People power for mass action on climate change in an interconnected world
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Presentation to COSAC 2020, ISCAST 12th Conference on Science & Christianity

“Christianity did not begin with a confession. It began with an invitation into friendship, into creating a new community, into forming relationships based on love and service.” Bass, D. B.

Abstract
Australia is ripe for people powered climate action movements, which Christians and churches ought to foster and participate in. We present learnings from successful movements in thousands of majority-world communities, respectively mobilising citizens impoverished by unpayable debt, land degradation and deforestation, and poor basic services. Often paralysed by disunity, fear, and apathy about change, these communities were unaware of basic rights to wellbeing, including the necessity of having a healthy functioning environment. Success in mobilising them required unifying community members in cycles of action research and learning, yielding shared, actionable knowledge. We also suggest a theological basis for collective action for the common good, highlighting how various God-given capabilities enable collective learning on and accountable relationships influencing climate change action. In our paper and presentation we reflect on implications for empowering local community-based climate change movements and offer proposals for movement-building.

Background
The church began not as a denomination but as a relational movement of people responsive to the Holy Spirit and to its local context. In this movement, treating everyone with dignity and belonging to community meant ‘invitation into friendship’, ‘relationships based on love and service’ and seeking the common good. Being primarily endogenous and Spirit-led, this kind of movement, which is also locally led and transformational, is, we suggest, relevant to mass action on climate change. As a contribution to such action in this paper, we compare and seek to learn from two local-to-global movements among the world’s most marginalised communities about what fosters mass action.

Climate change is complex, a wicked, earth-wide collective action problem. ‘Wicked’ because collective action, adequate to adapt to, impact or reverse climate change, is collectively opposed at multiple levels from elites to ordinary citizens, and therefore, elusive. A vicious cycle arises, we suggest, because sufficiently aligned and coordinated local, communal and global consciousness about, dialogue and agreement on the roots of climate change and its outcomes to overcome opposition is lacking. Despair about this situation then tends to stymy the possibility of collective action, creating apathy, fear or anger instead of well-founded shared hope and confidence that collective action will succeed. Effective

1 See table in Appendix 1 for a detailed comparison between FMNR and CV&A.
collective action would both require and produce knowing, which arises from social learning processes and yields social learning outcomes. Effective collective learning and action are most feasible and influential when they start locally, can overcome opposition, and then be scaled up to national and global levels.

As any scientist appreciates, all knowing requires communal knowing and learning, without which we can neither collaborate in collective action nor build actionable scientific knowledge based on it. Communal knowing and learning rely especially on abductive reasoning repeatedly evaluating outcomes which emerge. Such knowing and learning entail dialogue to allow both contestation to discover, and collaboration to act on, root causes of systemic failure and success. Triangulating between these root causes and their outcomes over time facilitates the shared consciousness and mental models needed to agree on further collective action and policymaking.

Sadly however, social and other sciences have largely lost sight of and sometimes severed altogether the integral connection between communal knowing and an epistemology of love and justice: which means that as human beings we ‘know’ by loving and together desiring human flourishing which is just, loving and peaceful. As NT Wright (2019, 205ff) puts it, since Descartes split the atom of this connection, with his *Cogito ergo sum* (‘I think therefore I am’), and Marx exploded it, this connection between lifegiving knowing, loving and desiring has been fractured, corrupted and sometimes all but lost, denuding social ethics of its power to unite in pursuit of the common good. To appreciate where this fracture and corruption of communal knowing, desiring and loving the common good began, and how it can be recovered, we need to journey far beyond Descartes and Marx to the origins of the created order and the God who holds everything together.

In Genesis chapter 1, the term ‘God said’ is repeated eight times, followed by ‘and it was so’, demonstrating that creation itself is the response to God’s word, and is subject to Him. In Chapter 2 verse 8, ‘God planted a garden’. Why did God Almighty, who merely had to speak creation into being, bother to ‘plant’ a garden? Was he presenting to us the responsibility of- indeed the accountability for - tending his Temple garden, (the creation), and the dignity of working in and with nature and enjoying its fruits? Indeed, the time of creation was a time of great delight and rejoicing in heaven (Prov 8:30-31). Even the angels shouted for joy (Job 38:7). Given the majesty of creation, and the joy and wonder such handiwork gave him, how sad must God feel when he sees his work – and relationships He established - being trashed? If creation brings so much joy to angels and God himself, how should that affect our attitude and actions towards it? Can we in good conscience stand by in silence, failing to care for the earth while others destroy it?

