers reporting these techniques prevent fields on hillsides from being "*washed away by heavy rains*."[172] The value of the training was most evident during extreme weather: during the severe 2023/2024

[169] Baseline phase three report March 2022.
[170] Outcome Monitoring Report August 2022
[171] WFP. 2022. R4 Phase 3 Baseline Report. Unpublished programme report.
[172] FGD, Gwembe.

drought, anecdotally some farmers in Pemba and Gwembe harvested more than those using conventional methods.[173]

208. Rain gauge training has altered planting decision making processes, removing guesswork from the agricultural calendar, with planting only beginning after gauges capture 25–30mm of moisture.[174] Usage patterns differed by cohort with early cohort farmers being more likely to use rain gauge information, though usage in both groups exceeds 60 percent.

209. The most significant indicator of genuine adoption involves continued practice after direct supervision ends. Despite high awareness of CA practices across all project districts, actual adoption and sustained use varied considerably by location and specific technique. Districts like Gwembe and Pemba demonstrated high continuity, with farmers retaining CA methods such as ripping, encouraged by their proven effectiveness during droughts. Conversely, Monze exhibited mixed results, with some farmers lauding CA's benefits, but overall adoption was limited by practical challenges such as difficulty in weeding and issues with draft animals. In Kalomo and Chikankata, lower uptake was evident, attributed to less participation in training and reduced application of techniques.[175]

210. In Gwembe, long-term participants report they "*still rip our fields*" because the method enables them to "*harvest even in worst droughts*,"[176] indicating training has produced conviction-based adoption rather than simple compliance. Critically, the Ministry of Agriculture continues to consult community rain gauge minders to advise the wider farming population after WFP support withdrawal, demonstrating institutional integration of trained capacity. However, not all CA practices achieve sustained utilization. Mulching and agroforestry remain underutilized as they are too labour intensive. As mentioned previously, this shows that training alone proves insufficient for practices requiring high labour investment or delayed benefits without complementary support addressing implementation barriers.

211. Several factors contributed to limited or discontinued use of CA. As the programme transitioned so that insurance payouts were no longer tied to CA adoption, this led some farmers to revert to traditional methods.[177] For others, CA was practised only to comply with project requirements rather than from genuine belief in its benefits.[178] Labour-intensive tasks, lack of herbicides, and insufficient access to essential tools further discouraged widespread adoption.

212. The SfC model emerges as the most successfully applied and sustained training component. Beneficiaries describe these groups as their "*own little bank*," with the average household saving ZMW 2,438.2 (approximately USD 152) – representing substantial capital accumulation in contexts where formal banking remains inaccessible. Beneficiaries strategically deploy "share-outs" – distributions of accumulated savings and interest – for transformative asset investments. Reported applications include upgrading from grass thatched houses to structures with "burnt brick walls and iron sheets"; purchasing solar lighting systems; and acquiring productive livestock including heifers and goats that function as savings for future shocks. Savings also frequently finance education expenses including university and school fees, demonstrating beneficiaries prioritize long-term human capital development. Some savings groups have formalized by registering as cooperatives and opening bank accounts.

213. Post-harvest training focused on hermetic storage (PICS bags) to prevent weevil attacks and fungal

[173] Self Help Africa. February 2024. Partner Report; R4 MTR Report 2019.
[174] ACR 2019; FGD, Kasikili Camp; FGD, Munyumbwe Camp; FGD, Manungu-B.
[175] WFP. 2024. Outcome Monitoring Report.
[176] FGD, Gwembe.
[177] Interview, CP DAPP.
[178] Interview, CP DAPP and VFZ.

contamination, with 62.7 percent of households receiving this training.[179] The adoption of post-harvest management techniques led to noticeable improvements in crop preservation and reduced losses, although adoption of PICS bags remained low at around three percent of households surveyed for outcome monitoring in 2024, largely due to the prohibitive cost of these bags. Quantitative data shows post-harvest losses fell significantly, with households experiencing losses dropping from 49 percent at baseline to just 14.2 percent by the endline of Phase 2.[180] Project camps consistently reported lower loss rates than control camps, attributed to targeted training in modern storage and handling. Farmers increasingly invested in new storage technologies, including hermetic bags and silos, though broader adoption remains limited due to cost and accessibility. Training reached a large proportion of the population, with up to 83.3 percent receiving instruction in some districts.[181] Qualitative evidence from focus groups and interviews confirms changed practices, such as discarding incorrect storage methods, reducing chemical use, and improving crop quality for markets.

214. Despite demonstrated training value, sustained application faces systematic constraints. Labour-intensive practices like mulching require ongoing physical investment farmers cannot maintain. Insurance adoption remains problematic: without WFP's initial 100 percent premium subsidy, many farmers resist out-of-pocket payments, particularly when perceiving payouts as inadequate or trigger points as confusing. This reveals that training alone cannot overcome economic barriers without complementary input support or subsidy structures. Many of those reporting that they still buy crop insurance do so because it is bundled into the FISP package that they are registered to receive.

27) Finding: Women demonstrated higher savings group participation and financial empowerment, but faced persistent asset gaps, cultural resistance, and unequal access to specialized agricultural training.

215. Men and women demonstrated distinct patterns in applying R4 technical knowledge to their respective livelihood domains. Men predominantly utilized CA training – particularly ripping and line planting techniques – to replace conventional ploughing on hillsides and prevent soil erosion. Notably, the introduction of herbicides fundamentally altered traditional gender labour divisions: weeding transitioned from being the responsibility of women and children to a male-dominated task linked to chemical application and technical input management. Labour-intensive CA practices including mulching and potholing were disproportionately avoided by women due to physical demands. Both genders cited logistical constraints as barriers preventing knowledge transfer to remote community members, namely long distances to central training locations and transport limitations for lead farmers.

216. Women reported knowledge application in nutrition and household food security domains, creating diversified products including "pumpkin fritters" and "sausages from cowpeas" to address child malnutrition.[182] Financial literacy training enabled significant economic transitions, with women leveraging savings group knowledge to shift from piecework survival strategies to becoming employers and small business owners trading commodities like fish and groceries.[183] Gender training produced household-level changes in decision-making structures, with many families adopting joint budgeting practices that men credited with reducing "couple fights" and divorces. Women represented 60–61 percent of project beneficiaries overall, with disproportionately high participation in savings groups. This concentration reflects savings groups' function as accessible credit alternatives to formal banking institutions that systematically

[179] Household survey.
[180] R4 Outcome Monitoring Report End Phase 2.
[181] R4 Outcome Monitoring Report End Phase 3.
[182] FGD, women, Nteme Camp, Monze.
[183] Self Help Africa. Sept 2023. Partner Report.

exclude women through collateral requirements.

217. The programme achieved meaningful inclusive leadership outcomes, with 42 percent of targeted women holding leadership positions in clubs or savings groups. Some women leveraged this confidence to ascend to formal governance roles including village head and town councillor positions, representing structural empowerment beyond project boundaries. However, learning platform access revealed systematic gender disparities. While CA training reached both genders relatively uniformly across districts, access to post-harvest management training for women varied significantly by location (p=0.03), indicating district-based infrastructure or cultural factors created differential access patterns for women seeking specialized agricultural knowledge.

28) Finding: Knowledge acquisition and application within the R4 programme shows strong positive effects, while also revealing useful variations across intervention and control sites, as well as between early and later programme cohorts.