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2 Vestiges of such approaches remain in some areas of research, like Southern participatory action research, which empowers marginalised communities with the dignity of collectively shared, actionable knowledge and transformative relationships.
God saw that everything that he made was ‘very good’ (Genesis 1:31), including the living creatures, the plants, soil and water, giving it intrinsic, not merely utilitarian value. He gave us ‘dominion’ (1:28) over the fish of the sea, birds of the air, over cattle all the earth, and every creeping thing. He also gave us everything that has the breath of life (30) and every green plant for food. The earth doesn’t belong to us (Psalm 24:1) – we are stewards, tasked with looking after it. Dominion here is not to be confused with domination. The translation by Ellen Davis (n.d.) is apposite: “Let us make humankind in our image, according to our likeness, so they may exercise skilled mastery among [or, with respect to] the fish of the sea and among the birds of the air.” Skilled mastery over the creatures God blessed (“Be fruitful and multiply”, Gen 1:22) on the fifth day of creation, before humans were created. Skilled mastery, with the capabilities it entails, necessitates learning processes which are intrinsically social and practical. As God’s image bearers, ‘ruling’ (Gen 1:28), implies ruling in the way God rules: not destroying but blessing and caring for the whole created order.

As Ellen Davis suggests

“we fulfil our role in the created order only when we recognize our responsibility to help perpetuate other creatures’ fruitfulness. We can infer that the human role is to live in such a way as to honour this divinely ordained, secure food supply. This is a sobering view of human “dominion,” in this age of habitat destruction and extinction, when countless species are dying off precisely because human activity has disrupted their food chains.”

Thus, we should not take dominion lightly, since judgment will come on ‘those who destroy the earth’ (Revelation 11:18).

At the dawn of creation, a teeming abundance existed, assuring creation’s ability to meet the needs of life on earth. We live in a world in which God has given us everything we need for our physical and spiritual needs through knowledge of him who called us by his own glory and goodness (2 Peter 1:3). Scarcity and hunger are post-fall phenomena. One could be forgiven for thinking that God has not provided. Nearly a billion people go to bed hungry every night. Vast areas of the earth are subject to one blight or other. God has given us plentiful food to nourish us and the nations (Psalm 104:14). He has also created wealth, ensuring a secure and safe food supply (Deut 28:7). The fish of the sea and the birds of the air, over cattle all the earth, (Gen 1:28), implies ruling in the way God rules: not destroying but blessing and caring for the whole created order.

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1 As Neville Carr reminded us: ‘God alone knows what is good [Mk 10:18]. The tree of the knowledge of good and evil and tower of Babel are symbols of this truth. Human pride (Lat. Hubris) and the desire for autonomy lie at the heart of the human condition: ‘I know best what is good for me, my family, my community, my education, my finance, my choice of a marriage partner, etc...’

2 Neville Carr’s comment is also germane to FMNR and CV&A: “There are four tasks within the ‘dominion’ mandate: i. building community (‘be fruitful’, etc.), ii. economic and cultural activity (‘till and guard’), iii. science, education and communication (‘naming’), and iv. rest, reflection and worship (‘sabbath’). For i. effective, God-honouring community only happens in submission to his word about what is ‘good’ community. This is elaborated by texts like Decalogue, where boundaries are given for human flourishing, or Deut 10.12ff, Isa 58, Sermon on Mount, etc. For ii. These words have sacred connotations, used in reference to tabernacle/Temple injunctions protecting from evil intrusion into God’s domain. If humans ‘serve’ the earth (i.e. honour and respect it), it will serve them well. Abuse it (i.e. disobedience, covenant-breaking), and look what happens in Deut 28 and the prophets. Tim Keller and others include parenting and all cultural activity as tilling/guarding. iii. naming involves exploring and unlocking the mysteries and wonder of creation – science, inquiry, education, language and literature (e.g. poetry), music and art, technology (e.g. making tools to farm). All to do with the fundamental driving search for meaning, truth, knowledge, wisdom. iv. Sabbath reminds us that all human activity must point us to its telos = service and worship of God. Humans are not truly fulfilled through work, but through critical reflection on their daily work, repentance for flawed and sinful activity and thought, and a casting upon the grace, forgiveness and renewal of God through Christ and the Holy Spirit.’ Pers. comm.
gives hope for a time when creation will no longer be subjected to futility and bondage to decay, since it was ‘subjected in hope’ (Rom 8:20, 21). The depth and breadth of human sin, being systemic and structural, infiltrates creation, including society. Despite this corruption, God’s purpose in history is not now to torch it, but rather to recover, redeem, renew and restore the created order. That creation ‘groans’ and ‘waits with eager longing for the revealing of the sons of God (Romans 8:19) suggests that, since the resurrection of Christ, not only have the children of God indeed been revealed, but a whole new and transformative reordering has arrived through which nature can, in part at least, be liberated and restored. This implies that Christians have a liberating, restorative role to play and we can do this in partnerships of mutual accountability with God and each other (Genesis 2:4-15). We participate with God not only in His work of redeeming mankind and healing human brokenness, but also in His upholding of it (Hebrews 1:3) and in His active working to renew the face of the earth (Psalm 104:30). Nevertheless, we must remind ourselves that we are of the earth – made from the dust of the ground (Genesis 2:7) and not separate to it, and, that while God placed us outside the Garden, like Adam and Eve after the Fall, we are still accountable to him and to each other, with the same mandate to till, care for and restore the earth.

As Barbara Deutschmann (2017) argues, the God-given calling to ‘serve and keep’ the earth emerges from distinct identities of maleness and femaleness born of dust. Through the mutual attraction of loving, these identities engender interactions and partnerships, thus fulfilling the calling as God speaks through creation, originally in ‘the forest garden’. However, acquiring ‘the knowledge of good and evil’ disrupts and corrupts the life-giving accountabilities implied in this partnership - accountability between man and woman, accountability between each of them and God, and consequently between humanity and God, and human accountability to God for the earth.

To now remake this groaning, expectant creation, which is awaiting its deliverance from corruption and decay, we marvel that our majestic God still has this partnership – us - in mind as delegated rulers ‘a little lower than the angels’ (Psalm 8:3-9). His rule – and our delegated role together in partnership with God - involve transforming, renewing and redeeming all historically created and shaped structures, systems, institutions and relationships. With Jesus’ resurrection, the groaning of a suffering creation now becomes one of expectation and hope. Not just ultimately, but in the present. For example, in John’s gospel we see that God’s gift of eternal life, communally experienced within a renewed creation, to which the tree of life in Genesis seems to allude, begins now. To restore access to this tree of life, God keeps calling a people to himself, a people He expects in Partnership with Him, both to be a beloved community and to engender beloved communities. By reflecting, following and thus witnessing to His Image, Jesus, beloved communities learn to model a renewed moral ordering.

Wherever this people of God does that – wherever it witnesses communally and obeys its mandate to be a blessing, which is especially wherever suffering, futility and poverty exists (because that is where God historically keeps revealing himself), it reflects back into the world the good

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5 What kinds of evil are involved are implied rather than spelt out. Potentially, moral, structural, systemic, metaphysical and natural evil might be involved or affected. For possible avenues to explore see Chapter 7 of Murphy, N. (2018). A Philosophy of the Christian Religion, Westminster John Knox Press.