218. R4 beneficiaries actively transition to climate-smart and business-oriented farming, while non-participants have a higher tendency to use conventional methods. Agricultural practice differences are particularly stark. Crop diversification reflects this knowledge gap: 42.8 percent of R4 households grew three or more crops compared to only 33.7 percent in control camps.[184] Climate information usage is also different between the groups. R4 farmers are more likely to utilize manual and automated rain gauge data to determine precise planting times, while non-intervention farmers have a higher tendency to rely on radio broadcasts.[185] Use of financial management transformation also differs. Savings participation reaches 82 percent in project households compared to 59 percent in control camps.[186] Credit access in project camps doubled from baseline to 28 percent. R4 farmers invest loans in businesses and agricultural inputs, whereas non-participants often lack necessary collateral or group support. Post-harvest losses have declined to 14.2 percent in intervention sites, meeting project targets, while non-intervention farmers remain more susceptible to pest damage.[187]

219. Knowledge application varies notably between the early cohort and late cohort. CA adoption rates consistently favour the early cohort: 93 percent apply crop rotation compared to 81 percent in the late cohort. Disparities are particularly pronounced for labour-intensive practices, with 45 percent of the early cohort using mulching versus only 24 percent of the late cohort, and zero tillage practiced by 43 percent versus 32 percent respectively. Interestingly, the late cohort reports better current food security outcomes, potentially reflecting the early cohort's location in more environmentally stressed districts.

EQ 4.3: What factors within the different activities have driven change on key outcome parameters (within the target communities), specifically: dietary diversity, income generation, women's empowerment, market availability, social networks and power balance of households and communities, and what factors have been less successful?

29) Finding: Savings and associated livelihood diversification had the greatest impact on household nutrition and dietary diversity

220. Livelihood diversification and savings interventions emerged as a critical pathway linking R4 participation to improved dietary diversity, particularly through enhanced income stability / income sources, reducing dependence on rain-fed agriculture alone. Across all districts, over 80 percent of surveyed households reported diversified income sources, reducing dependence on rain-fed agriculture alone.[188]

[184] Household survey, November 2025.
[185] Household survey, November 2025.
[186] Household survey, November 2025.
[187] Household survey, November 2025.
[188] Household survey, November 2025.

Focus group discussions with separate groups of women and men highlighted that membership in savings groups facilitated access to business ideas, start-up capital, and peer learning, enabling households to invest in small livestock rearing (e.g. goats and poultry) and off-farm income-generating activities. These investments contributed to more predictable income streams, allowing households to: a) purchase a wider variety of foods from local markets; b) improve diet quality beyond own production; and c) reduce reliance on negative coping strategies such as meal reduction or food borrowing. These findings underscore the importance of income stability and savings mechanisms as key determinants of improved dietary diversity in climate- and shock-prone contexts.

221. Although nutrition education was not a standalone R4 component, its integration through extension services and community platforms enhanced the nutrition sensitivity of production and livelihood interventions, amplifying their impact on dietary outcomes.[189]

30) Finding: Sale of crops and livestock, petty trade and employment are the main sources of income for R4 households.

222. Analysis of main sources and values of income indicates that sale of crops and livestock was an income source for over 60 percent of households, with petty trade at around 50 percent and employment at around 30 percent.[190] Sex-disaggregated analysis of household survey data of November 2025 shows that the sale of farm produce is the dominant income source for both men (90 percent) and women (83 percent), followed by livestock sales (69 percent for men and 56 percent for women). Engagement in small businesses was reported by 46 percent of men and 57 percent of women, suggesting a relatively higher participation of women in micro-enterprise activities, albeit with generally lower income values compared to crop and livestock sales.[191] In terms of income levels, quantitative data collected for this evaluation finds that project beneficiaries reported an average annual income of 29,020 ZMW, nearly double the 16,899 ZMW average of the control group. Within the project, the early cohort earned slightly more annually (29,164 ZMW) than the late cohort (28,230 ZMW).

31) Finding: The R4 design (including women's participation in management and joint savings decisions) did not affect women's empowerment, but there were changes to decision making roles, social networks, and household power dynamics.

223. The R4 model provided multiple entry points for women's meaningful economic participation. Women's involvement in savings groups enhanced their access to and control over small but regular income streams, enabling them to contribute to household expenditures, invest in livelihood activities, and respond to climate shocks with reduced dependence on male household members. Across FGDs, women reported increased confidence in managing finances, planning expenditures, and participating in joint financial decision making with spouses. These gains were most evident where savings contributions and insurance payouts were discussed at household level and linked to seasonal livelihood planning. Focus group discussions conducted in several camps, including Lukonde, Munyumbwe, Manungu-B and Nansenga (Gwembe, Monze, and Chikankata districts) revealed a marked shift towards joint and transparent financial decision making within households, moving from secrecy to open consultation, especially after gender training. Both men and women now view income as "family money", collaboratively budgeting and even involving older children. Women's participation in savings groups fostered greater financial independence and confidence, enabling them to make routine purchases without relying on men and earning them increased respect at home.

[189] Development Aid from People to People. n.d. Rural Resilience (R4) end-of-project report (2015–2025). Unpublished programme report.
[190] Household survey, November 2025.
[191] Household survey, November 2025.

224. However, gains in decision making were largely joint rather than autonomous, reflecting entrenched gender norms and men's dominance over major productive assets such as land and livestock. Persistent patriarchal practices – especially around asset ownership and inheritance – continue to constrain women's ability to translate increased financial participation into full decision-making authority. For instance, married women in Monze district reported storing personal livestock in their original birth villages due to fears of property grabbing if their husbands were to die. This practice reduced household-level asset utilization and, in some cases, generated tension when husbands were asked to support repayment of loans obtained through women's savings groups.

225. The R4 design deliberately promoted women's participation in group management and leadership structures. Key informant interviews with district officials in Monze indicated that, prior to the project, leadership positions in community groups were predominantly occupied by men. Under R4 women increasingly assumed roles such as treasurer, secretary and committee member. Women in leadership positions reported enhanced confidence, negotiation skills, and social recognition, expanding their influence beyond the household and increasing their visibility within the community. However, leadership participation varied across districts and was sometimes constrained by time poverty, childcare responsibilities, and prevailing cultural expectations. In Gwembe district, FGDs with men indicated that gender-focused training sessions, combined with exposure to women civil servants and community leaders, contributed to more positive attitudes towards women's mobility, business engagement and leadership roles.

226. R4 savings groups and collective activities significantly strengthened women's social networks and social capital. Focus group discussions with women across all districts highlighted that group membership enhanced access to peer support, livelihood information, and informal skills transfer. Women described savings groups as safe spaces for sharing business ideas, identifying viable income-generating activities, and learning from both successes and failures of fellow members. These strengthened networks contributed to: a) increased mutual support during climate and livelihood shocks; b) improved information sharing on financial management and livelihood practices; and c) enhanced collective confidence and solidarity among women.

32) Finding: No evidence that the programme's promotion of coping activities led to significant unintended negative impacts on time spent on households' own productive activities, and no meaningful variation was observed across gender or social groups.

227. The R4 programme routinely monitored coping strategies.[192] The household survey results show that over 80 percent of the respondents engage in coping strategies to access food while fewer respondents (46 percent men and 44 percent women) engage in coping strategies to access funds for their children's education. Stress-related coping strategies were the most adopted. Spending savings was reported by 59 percent of men respondents and 62 percent of women respondents, while borrowing money was reported by 63 percent of men and 63 percent of women. Crisis strategies were used by a much smaller proportion of households, with 10.4 percent of men respondents and 5.4 percent of women respondents reporting the sale of productive assets. No households reported engaging in emergency coping strategies such as selling land.

228. Qualitative evidence from sex-segregated FGDs with men, women and youth across districts corroborates the survey findings. Participants consistently reported that the coping strategies adopted did not negatively affect time allocated to own production, largely because households had reduced reliance on labour-for-food arrangements, which had previously diverted time away from their own farms and income-generating activities. Further insights from men-only FGDs, including with traditional leaders, indicate that gender-transformative training supported under R4 contributed to more equitable sharing of household and

[192] Through annual outcome monitoring reports.

productive responsibilities. Men participants reported increased willingness to undertake household chores and productive tasks when women were temporarily away from home for business or income-related activities, recognizing these engagements as contributing to overall household wellbeing.

EQ 4.4: In terms of gender inequality, what level of impact did WFP activities achieve with regard to the Reach, Benefit, Empower and Transform (RBET) framework? 1) Improve the lives of women, girls and gender diverse people? 2) maintain existing gender inequalities? 3) worsen the circumstances for women and girls?

33) Finding: R4 activities effectively reached women and men across all programme components, although the participation of youth and people with disabilities was moderate.