6 As we can trace throughout Old and New Testaments (e.g. see Isaiah 65: 17-25; Ezekiel 37; Matthew 5:1-16; Romans 8; Ephesians 6:10-20; Revelation 22:1-6)
news of the image of God Himself made flesh. Blessing then overflows to all nations (Gen 12:3). This witness is a sign of hope to a despairing divided world of the ‘now’ and the ‘not yet’: that the cosmos is being, can be and will be transformed and flourish, which will glorify God. Such witness requires saved followers of Jesus who by practicing, facilitating and thus being formed by shared learning and action are themselves good news. As Jonathan Cornford (2019) suggests being saved entails us living into and caring for our relations with each other and the earth, now and into the future.

In the two cases of movements to which we now turn, Farmer-Managed Natural Regeneration (FMNR) and Citizen Voice and Action (CV&A) arose by co-learning with historically marginalised communities whose freedom from the suffering of poverty, injustice and futility necessarily entails salvation from them (Morris 1988). Deprived of opportunities to flourish as communities, and often paralysed by fear, apathy and false consciousness they cannot exercise their God-given capabilities of knowing communally in their relationships with God, each other and the created order. By processes of continual social learning which seek the common good, both FMNR and CV&A facilitate communal knowing of, action on and care for the created order with which God has blessed us all.

What are FMNR and CV&A?

Natural resource systems: Case of Farmer Managed Natural Regeneration

**Definition.** Farmer Managed Natural Regeneration (FMNR) is both a technical practice and community development approach for mobilising and empowering local communities to restore their natural environment through the systematic regrowth and management of existing trees and shrubs from tree stumps, sprouting root systems or wild seeds on diverse landscapes.

**FMNR Origins.** While one form or other of FMNR has been practiced on various continents for centuries, it was developed as a distinct practice in 1983 in Niger Republic as a response to deforestation, the failure of conventional tree planting practices and deteriorating livelihood conditions of small holder farmers. In fact, the flourishing landscape which supported large numbers of wildlife and herds and crops, was at a point of ecological collapse, barely able to support life on earth. FMNR’s development followed the observation that, contrary to perceptions, apparently tree-less landscapes often contain a vast repository of living tree stumps with the capacity to regenerate – at low cost, quickly and simply (with low technology), and this can be done at scale. In areas with no, or few living tree stumps, usually there are tree seeds in the soil, and all that is required is a change of behaviour / land management practices to encourage natural tree establishment. This ‘discovery’ led to the realization that the main constraints to reforestation were not technical or financial, but social and policy related. Hence, while the technique was

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being co-developed with farmers and honed to meet felt needs, much effort also went into awareness raising and popularizing the idea, which went against standard practice of clearing fields of all woody vegetation.

The practice was co-developed with farmers in Niger, and in each new context, ideally, it is adapted with the land users to the unique needs and goals of local communities in line with their specific environment. FMNR would never have spread at the rate it has unless farmers were given the freedom to adapt the practice to their own situation and objectives.

**Citizen-government relationships: Case of Citizen Voice and Action (CV&A)**

**Definition.**

CV&A is a community-led advocacy development approach which frees systematically marginalised communities, using dialogue with each other and government, to engage in collective action with each other and government. Illustrated in the diagram below, CV&A processes foster inclusive social learning, which enables citizens to influence policy and engender reform of public health, early, primary and secondary public education, water supply and other public systems. By harnessing and generating their own knowledge as collective capabilities, citizens can claim ‘living rights’ to shared wellbeing, and foster mutually accountable relationships with governments for public policies affecting them.

**CV&A Origins**

Currently used by thousands of communities in 48 countries, CV&A targets relationships of accountability between rulers and ruled, an approach to empowerment over 5000 years old, often now called social accountability. More recent history can be traced a) to the 1940s when Paulo Freire’s approach enabled critical literacy among illiterate peasants via thousands of culture circles in North East Brazil, b) to India in the 1980s and 1990s when social auditing emerged to seek health justice amid long-term suffering from birth deformities and major illness following the Union Carbide Corporation Bhopal disaster, c) citizen report cards developed to address public service failures in Bangalore, and d) community scorecards, developed to increase accountability between rulers and ruled from the late 1990s until the early 2000s in West Africa and Malawi.