229. The evaluation found that there were not conspicuously large differences between men and women on rates of engagement with R4 activities (for example, CA engagement was high at over 90 percent, while access to credit was low for both gender groups).[193] This indicates that differences in adoption were linked more to suitability of the activity or product than to the programme's approach to outreach, although the evaluation did find some evidence that long distances to meeting and training venues was a barrier that disproportionately affected young mothers with childcare responsibilities, as well as elderly and disabled community members who faced mobility challenges. For example, in Gwembe district, the participants from one location along the bottom road said that due to the distance they often have to pay transport costs to attend meetings at the central place in Munyumbwe agricultural camp.

230. Youth engagement was observed to be moderate. In Phase 3, 13.5 percent of households in project camps indicated that they had a member living with a disability.[194] Several structural and programmatic factors constrained the full participation of young people – especially young mothers, the elderly, and PWD.

231. The evaluation also highlighted weaknesses in age-specific data collection and reporting across implementing partners and WFP. The absence of disaggregated data by age made it difficult to accurately analyse youth participation trends, monitor progress, or tailor interventions to the needs of different age cohorts. This gap significantly constrained the ability to systematically track and address youth-related participation barriers.

34) Finding: A small number of unintended negative consequences were reported in relation to R4 interventions affecting women; however, programme adjustments, along with continued training and awareness activities, appeared to reduce these occurrences as implementation progressed. This suggests that adaptive management and sustained engagement with communities contributed to improving gender-sensitive implementation over time.

232. Despite the positive outcomes achieved through the R4 initiative, the evaluation identified several unintended negative consequences that, at certain points in the project cycle, risked exacerbating gender inequalities and placing additional burdens on women and girls. One of the most significant challenges related to asset accumulation through savings and insurance payouts, particularly among women participants. While these assets were intended to strengthen household resilience, they also became a source of tension within families. FGDs in Monze district revealed that women's increased ownership of assets triggered conflict – especially upon the death of a spouse. Widows reported instances where extended family members grabbed the assets accumulated through R4-supported savings groups, reinforcing harmful cultural practices that undermine women's property rights and economic security.

233. In other districts, such as Gwembe and Namwala,[195] FGDs revealed that the project initially contributed

[193] Household survey, November 2025.
[194] WFP. 2022. R4 Phase 3 Baseline Report. Unpublished programme report.
[195] Kalomo and Chikankata did not report concerns with regard to asset grabbing, perhaps because savings groups were

to a sharp rise in intra-household conflicts, particularly between husbands and wives. As women gained financial literacy, confidence, and decision-making power through the savings and risk-reduction components, some men perceived this shift as a threat to traditional gender norms. This led to increased couple disputes, with reports of husbands accusing wives of becoming "less submissive" or overly assertive. These tensions underscored the persistent patriarchal attitudes within many communities and highlighted how empowerment initiatives can inadvertently provoke resistance when not accompanied by deliberate social norm change strategies.

234. Importantly, the evaluation found that these negative trends were most visible during the early implementation phase (2015–2017). The situation improved significantly after the introduction of targeted gender-transformative training, including sessions for couples, community leaders and traditional authorities. These efforts helped promote more equitable household dialogues, enhanced understanding of shared decision making, and gradually reduced backlash against women's empowerment. Community engagement with traditional leaders also contributed to shifting norms on property rights and reducing asset-grabbing practices.

SUSTAINABILITY

2.5. EQ 5: To what extent are the benefits and systems-strengthening effects of R4 likely to be sustained?

EQ 5.1: How effective were the measures put in place to guarantee the continuation of benefits from the programme and local ownership after the programme has ended, and why were they effective/not effective?

35) Finding: Sustainability of capacity building gains remains partially constrained by systemic and institutional gaps.

235. While the programme delivered notable important strides in building local capacities, the sustainability of these gains remains partially constrained by systemic and institutional gaps. A review of numerous R4 internal reports confirms that the programme invested significantly in capacity building, with numerous training sessions conducted for implementing partners, government line ministries, and community structures. Focus group discussion results in all R4 areas confirm that this training improved technical understanding of risk reduction, savings and credit mechanisms, insurance literacy, and resilience planning. However, the long-term retention and institutionalization of these skills has been undermined by two key challenges.

236. First, high staff turnover and frequent transfers of trained government and implementing partner personnel out of R4 operational areas disrupted the continuity of knowledge and practice. For example, 90 percent of the DACOs in the R4 operational areas had recently been in their positions (i.e., for under two years). The situation was the same for camp extension officers and personnel of the implementing partners. As a result, many of the individuals who benefited from the training are no longer positioned within the programme's geographic scope to apply or further disseminate the skills acquired. This weakened the intended cascading effect of capacity building and created recurrent gaps whenever new staff were brought in.

237. Second, knowledge management systems remained weak at both implementing partner and government level. The project's effectiveness was significantly hampered by the absence of standardized tools and guidelines. The 2019 MTR highlighted a lack of minimum standards and practical "how-to" guides, which undermined the quality and scalability of interventions. Although a 'recommendation tracker' was put

relatively newer.

in place, this gap led to inconsistent implementation across districts, with different partners applying varying approaches – particularly around gender balance and loan access in savings groups – necessitating corrective actions later in the project. Additionally, key processes, such as insurance management, remained manual and inefficient due to the lack of digital tools.[196] The ICRM review also found that WFP and implementing partners held differing expectations regarding M&E for resilience programmes, and that reporting on outcomes was not always fully aligned with the ToC. It further noted that some outcomes had evolved over time without systematic documentation, and that data disaggregation was insufficient to capture results across different beneficiary groups. The 2019 MTR recommended the development of minimum standards and practical implementation guides, a gap the ICRM review confirmed was still outstanding at the Phase 3 midpoint, and which this evaluation finds had not yet been resolved at programme close. This suggests that translating monitoring and review recommendations into sustained institutional practice proved more difficult than anticipated, and that future resilience programmes would benefit from embedding knowledge management systems into operational structures from the outset rather than relying on informal institutional memory.

238. The R4 experience highlights important lessons regarding the management of institutional knowledge and staff transitions in complex, multi-year programmes. While the project built valuable expertise across WFP and its partners, this knowledge was not always systematically institutionalised, [197]which affected continuity during periods of staff transition and at programme closure. In some instances, the absence of a structured transition or handover approach resulted in gaps in knowledge transfer, particularly where technical understanding was concentrated among a limited number of individuals.[198]

239. Consequently, while the R4 initiative introduced valuable practices and demonstrated encouraging results in enhancing household resilience, the sustainability of these capacity building benefits and system-strengthening outcomes can be rated as very moderate at best, given that the new camp extension officers do not have the institutional memory on what and how their predecessor packaged their messages to be impactful.

36) Finding: Improvements in the organizational capacity of local community institutions, financial independence, and leadership were notable within savings groups.

240. The evaluation found notable improvements in the organizational capacity, financial independence, and leadership of local community institutions participating in the R4 initiative. Across project sites, savings groups emerged as strong, cohesive, and well-functioning structures, demonstrating enhanced internal governance, record-keeping, and decision-making processes. Members reported improved confidence in managing group affairs, conducting meetings and enforcing agreed-upon rules – an indication of strengthened organizational capacity.

241. In terms of financial independence, the project contributed significantly to building the groups' financial resilience. Many savings groups successfully opened formal bank accounts,[199] improving the security of their savings and facilitating transparent financial management. A number of groups also accessed external financial services, including loans from microfinance institutions and local lenders. Importantly, 61 groups[200] were able to tap into Constituency Development Fund (CDF) opportunities, signalling their growing credibility and capacity to engage with government financing mechanisms.

242. Leadership within the groups also showed positive change. In DAPP's operational areas approximately

[196] KII, Mayfair Insurance staff.
[197] KII, aggregator, Chikankata Pemba.
[198] R4 MTR Report 2019.
[199] Outcome Monitoring reports in 2017 and 2018 indicate that ~50 percent of savings groups opened bank accounts.
[200] Partner reports, Self Help Africa August 2023 and 2024.

42 percent of targeted women held leadership roles in farmers' clubs and savings groups. In Gwembe, government officials highlighted the shift from women not participating publicly to now being active in meetings and elected roles, such as councillors. In Lukonde Camp in Gwembe, beneficiaries reported increased confidence, independence, and leadership, including as village heads, and women reported overcoming previous fears, now freely leading committees and speaking during visits. Merit-based governance was emphasized in Lukonde Camp in Gwembe, where leaders are chosen for competence, enabling women and persons with disabilities to assume leadership. In Namwala, women's involvement in household and community decision making has notably increased, reflecting changing attitudes towards gender inclusion. Rotational leadership arrangements helped broaden participation and strengthen internal accountability mechanisms.

243. However, despite these gains, there was a significant structural gap. The groups operated largely in silos, with limited interaction, coordination, or knowledge exchange across communities. Literature[201] indicates that well-designed linkages (to banks, insurers or second-tier structures) can expand their functions and resilience if governance capacity keeps pace with complexity, and the absence of an apex body or network structure weakened the potential for collective advocacy, shared learning and long-term institutional sustainability. Such a structure could have provided mentorship to emerging groups, supported standardization of practices, and facilitated stronger engagement with external stakeholders, including government and financial institutions.

37) Finding: Institutional memory and knowledge management were not consistently preserved and made accessible across WFP, implementing partners, and government

244. The evaluation found that institutional memory and knowledge management were not systematically preserved across WFP, implementing partners, and government structures. This gap significantly affected the continuity and effectiveness of R4 implementation, particularly in the context of high staff turnover. Evidence from implementation highlights important lessons on the accessibility and continuity of programme knowledge. While R4 generated a wide range of valuable documentation, including outcome monitoring reports, annual country reports, training materials, datasets and learning outputs, these were not always systematically organised or easily accessible to incoming staff. In some cases, newly deployed officers at both partner and government level had limited exposure to the programme's broader objectives, processes and achievements, which affected the speed and consistency of implementation.

EQ 5.2: What opportunities exist to guarantee the continuation of benefits from the programme and local ownership after the programme has ended?

38) Finding: The R4 experience offers some opportunities to add to the knowledge base of resilience programming – particularly in the areas of promoting financial autonomy and integrated programming.

245. The lessons learned through R4 have revealed opportunities for shaping ongoing initiatives in resilience programming. The experience of crop insurance has highlighted the importance of adequate communication of the workings and terms of the insurance product to farmers – an issue that should be recognized by FISP. The need for mechanization in order to drive wider adoption of CA is another lesson that is pertinent to the Ministry of Agriculture and other actors involved in pushing the climate smart agriculture agenda. Successes with financial inclusion models such as SfC can serve as an example to other entities. These issues are explored in more detail below.

[201] Frölich, M., & Nguyen, P.L. 2020. Impacts of linking savings group to formal financial service providers and strengthening their internal group insurance mechanism in Zambia. New Delhi: International Initiative for Impact Evaluation (3ie). https://www.3ieimpact.org/sites/default/files/2020-07/IE121-TW4.1025-RUFEP-Zambia.pdf

39) Finding: Smallholder crop insurance has been integrated into government policy, but other components of R4, particularly CA, were already promoted by government to varying degrees.

246. WFP through R4 successfully supported the integration of insurance into government policy. WFP provided significant technical assistance to the Government in strengthening the insurance component under the FISP – setting up a multi-ministerial and multi-stakeholder technical working group dedicated to reviewing the performance of the insurance component and sitting on the Government's Technical Committee on Insurance – which directly led to R4 experiences being incorporated into FISP. This policy influence contributed to the refinement of crop (and now livestock) insurance mechanisms (for example moving towards the area / yield model for assessing losses).

247. However, beyond insurance, other key components of R4 – namely savings, credit and conservation agriculture practices – were not fully integrated into government policy instruments. This limited integration is partly because these components already exist within broader government interventions, such as the VSLA, and various other rural financial inclusion initiatives, such as the Rural Finance Expansion Programme (RUFEP).[202] Additionally, the Ministry of Agriculture has long promoted conservation farming through for example the Conservation Agriculture Scale Up (CASU),[203] and the Strengthening Climate Resilience of Agricultural Livelihoods in Agri-ecological Regions I and II (SCRALA),[204] and the Comprehensive Agriculture Transformation Support Programme (CATSP), which was adopted as a long term strategy (2024–2033) and has components that explicitly aim at promoting CSA technologies including CA. As a result, R4's contributions in these areas were viewed as parallel efforts rather than integrated enhancements to existing national systems.

40) Finding: There has been moderate expansion by the private sector into climate risk management market.

248. The evaluation found that the private sector has only moderately expanded its role in the climate risk management market, particularly around agricultural insurance. While WFP did a lot of work to demonstrate the functionality of the insurance component and on linking the private sector to the R4 project, several systemic barriers continued to constrain effective growth and uptake. A key barrier is the low appetite for agricultural insurance among smallholder farmers. Insurance products remain poorly understood, with many farmers perceiving them as complex, unreliable, or offering limited tangible benefits. This lack of awareness and understanding, exacerbated by limited permanent presence of insurance firms within R4 project districts and locations, has resulted in weak demand, thereby limiting the incentive for private providers to scale up their offerings.

249. Additionally, consultation with insurance firms shows that the premiums paid by smallholder farmers are typically very low, making agricultural insurance a less attractive market for private companies. According to the insurance firms, the low premium base diminishes profitability and discourages sustained investment in product development, marketing, and outreach to rural communities. Compounding these challenges is the high frequency of adverse weather events in recent years. Repeated droughts, floods and erratic rainfall patterns have made agricultural insurance riskier and more expensive for providers to underwrite, especially amongst the smallholder farmers. As a result, insurance companies face higher payout obligations and operational losses, which they said further reduces their willingness to expand into this market.

250. The sector is also characterized by limited competition, with only a small number of insurance companies offering agriculture-related products. This narrow participation restricts innovation, product diversification, and pricing competitiveness, all of which are critical for fostering a vibrant climate risk

[202] A nationwide joint GRZ/IFAD programme that ended in September 2024.
[203] GRZ and FAO partnership funded by the European Union.
[204] A partnership between GRZ, UNDP and FAO.

management market.

41) Finding: R4 interventions contributed to strengthening community organizations and producer groups.

251. Savings groups emerged with the most comprehensive and sustainable outcomes, demonstrating marked improvements across multiple dimensions. These groups developed enhanced internal governance with clearly defined roles and responsibilities, systematic record-keeping for savings, loans and repayments, and structured, participatory, decision making. Members reported improved confidence in managing group affairs and enforcing agreed-upon rules, indicating successful internalization of organizational management principles.

252. Financial management capacity showed marked improvement. Groups developed competence in calculating loan interest, managing social funds, planning share-out cycles, and making collective fund decisions. The successful opening of formal bank accounts by many groups demonstrates achievement of minimum organizational standards – proper registration, elected leadership, and systematic record-keeping – required by financial institutions. Financial independence represents perhaps the most significant strengthening outcome, as groups built substantial capital bases through member savings, enabling loan provision without external funding. This financial autonomy eliminates dependence on external agencies and creates genuine community ownership. The model achieved sustainability because it was designed not to subsidize or provide seed money to the groups.

253. Leadership capacity improved notably, particularly for women members who demonstrated increased leadership skills, confidence and active participation in governance – often their first opportunity to hold formal leadership positions. Rotational leadership arrangements broadened experience beyond traditional elites, strengthening internal accountability mechanisms.

3. Conclusions, lessons and recommendations

3.1. Conclusions

3.1.1 R4 Concept

254. R4's foundational premise that smallholder household resilience requires simultaneous engagement across four integrated risk management pillars proved conceptually sound but was not fully realized in the implementation context - as much because of farmer appetite as delivery issues. It recognizes the multidimensional nature of vulnerability facing Zambian smallholder farmers confronting intersecting climate, economic and institutional constraints that no single intervention adequately addresses. The ToC posited that combined interventions addressing risk reduction, risk transfer, prudent risk-taking, and risk reserves would generate synergistic effects exceeding the sum of individual component contributions.