Community-based Performance Monitoring (CBPM) hybridised these approaches into a unified social accountability approach which engages marginalised citizens in seeking accountability from local government. Between 2005-2009, CV&A was co-developed from CBPM by World Vision with impoverished rural & peri-urban communities, and scaled up beyond local level, initially in Uganda, Brazil and Armenia.

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8 For a brief introduction to CV&A including video see: [https://www.smores.com/w5xy-citizen-voice-and-action#:~:text=Citizen%20Voice%20and%20Action%20works%20by%20educating%20citizens%20on%20how%20these%20rights%20are%20articulated%20under%20local%20law](https://www.smores.com/w5xy-citizen-voice-and-action#:~:text=Citizen%20Voice%20and%20Action%20works%20by%20educating%20citizens%20on%20how%20these%20rights%20are%20articulated%20under%20local%20law)


10 Also sometimes called ‘participatory governance’ or ‘civic-driven change’ or ‘grassroots democratisation’. 
The diagram of CV&A summarises the repeated cycle of participatory action research by which marginalised communities are freed to engage with each other and local government, and use the shared knowledge they generate to grow their ownership of and influence over public policy as it affects them locally.\textsuperscript{11}

\textbf{Why communities find FMNR and CV&A attractive}

- \textbf{FMNR} addresses lived experiences and meets community felt needs. In that FMNR restores woody vegetation on deforested and often degraded land, it therefore addresses multiple problems simultaneously, including: land degradation and fertility loss, soil erosion, biodiversity loss, food insecurity, fuel wood and building timber shortage, fodder shortage and dysfunctional hydrological cycles (exacerbated by flood and drought events, reduced ground water recharge, drying of springs, wells and streams). When done at scale, FMNR contributes to increased recharge of groundwater and increased soil moisture, and more so when done in combination with physical soil and water conservation measures. Because FMNR contributes to lifting yields and income, it has a positive effect on livelihoods, food security, resilience and risk reduction. There are documented reports of reduced impact of drought and reduced incidence of flooding. The lives of women and children are made easier as fuel wood is easier to gather and is closer at hand. Women have more time to pursue economic and other activities important to them. Their status in the community is often lifted as they participate in decision making group activities and sometimes, leadership. In that land and vegetation restoration is foundational to economic development, FMNR can contribute to diversification of agricultural enterprises and increased investment in agriculture and economic activities and reduction in poverty and sustainable wealth creation.

In CV&A, felt needs regarding services and lived experiences are core to repeated agenda-setting which shapes what kinds of policy change communities seek. Including key groups who are often politically marginalised (such as women, children and youth) in agenda-setting, voting, performance measurement and monitoring helps reform policy decision-making and implementation, while governments at each successive level become more responsive to the felt needs and lived experiences of communities.

\textbf{Both practices increase community and household resilience and reduce risks arising from system failures}. For example, farmers practicing FMNR are more likely to harvest an annual crop in a drought year than their non-practicing neighbours and, having trees in

\textsuperscript{11} As they engage with each ‘case’ or bounded system. They choose the public system where they wish to start, and over time, engage with others affecting their wellbeing. As they collectively learn by doing, they can influence progressively more complex public systems. For published case studies where impoverished children lead research and influence policy, see Walker, D. W., et al. (2019). "From injustice to justice: Participation of Marginalised Children in Achieving the Sustainable Development Goals." \textit{Journal of Global Ethics} 15(3): 382-403.
their farmlands, they have other options to draw from, including harvest and sale of fuelwood, timber, wild fruits, traditional medicines and fodder.

Because of these wide-ranging benefits, practitioners often express a heightened sense of wellbeing and self-worth. They have greater agency in managing the resources at hand and along with successes, confidence is built and there is a greater propensity to take calculated risks in investing in improvements to production systems. A common outcome of FMNR interventions is the restoration of hope. Increased agency and the restoration of hope are powerful motivators which can liberate people to strive for a better life.

Communities and household members who enjoy public service systems which are more accessible, available and of better quality and are treated with dignity as a result of CV&A are not only healthier and more educated but more likely to be resilient and responsible when risks, such as climate change and the current pandemic, arise.