255. However, the evaluation reveals a disconnect between the conceptual integration and operational reality. Household survey data found that not all R4 beneficiaries participated across all four risk management pillars. This demonstrates that integration did not always happen, challenging the ToC's assumption that integrated delivery would enable households to build comprehensive resilience capacity through complementary risk management strategies.

256. Individual R4 components demonstrated markedly different levels of performance, with outcomes exposing the validity of underlying ToC assumptions about beneficiary capacity, institutional readiness, and contextual suitability, while also highlighting insufficient adaptation in some cases when implementation revealed assumption failures.

257. Among the R4 components, the savings element, particularly the SfC model, emerged as the most consistently successful and transformative. The evaluation confirms the underlying assumption that vulnerable households are able to save regularly when supported with appropriate facilitation and governance arrangements. The model's emphasis on member ownership and internal capitalisation supported strong functionality and sustainability, with many groups demonstrating the capacity to continue operating independently beyond WFP support.

258. The assumption that farmers would prioritise buying insurance premiums without subsidy proved invalid, as evidenced by the sharp drop in voluntary uptake when WFP reduced its premium contribution. Also, the assumption that insurance providers could maintain adequate field presence for ongoing technical support while maintaining a low premium price proved unfounded: the low-premium, high-volume business model that characterizes smallholder agricultural insurance cannot commercially sustain the level of staff presence in the field that would be required to properly explain the product. As a result, many farmers who retain insurance do so because it is bundled as a mandatory component of the FISP package rather than through genuine demand.

259. The credit component similarly exposed issues about institutional readiness and service quality. Linking farmers to microfinance institutions was undermined by institutions employing debt recovery practices that exacerbated rather than mitigated vulnerability. This was first observed in Phase 1 when Vision Fund's recovery methods were documented, and the same practices were reported in relation to Agora in Kalomo, Chikankata and Monze in 2023. The pivot to the SfC model - where loans are collateralized by group savings rather than household assets - represented adaptive learning and produced significantly better

outcomes. However, mistrust of commercial credit providers persists among beneficiaries, who consistently prefer to borrow from their own savings groups at higher interest rates than to engage with commercial MFIs.

260. Conservation agriculture training demonstrated near-universal adoption of at least one technique, with 99.1 percent of households reporting applying at least one technique, validating ToC assumptions about farmer willingness to adopt climate-smart practices. However, farmers rarely applied CA techniques beyond small portions of their farms, typically around one lima (0.25 hectares), due to the labour intensity of practices such as potholing and mulching, and the cost of herbicides required for optimal productivity. The finding that women disproportionately avoided labour-intensive CA practices points to a limited consideration of gendered labour constraints in the original design assumptions.

261. The climate information services component achieved high levels of service use, with 95 percent of beneficiaries describing information as reliable and more than 75 percent actively using rainfall data for planting decisions. This confirms that farmers will reliably engage with climate information when it is delivered in accessible formats through trusted community channels. The success of the community rain gauge minder model - subsequently integrated into MoA advisory services after WFP support ended - validates the approach and demonstrates its genuine sustainability potential.

262. The notion that establishing micro-aggregators and market linkage platforms would improve smallholder market access was sound in principle, and to an extent, the endeavour was successful in serving as a secondary outlet for farmer sales but the initiative was undermined by an inadequate prior assessment of micro aggregator financial capacity: they could not pay farmers on delivery, meaning that farmers favoured better-capitalized private traders, neighbours, or the FRA, and the share of households selling to WFP-supported aggregators fell from 19.3 percent at the Phase 2 endline to just 4.6 percent for micro-aggregators in Phase 3. The Maano VFM platform grew to over 105,000 registered users, demonstrating real demand, but suffered from recurring system outages, poor rural network coverage, and limited aggregator liquidity that negated its efficiency gains. Its transition to private sector operator Digital PayGo, with WFP retaining a supportive oversight role, was nonetheless an appropriate course correction that reflects an honest institutional recognition of where WFP's comparative advantage lies.

3.1.2 Delivery systems

263. R4's implementation architecture - particularly short-term contracting modalities and a lean staffing model - constrained programme effectiveness in ways that were independent of individual component design quality. This suggests that future multi-year resilience programmes require contracting and staffing designed for sustained field engagement. Government coordination achieved high-level policy influence outcomes, notably the integration of insurance into FISP, but at the field level government extension officers became unintended focal points for farmer complaints about delayed insurance payouts despite having no authority over claims processing. Community-embedded staffing models proved most effective and efficient in maintaining field presence and farmer support.

264. WFP's internal coordination and monitoring systems were not fully configured to support the adaptive management that a complex, multi-component resilience programme requires. Monitoring was oriented primarily toward external reporting rather than internal learning, limiting the programme's ability to track cross-component outcomes at household level and to identify differential results across beneficiary groups. Successive reviews identified these gaps, indicating that future programmes need to build adaptive monitoring and learning functions into their design from the outset.

3.1.3 Context assumptions and external shocks

265. The R4 ToC's assumptions of contextual stability were undermined by a decade marked by disruptions well beyond reasonable expectation. The economic shock following the 2022 Russia–Ukraine war led to

dramatic rises in global commodity prices: retail urea prices in Zambia rose by approximately 64 percent between August 2021 and May 2022, and domestic fuel and mealie meal prices increased sharply over the same period. This rendered key agricultural inputs unaffordable for many farmers, forcing reductions in usage and undermining the productivity assumptions of the CA component. Insurance uptake dropped when premium subsidies were withdrawn, demonstrating that perceived value relative to cost was insufficient to sustain demand-driven uptake.

266. The 2023–2024 El Niño-induced drought - the most severe in forty years, destroying approximately 983,000 hectares of maize and driving acceptable FCS rates down to 34.4 percent for monitored households[205] - overwhelming resilience mechanisms. The strong recovery to 92.8 percent acceptable food consumption score among R4 beneficiaries by the evaluation endline, however, and the finding that 72.2 percent of households demonstrated high anticipatory capacity, 75.3 percent high absorptive capacity, and 69.3 percent high adaptive capacity, suggests that the programme had nonetheless built underlying resilience. A model conceived for moderate, recurrent shocks within a broadly stable economic context may not be fully suited to the current environment of accelerating climate change, sustained economic volatility and high unpredictability. This suggests a need to rethink the design of resilience programming to better account for high-shock environments, potentially by integrating stronger safety nets or crisis modifier components, and promoting livelihood diversification beyond rain-fed agriculture, including through livestock development and irrigation.

3.1.4 Gender integration and social inclusion

267. The R4 model's gender integration approach achieved genuine progress in improving women's productive capacity, asset ownership, and participation in household financial decision-making. Women engaged meaningfully across most R4 components, and the programme successfully challenged gender norms limiting women's public participation, as evidenced by women's increased representation in community leadership structures.

268. However, the programme's gender approach focused primarily on increasing women's access to programme benefits rather than transforming the underlying structural drivers of gendered vulnerability. Design choices - including labour-intensive conservation agriculture techniques and complex index-based insurance products - inadvertently disadvantaged women, reflecting asset-related constraints rather than capability gaps. The absence of a gender analysis at the programme's outset limited the extent to which these structural barriers could be systematically addressed, and the implication is that future programmes should embed gender-transformative design from inception rather than relying on incremental mainstreaming.

269. Similarly, while inclusion efforts expanded over successive phases, the approach remained oriented toward preventing explicit exclusion rather than actively designing interventions around the distinct constraints of vulnerable populations. The labour-intensive and knowledge-intensive nature of core programme activities created de facto barriers for physically constrained and less-educated households, and formal inclusion targets did not consistently translate into meaningful participation. The overarching evaluative judgment is that both gender and inclusion require deliberate, structurally informed design from inception; where this was absent, programme design choices unintentionally reinforced the very exclusion patterns the programme sought to address.

3.1.5 Sustainability and institutionalization prospects

270. The evaluation finds that R4's sustainability prospects differed markedly by component, underscoring that R4 should not be treated as a single model with uniform sustainability outcomes. Components deliberately designed for independence, particularly the savings component and climate information

[205] 720 households sampled by WFP for outcome monitoring in May / June 2024

services, demonstrated the strongest sustainability potential. In contrast, components reliant on ongoing subsidies, complex institutional arrangements, or specialised technical support face more limited prospects for sustained impact without continued external engagement. Getting farmers to autonomously buy insurance at scale requires either continued premium subsidization - economically unsustainable at scale - or fundamental redesign addressing the value proposition issues that caused demand collapse when subsidies ended. Conservation agriculture knowledge is embedded with farmers, but most lack the resources - including mechanization, herbicides, and access to irrigation - to implement practices at the scale required to achieve full benefit. The credit component's sustainability depends on external institutional capacity and service quality that programme interventions did not adequately strengthen; farmers' deep mistrust of commercial credit providers represents a constraint that will endure. The market access component's sustainability at the local level, while successful in several cases, was undermined from inception by insufficient attention to aggregators' (particularly micro aggregators) financial capacity: without working capital, trained aggregators could not buy grain.

271. The integration of insurance into FISP represents R4's most significant policy influence success and potentially its most enduring legacy, demonstrating that well-evidenced advocacy combined with WFP's respected convening power can shift national systems in ways that outlast project funding. However, sustainability of capacity strengthening outcomes across the programme more broadly is constrained by two systemic gaps that remain unaddressed at closure. The first factor - largely beyond WFP's direct influence - is the high rate of staff turnover within the MoA: approximately 90 percent of DACOs in R4 operational areas had served in their posts for fewer than two years, a pattern similarly observed among camp extension officers. This meant that trained capacity tended to move with individuals rather than becoming embedded within institutional structures. The second relates to knowledge management: both the 2019 MTR and the ICRM review highlighted the lack of a centralised documentation repository, standardised handover protocols, and systematic onboarding as notable gaps. That these same findings remained substantially unaddressed at programme closure - six years after being formally identified - suggests that neither recommendation trackers nor midterm reviews were sufficient to drive corrective action.

3.1.6 Model transferability and adaptation

272. The R4 model's transferability to other contexts requires an assessment of which elements proved genuinely robust versus those that were heavily dependent on specific Zambian contextual features, implementation partnerships, or temporal conditions. While certain components demonstrate strong potential for replication, the integrated model as designed faces significant transferability challenges.

273. The SfC savings approach demonstrates high transferability potential because its success derived from community self-organization, gradual capital accumulation, peer accountability, and member-controlled governance rather than context-specific enabling factors. The finding that groups achieved sustainability across diverse socioeconomic contexts within Zambia, including through the severe 2023–2024 drought, suggests robustness. However, transferability requires strict adherence to design principles including zero external capitalization and thorough social preparation before financial activities commence.

274. Climate information services similarly demonstrate strong transferability, as the need for actionable weather data is universal across smallholder farming contexts. However, effectiveness depends on adequate investment in both physical infrastructure - rain gauge networks, data transmission systems - and human capacity: trained community data collectors and extension officers capable of linking information to concrete agricultural recommendations.

275. The extent to which the insurance market becomes appealing to smallholder farmers is questionable based on R4 experience. The component's challenges - farmer misunderstanding, perceived inadequate value relative to premium costs, delayed payouts - speak to both design limitations and implementation

issues that are likely to recur in comparable smallholder contexts. R4's most replicable insurance contribution is ultimately its policy advocacy and technical assistance model rather than the direct delivery component itself.

276. The integrated R4 model's transferability was constrained by operational requirements that proved difficult to establish even with substantial funding and strong implementing partner capacity in Zambia. This suggests that the model's ambition may exceed operational feasibility in other implementation environments, requiring either substantial simplification - potentially selecting fewer, higher-performing components for integrated delivery - or considerably increased investment in the coordination infrastructure that genuine integration demands.

277. The overarching conclusion is that R4 should be understood as a portfolio of components with differential performance profiles and adaptation requirements rather than as a single unified model. Future programmes should select specific elements validated by Zambia's experience, particularly savings groups and climate information services, substantially redesign or deprioritize components with design constraints such as insurance without major product reform, and recognise that conceptual integration does not translate to operational integration without sufficient and deliberate investment in the coordination mechanisms, monitoring systems, and institutional infrastructure that make integration a practical reality.

3.2. Lessons

278. The R4 evaluation generates several critical lessons with relevance for WFP's global resilience programming portfolio, particularly for contexts characterised by climate vulnerability, resource-constrained smallholder populations, and institutional capacity constraints.

Lesson 1: The R4 experience highlights that strong conceptual integration, while essential, needs to be complemented by equally robust functional delivery architecture to fully realise programme synergies.

279. Integration emerges from deliberate operational design - unified beneficiary tracking systems, coordinated scheduling protocols, integrated field staffing models, and monitoring frameworks measuring interaction effects - rather than from proximity of activities or the acknowledgement of conceptual frameworks. This was compounded by a monitoring system that tracked participation in individual components but lacked the integrated household-level databases needed to test whether combined engagement produced better outcomes than single-component participation. Future programmes should design integration mechanisms at the operational level during the design phase, with partner agreements explicitly demanding and incentivising coordination, and staff responsible for holistic support in one area rather than component-specific delivery. Without these enablers, multi-component programmes will default to siloed implementation regardless of the ambition of the ToC.

280. This lesson applies to all WFP resilience programmes employing integrated risk management or multi-pillar approaches delivered through multiple implementing partners, particularly where: a) different technical units manage separate programme components; b) implementing partners have distinct contractual arrangements and activity schedules; and c) field coordination mechanisms are informal rather than structurally embedded.

Lesson 2: Community savings group sustainability inversely correlates with external capital dependency.

281. Zero-capital-injection models that require groups to build capital bases entirely through member contributions demonstrate superior sustainability compared to models providing seed capital or requiring ongoing institutional intermediation. While initially producing lower levels of capitalization, these approaches eliminate aid dependency, build internal financial discipline, and create institutions that function

independently after programme exit. The SfC model's performance - including average repayment rates of around 90 percent, formal bank account opening, and continued operation through severe drought cycles without WFP support - confirms this. WFP should prioritize savings group models over commercial credit linkages as the foundation for household economic strengthening in resilience programming.

282. This lesson applies to WFP's financial inclusion programming across all contexts where savings groups are promoted, particularly where formal financial institutions systematically exclude vulnerable populations and donor funding horizons are uncertain.

Lesson 3: Technical product or component complexity must align with available field support capacity.

283. When products require sophisticated technical knowledge for effective delivery, but operational and commercial models cannot support adequate field expertise, three options exist: a) simplify products to match available support capacity; b) invest in technical staffing despite economic constraints; or c) recognise the product's unsuitability for direct community-level implementation and redirect resources to policy advocacy for government-managed schemes. The low-premium, high-volume model of smallholder agricultural insurance may be structurally incompatible with the quality of technical support needed to deliver genuine farmer understanding and confidence. The difficulties in resolving the comprehension problem across the full ten-year lifecycle - despite its having been identified before the programme began - suggests that this is not primarily a training or awareness issue but a structural feature of the product model itself. WFP should assess the technical complexity of interventions against realistic field capacity at the design stage and seriously consider redirecting resources from premium subsidization to sensitization, product redesign advocacy, or transitioning fully to a policy facilitation role.

284. This lesson is applicable to all WFP programmes delivering complex technical products through lean field structures, particularly where products require specialist expertise for effective explanation, where cost structures limit technical staffing, and where beneficiary adoption depends on full understanding of the product.

Lesson 4: Development-oriented resilience programming requires contract modalities distinct from humanitarian response models.

285. The R4 experience reinforces a lesson that extends well beyond Zambia: short term contracting modalities are incompatible with the sustained field engagement that multi-year resilience programming requires. This is not a new insight - multiple WFP evaluations globally have reached the same conclusion - yet the persistence of the gap between evidence and practice suggests that the solution lies at the institutional policy level rather than in project-level workarounds. Establishing distinct contracting modalities for resilience work, with multi-year agreements that enable strategic planning, consistent staffing, and relationship continuity, remains an outstanding corporate priority for WFP.