Both practices are accessible because they use simple techniques, requiring no external inputs or expertise, and are low in cost. Very poor farmers in Niger mostly learnt FMNR technique from their neighbours, or by observation. They used farm utensils already at hand for pruning and thinning stems and branches. They did not need to wait for a project, external resources or expertise in order to start practicing FMNR. Because all resources and expertise needed can be found or developed within a community, FMNR does not create dependency and adoption and spread often continues well beyond the life of any externally funded project.

CV&A is simple and accessible enough that citizens learn by mimicking each other and learning processes to improve governance by group action and critical reflection. Well-conceived FMNR and CV&A projects facilitate enhanced governance, greater collaboration and peace building.

Both practices are locally managed and driven. FMNR is farmer (or user) managed. Users are very much in control of what they do, deciding which trees to manage, the number of trees and how they will manage and benefit from them. They can do this completely independent of government or NGOs. To a large degree, how much they benefit depends on them.

CV&A is locally managed and civic-driven, as marginalised citizens in groups, many of whom may be illiterate, pool their local knowledge to set their own agendas, monitor and vote on performance and, through dialogue in groups and plenary, agree on ‘action plans’ which have feedback learning and accountability embedded within them.

Both practices yield rapid changes.

Rapid changes are very important not least because of widespread, shared hopelessness and despair about systemic change, and lack of belief in shared efficacy.
In terms of tree growth, FMNR gives ‘early’ returns on farmers investment of labour. Poor farmers cannot afford to wait years for benefits. Each day is a struggle and they need to benefit relatively quickly to be convinced to uptake a new intervention. Poor farmers begin to realize benefits from FMNR even within the first year, particularly in terms of small amounts of fuel wood and fodder (from some species), but additionally, the existence of even small trees in fields has a number of benefits to crops – including some flow on impact from improved microclimate through reduced temperatures and windspeeds and increased soil microflora), increased soil fertility in the case of nitrogen fixing trees, but additionally, during the dry season, trees in fields attract birds and livestock which fertilize the soil. As the trees grow, greater amounts of fuelwood and timber will be harvestable, but in addition, farmers will have access to wild foods, traditional medicines and new enterprise opportunities will arise such as bee keeping. A 2013 Social Return on investment report on World Vision Ghana’s Talensi FMNR project calculated that, after accounting for discounting factors, World Vision’s investment of funds, staff and technical input generated in the target communities a SROI ratio of 6:1 by year three (end of the project). The study also calculated that the project will generate a ratio of 17:1 by year seven (four years after project closure) and 43:1 by year 13 (10 years after project closure).

With CV&A, citizens who often lack political voice grow rapidly in confidence, often at first through ‘quick wins’ (Walker 2018). CV&A’s engaging phase yields rapid feedback from elected and appointed leaders, for which all become socially accountable through action plans.

- **Both practices are scalable.** FMNR rapidly went to scale in Niger primarily as a bottom up, farmer led movement.

  Begun in one rural school and one rural clinic in 2005, CV&A rapidly went to national scale in Uganda on educational and health policy issues. Scaling up has since emerged in Kenya (education), Armenia (local government reforms), Brazil (youth issues) and other countries.

  Since the basic principles of FMNR and CV&A are applicable across a wide range of contexts, both are replicable in many developing contexts across the world.

**FMNR & CV&A as Social Movements**

Social movements by their very nature cannot be orchestrated. We can foster key initial conditions which we think will contribute towards creating a movement, but because movements depend on coordinated actions by individuals under circumstances conducive to collective action,

we cannot predict when, or how a movement will occur. Malcolm Gladwell (2000) suggests that movements which effect positive change can be likened to beneficial viruses. According to Gladwell, ideas, products, messages and behaviours spread just like viruses. Small actions can single-handedly initiate big changes, and he asserts that change can happen rapidly after a certain point and social epidemics are driven by a handful of exceptional individuals. FMNR could be likened to a beneficial virus which enables communities, over time to resist, be protected from and overcome land degradation, and ultimately, climate change.