286. This lesson applies across WFP's resilience programming portfolio globally, particularly where: a) interventions require multi-year engagement for cumulative capacity strengthening; b) activities depend on seasonal agricultural cycles where delays render efforts ineffective; and c) community trust-building requires sustained partner field presence.

Lesson 5: Institutional capacity strengthening sustainability depends on institutional knowledge systems rather than training volume.

287. The R4 demonstrates that investments in capacity building for government staff are most effective when complemented by strong institutional memory and knowledge management systems. While training efforts contributed to building individual skills and competencies, their long-term sustainability was influenced by the extent to which knowledge was systematically captured, retained and transferred within

institutions. The recurrence of this issue across multiple review points including the 2019 MTR and subsequent assessments highlights an important lesson: training alone is not sufficient to sustain capacity gains without supportive systems that institutionalise knowledge.

288. This is applicable to all WFP capacity strengthening initiatives, particularly where: a) government and partner organisations experience high personnel turnover; b) programmes operate over extended timeframes with multiple staff transitions; and c) institutional capacity is prioritised over individual skill development.

Lesson 6: Accompanying social norm change strategies with women's economic empowerment guards against backlash risk.

289. The R4 implementation highlights that individual-level women's empowerment can generate significant gains in access to resources and economic participation, while also interacting with existing social and household dynamics. In contexts where broader social norms and structures evolve more gradually, these shifts may introduce new dynamics within households and communities. The R4 experience demonstrates that where early implementation generated conflict as women's financial confidence grew, targeted couples-based training and engagement with traditional authorities demonstrably reduced backlash and produced better outcomes for both men and women. Gender-transformative programming requires the parallel engagement of male household members, traditional authorities, and community power structures alongside women-focused activities. Couples-based training, men's engagement strategies, and community dialogue with traditional leaders are essential rather than optional components for safe and sustainable empowerment outcomes and are directly applicable to WFP Zambia's forthcoming CSP due to commence in 2028.

290. This is applicable to all WFP gender programming across contexts where: (a) patriarchal norms strongly determine women's economic autonomy and asset ownership; (b) empowerment activities challenge traditional gender roles; and (c) women's safety depends on male household member and community acceptance of changing power dynamics.

Lesson 7: Private sector partnership viability requires pre-implementation capacity validation beyond service provision agreements.

291. Partnership assumptions regarding private actors' financial capacity, service commitment, and beneficiary responsiveness require validation before programme launch. The R4 experience with both commercial credit providers and insurance companies demonstrates that service delivery agreements do not guarantee adequate field presence, appropriate debt recovery practices, or willingness to invest in the ongoing customer support that complex financial products require in low-literacy rural contexts. Due diligence should include financial stress-testing, service delivery capacity assessments, and contractual service standards covering ongoing technical support, claims processing timeliness, and accessible grievance mechanisms - not only initial product provision.

292. This lesson is relevant to WFP market systems programming globally, particularly where: a) interventions depend on private sector service delivery capacity; b) partnerships involve actors with limited prior experience serving vulnerable populations; and c) programme success requires sustained service quality beyond initial product provision.

Lesson 8: Market systems interventions require rigorous value chain analysis addressing systemic constraints, rather than direct service provision models.

293. Market access interventions that establish platforms or facilitate direct linkages without adequately assessing and addressing underlying value chain constraints will fail to achieve sustainability regardless of the quality of farmer organisation or production improvements. The R4 experience demonstrates that

identifying market access as a problem and creating aggregation infrastructure is problematic where micro aggregators lack working capital to purchase produce, storage capacity to manage inventory, or financial management systems to handle cash flow.

294. While not wholly unsuccessful, the critical flaw in R4's market access design was assuming that aggregator establishment would automatically create functional market linkages, without conducting comprehensive value chain analysis identifying where specific bottlenecks existed. Effective market systems interventions require comprehensive value chain mapping that identifies specific constraints at each node; assessment of private sector actors' financial capacity and incentive structures; facilitative approaches that strengthen existing market actors rather than creating parallel structures; and market functionality monitoring that tracks whether relationships and services persist beyond WFP support. Where analysis reveals inadequate capitalization, interventions should facilitate aggregator access to working capital loans, establish group purchasing arrangements enabling collective negotiation without individual capitalization requirements, or link farmers directly to buyers with adequate capital who can pay on delivery.

295. This is not new to WFP Zambia: the Zambia Breweries sorghum arrangement - in which 777 metric tons were aggregated against a target of 200 in 2022–2023, substantially exceeding expectations - demonstrates what is achievable when a committed off-taker with adequate capital is in place. WFP's comparative advantage lies in convening market actors, building smallholder farmer organizational capacity that enables collective action, facilitating information flows and relationship development, and advocating for policy environments that enable inclusive market systems - not in direct market service provision or subsidising market functions that lack commercial sustainability.

296. The Maano platform's initial functionality followed by operational challenges due to rural connectivity constraints, etc. similarly demonstrates the importance of thorough feasibility analysis of technical infrastructure requirements before significant platform investment. Its eventual transition to private sector ownership under Digital PayGo, with over 105,000 registered users by late 2023, offers a model for how WFP can establish digital market infrastructure and then transfer it to actors better positioned to sustain it commercially.

297. This lesson has particular relevance for the 2026–2029 WFP Strategic Plan's emphasis on scale, efficiency, and complementarity. Market systems approaches - when properly designed through comprehensive value chain analysis and facilitative rather than direct implementation - offer superior potential for sustainable scale because they strengthen existing commercial structures that will continue functioning beyond programme duration. Country Offices pursuing market access programming should elevate specialised market systems development expertise, partner with organizations experienced in facilitative approaches such as Making Markets Work for the Poor, and resist pressure to demonstrate rapid beneficiary numbers through direct service provision that undermines long-term market functionality and sustainability.

3.3. Recommendations

Table 7: Recommendations

#	Recommendation	Timeframe	Responsibility (Lead)	Other Contributing Entities	Priority	By When
1	**Redesign resilience programme delivery to embed synergy and coordination across pillars.** • Establish unified beneficiary management systems tracking multi-pillar participation on a longitudinal basis. • Implement coordinated partner activity and training scheduling. • Deploy field staff with responsibility for sequencing and managing the delivery of all programme components holistically in their operational area. • Develop monitoring frameworks that assess synergies between risk pillars. This could be done by ongoing monitoring of 'sentinel sites' that represent different beneficiary typologies.	Medium-term	WFP Zambia CO	Programme Policy Officer, M&E Officer, Implementing Partners	Medium	Q3 2026 depending on emergent programming

2	**Prioritize community savings models as the primary financial inclusion strategy in future resilience programming.**
	• Future resilience programmes should:
	  ○ Scale SfC groups as a foundational intervention.
	  ○ Position commercial credit (and insurance) as supplementary components.
	  ○ Allocate resources proportionally to reflect superior impact and cost-effectiveness.
	  ○ Facilitate formation of district-level savings group federations, and develop graduated support models where apex structures assume mentoring responsibilities.
	  ○ Link apex bodies to government cooperative registration.
	  ○ Facilitate connections to market actors and financial institutions.
		Medium-term	WFP Zambia CO	Programme Policy Officer, Implementing Partners	Medium	Q3 2026 depending on emergent programming