With both FMNR & CV&A, sustained collective action for the common good arises through synergies, as ‘push’ and ‘pull’ reinforce each other. The chronic failure of lifegiving systems (ecological and public service) motivates (‘pushes’) collective action to overcome them, while encouraging outcomes from this action attracts (‘pulls’) more collective action.

The mass movement appeal and effectiveness of CV&A and FMNR are consistent with findings (Illick-Frank, and Mfitumukiza, 2020) that increased climate resilience relies on:

- **Effective, Context-Specific Programs** which manage ‘uncertainties of climate risk in ways that are tailored to specific locations’. Since there is no universal quick fix, adaptation need to be driven and led locally to ‘accommodate future changes in hazard intensity and frequency’.
- **More Holistic Approaches.** Local adaptation solutions are more likely to succeed because communities approach adaptation holistically and develop solutions through their lived experiences of ‘the complex relationships between adaptation measures and other development priorities like poverty alleviation, disaster impact reduction and inclusive socioeconomic development.’
- **Amplified Local Knowledge.** A vast and underutilized resource, local knowledge is more accessible and contextually relevant. Embedding it in ‘adaptation measures makes them more inclusive, eases uptake and makes them more sustainable, while boosting communities’ sense of ownership.’

In turn, these yield

- **“Higher Social, Environmental and Economic Returns** because the benefits of local adaptation easily outweigh the estimated costs.”
- **More Equitable Results.** By accounting for regional inequalities, local action can avoid excluding or discriminating against marginalized groups. Mobilizing the most vulnerable people in meaningful decision-making not only prioritises their needs but leads to effective and equitable outcomes for the whole community.

Illick-Frank and Mfitumukiza conclude that
“Adaptation is a global issue with transboundary implications, but effective action begins at the local level. Local voices and priorities are urgently needed in an honest and long overdue conversation on the systemic causes of vulnerability which prevent more transformative solutions from flourishing.”

As no universal ‘quick fix’ exists, effective adaptation solutions must manage the uncertainties of climate risk in contextually relevant ways. “When adaptation is overseen at the local level, communities can adopt flexible and incremental solutions which accommodate future changes in hazard intensity and frequency.”

**What can we learn from FMNR and CV&A experience germane to fostering mass movements on climate change in Australia?**

While there is no single answer to this question, elements of how FMNR and CV&A are promoted could be applied. These include:

- the repeated cycle of including and enabling (awareness raising / equipping / facilitating etc) people, including leaders, to engage with each other to transform systems (including overcoming obstacles/opposition etc) and mindsets, as the basis for influencing change.
- Learning together, to discover, understand and act on causal drivers in their complexity by using systemic inquiry to build local, actionable knowledge on bounded systems, such as landscapes.
- Formally and informally bringing people together for solidarity, information exchange and mutual support.
- Regular follow up and encouragement, especially in the early stages.

FMNR and CV&A experience across many countries suggests concrete actions in Australia include:

- Identify, equip and enable those willing to lead and inspire others and community-based organisations and networks as local climate champions.
- Connect with existing Christian movements (e.g. A Rocha, ARCC, churches already active or open to being mobilised).
- Mobilise and raise shared awareness of climate action groups based on location e.g. street, suburb, town or district and/or interest e.g. local landscape, bush fire prevention in fire prone areas, solar panel installation and electrical power sharing on local grids, car-pooling etc. To enhance voice of significant marginalised groups, prefer favour? groups organised by gender, status, age (e.g. youth) etc.
- Equip group facilitators not only to facilitate group-led change but to network with, accompany and mentor emerging champions and groups, understand local culture and facilitate dialogue in plenaries.
- Individual groups set measurable climate goals, members commit to what they are prepared to do towards achieving goals, develop action plans for which they hold each other accountable (develop rubrics, by agreeing and voting on group-generated performance indicators to create a community scorecard as a shared mental model for dialogue and proposed action). Climate-issues awareness creation and action can then be tailored to the interests and needs of the target group.
- Obtain immediate feedback by inviting officials to participate in groups run in parallel with citizen groups, each developing their own community scorecard on policy performance. Facilitate action-oriented planning via plenaries where dialogue on group scorecards and audits invite feedback from officials.
- Scale up these groups by arranging (e.g. virtual) meetings and adding their data to an Australia-wide database (e.g. can be used for targeted advocacy to local lower (and where they exist upper) house MPs (e.g. local Province in Victoria). Small groups can also do social audits of
government policy inputs, including funding, measure and monitor government policy performance, and hold governments accountable ‘from below’