#	Recommendation	Timeframe	Responsibility (Lead)	Other Contributing Entities	Priority	By When
3	**Integrate gender-transformative programming, and community power structures alongside women-focused activities** • Design couples-based training on joint financial decision making. • Engage traditional authorities in gender equality dialogues. • Establish protection mechanisms addressing property-grabbing risks. • Conduct assessment of opportunities for and barriers to people with disabilities and young people's participation in rural agriculture-based economic activity. This will include an assessment of their priorities and capabilities, and current government policy, and identify the areas where support is most likely to benefit them.	Short-term	WFP Zambia Gender Focal Point	Country Director, Programme Policy Officer, Implementing Partners	High	Q4 2026
4	**Maintain policy advocacy and facilitation role regarding crop (and livestock) insurance** • Phase out direct premium subsidies within programmes. • Redirect resources to policy advocacy supporting enhanced FISP insurance design. • Provide technical assistance to Government and insurance providers on product improvement – especially around client awareness, payout modalities, timeliness, etc.	Short-term	WFP Zambia Country Director	Programme Policy Officer, Government Relations	High	Q4 2026
5	**Explore possibility of multi-year FLAs with CPs for resilience interventions.** • Explore the feasibility of establishing longer FLA durations for resilience programme implementing partners and develop multi-year budget forecasting as per the recommendations of recent WFP evaluations in this area. • Align contract periods with intervention timeframes and donor commitments. • Streamline renewal processes to prevent implementation gaps.	Short-term	WFP Zambia Head of Programme	Country Director (HQ coordination), Partnerships Focal Point	High	Q4 2026

#	Recommendation	Timeframe	Responsibility (Lead)	Other Contributing Entities	Priority	By When
6	**Establish mandatory knowledge management systems for resilience programmes.** • Create a centralized digital documentation repository under the control of a specified member of staff who has responsibility for this and overall knowledge management. • Ensure that findings from internal monitoring processes are collated, synthesized and communicated to relevant stakeholders in a regular manner. • Develop "how-to" guides which are regularly updated and circulated to all project delivery stakeholders to ensure consistent delivery of project activities in different contexts	Medium-term	WFP Zambia M&E Officer	Programme Policy Officer, ICT, Implementing Partners	High	Q3 2026

7	**Conduct comprehensive market systems analysis before designing market access interventions and adopt facilitative rather than direct implementation approaches.**
	• In programmes where supporting farmers' access to markets is planned:
	  ○ Map existing value chains, identifying specific constraints affecting smallholder participation.
	  ○ Focus on interventions that address systemic market failures rather than providing direct market services.
	  ○ Use convening role and field presence to facilitate relationships between smallholder organizations and market actors.
	  ○ Seek out and make partnerships with implementing partners who have skills in market development (these may be private sector entities rather than the typical NGO partner).
	  ○ Establish market functionality monitoring tracking sustainability of linkages beyond WFP support.
		Medium-term	WFP Zambia Programme Policy Officer	Private Sector Engagement, Supply Chain Actors, Implementing Partners	Medium	Q4 2026 depending on emergent programming

#	Recommendation	Timeframe	Responsibility (Lead)	Other Contributing Entities	Priority	By When
8	**Strengthen qualitative data collection and shock exposure monitoring within resilience programming to assess whether interventions outpace vulnerability, and implement adaptive management systems enabling timely programme adjustments.** • Strengthen M&E systems by institutionalizing mixed-methods approaches integrating qualitative tools such as FGDs, outcome harvesting, and beneficiary narratives alongside quantitative indicators. • Systematically document climate shock frequency, intensity, and household exposure. • Integrate shock data with outcome indicators. • Establish early warning thresholds triggering programme adjustments – including consideration of 'crisis modifier' components to protect accumulated assets from severe shocks. • Develop decision rules specifying indicator thresholds triggering adjustments. • Create accountability mechanisms tracking adaptation effectiveness.	Medium-term	WFP Zambia M&E Officer	VAM Officer, Programme Policy Officer	Medium	Q4 2026 depending on emergent programming
9	**Conduct rigorous pre-implementation capacity assessments of private sector partners including financial sustainability stress-testing.** • Develop standardized partner assessment frameworks. • Conduct financial stress-testing scenarios. • Establish contractual service standards beyond product provision. • Implement staged partnership approaches with incremental responsibility increases.	Short-term	WFP Zambia Programme Policy Officer	Partnerships Focal Point, Private Sector	Medium	Q4 2026

List of Acronyms and Abbreviations

Acronym/ Abbreviation	Definition
7NDP	Seventh National Development Plan
8NDP	Eighth National Development Plan
AAP	Accountability to affected populations
AED	Assistant Executive Director
CA	Conservation Agriculture
CASU	Conservation Agriculture Scale Up
CATSP	Comprehensive Agriculture Transformation Support Programme
CDF	Constituency Development Fund
CEO	Camp Extension Officer
CET	Central European Time
CFM	Community feedback mechanism
COMACO	Common Markets for Conservation
CRIIZ	Climate Risk Insurance and Information in Zambia
CSA	Climate Smart Agriculture
CSAIP	Climate Smart Agriculture Strategy and Investment Plan
CSP	Country Strategic Plan
CSPE	Country Strategic Plan Evaluation
DACO	District Agriculture Coordination Officer
DAO	District Agriculture Officer
DAPP	Development Aid from People to People
DDS	Dietary Diversity Score
DfID	Department for International Development
ET	Evaluation team
EU	European Union
FAO	Food and Agriculture Organization
FCS	Food Consumption Score
FEG	Food Economy Group
FGD	Focus group discussion
FHH	Households headed by women
FISP	Farmer Input Support Programme
FLA	Field Level Agreement
FRA	Food Reserve Agency
GAM	Gender and Age Marker

Acronym/ Abbreviation	Definition
GBV	Gender-based violence
GDP	Gross domestic product
GEWE	Gender equality and women's empowerment
GIZ	German Agency for International Cooperation
GoZ	Government of Zambia
GRZ	Government of the Republic of Zambia
Ha	Hectares
HDDS	Household Dietary Diversity Score
HEA	Household Economy Analysis
HH	Household
HHM	Households Headed by Men
HHW	Households Headed by Women
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
HQ	Headquarters
ICRM	Integrated Climate Risk Management
ICT	Information and Communication Technology
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
IGA	Income generating activity
IPC	Integrated Food Security Phase Classification
KfW	Kreditanstalt für Wiederaufbau (German investment and development bank)
KII	Key informant interview
KOICA	Korea International Cooperation Agency
LPT	Livelihood Protection Threshold
LULUCF	Land use, land-use change, and forest
M&E	Monitoring and evaluation
M4P	Making Markets Work for the Poor
MDD-W	Minimum Dietary Diversity for Women
MFI	Microfinance institution
MHH	Households headed by men
MoA	Ministry of Agriculture
MCDSS	Ministry of Community Development and Social Services
MTN	Telecommunication provider in Zambia
NAP	National Agriculture Policy
NAIP	National Agriculture Investment Plan
ODK	Open Data Kit
OECD-DAC	Organisation for Economic Co-operation and Development - Development Assistance Committee
PICS	Purdue Improved Crop Storage

Acronym/ Abbreviation	Definition
PLWHA	People living with HIV/AIDS
PWD	Persons with disabilities
Q1, Q2, Q3, Q4	Quarter 1, 2, 3, 4
R4	Rural Resilience Initiative
RAM	WFP Research, Assessment and Monitoring Unit
RBET	Reach, Benefit, Empower, Transform
rCSI	Reduced Coping Strategy Index
RCS	Resilience Capacity Score
RIMA	Resilience Index Measurement and Analysis
RT	Resilience Threshold
RUFEP	Rural Finance Expansion Programme
SCRALA	Strengthening Climate Resilience of Agricultural Livelihoods in Agri-ecological regions I and II
SDC	Swiss Agency for Development and Cooperation
SfC	Savings for Change
SHA	Self Help Africa
SHF	Smallholder farmers
SIDA	Swedish International Development Cooperation Agency
SO	Strategic Outcome
SPSS	Statistical Package for Social Sciences
ToC	Theory of Change
ToR	Terms of Reference
UN	United Nations
UNDP	United Nations Development Programme
USD	United States Dollar
USSD	Unstructured Supplementary Service Data
VAM	Vulnerability Analysis and Mapping
VAT	Value Added Tax
VFM	Virtual Farmer Market
VFZ	Vision Fund Zambia
VSLA/VSLS	Village Savings and Loan Association/Scheme
WFP	World Food Programme
Zanaco	Zambia National Commercial Bank
ZMW	Zambian Kwacha

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