- Mobilise communities based on groups to co-produce policy outcomes with governments, corporations and others (experience overseas indicates frequent outperforming of government underperformance).
- Foster exchange visits for new or nascent groups to be inspired by and learn from established groups
- CV&A training particularly on engaging governments (e.g. accountable officials) in meeting climate change commitments and aspirations, beginning locally, and applying the principle of subsidiarity to target accountability.
- Collaborate with First Nations peoples to revive climate smart traditional practices such as maintaining healthy country through fire management and the creation of low earth bunds which retard movement of flood waters, allowing the land to become rehydrated.

We invite questions and discussion on these and other possible learnings from CV&A and FMNR. Moreover, we note that in several countries, World Vision has begun combining FMNR and CV&A at community level. Our paper has explored some of the complementarities and likely synergies from doing so. Accordingly, we recommend increased experimentation in these and other settings with such ways to enhance community knowing and its nexus with shared wellbeing, including resilience to climate change.

**Conclusion**

As NT Wright (2019) says, ‘Love is the mode of knowing that provides continuity between the present age and the age to come.’ That makes it immensely practical for patiently and inclusively building communal knowledge and ensuing mass action responding with practical creation care to climate change in Australia. As we have seen in FMNR, CV&A and other community-led movements in other countries, the integration and scaling up of communal loving and knowing, starts with compassion for and solidarity with marginalised local communities.

Love matters, not least because it motivates action. Love is ‘the constant between our present incomplete knowledge and the full knowledge yet to come: For now, all that we can see are puzzling reflections in a mirror; Then, face to face. I know in part, for now; But then I'll know completely, through and through, Even as I'm completely known. So, now, Faith, hope, and love remain, these three; and, of them, Love is the greatest. (1 Cor. 13:9-13)’

Given our ‘steward’ status, and God’s mandate to have dominion over the earth (exercise skilled mastery among ruling in the way God rules: not destroying but blessing and caring for the whole created order) the love response of Christians and churches compels us to be at the forefront of climate action.
Bibliography


Wright, N. T. (2019). History and Eschatology: Jesus and the Promise of Natural Theology, SPCK.


# Appendix 1: Comparison of FMNR and CV&A

<table>
<thead>
<tr>
<th>Current usage</th>
<th>Farmer-Managed Natural Regeneration (FMNR)</th>
<th>Thousands of communities in 26 countries.</th>
<th>Citizen Voice and Action (CV&amp;A)</th>
<th>Thousands of communities in 48 countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Origins</td>
<td>Very old (e.g. coppicing dates to Mesolithic period)</td>
<td>Recent history from 1983 when FMNR was co-developed with impoverished farming communities in Niger learning by doing and modifying accordingly. Since locally adapted worldwide for ecological, social, political, legal, cultural &amp; other contextual factors.</td>
<td>Very old (social accountability between rulers &amp; ruled, &gt; 5000 years old) Recent history from 1940s (Freire, Brazil), 1980-90s (India; social auditing) and 2000s (Africa, community scorecards and Community-based Performance Monitoring CBPM). CV&amp;A was co-developed from CBPM with impoverished rural &amp; peri-urban communities in Uganda and Brazil from 2005-2009 → CV&amp;A; since locally adapted worldwide</td>
<td></td>
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<tr>
<td>Approach to politics</td>
<td>Democratic: seeks citizen engagement with government for devolution of power over land management rights (rights to make decisions, manage and benefit from forest resources with responsibility to sustainably manage and protect from degradation)</td>
<td>Democratic; focuses on unifying and mobilising citizens, empowering them with enough knowledge to increase public accountability for policies and their implementation, between elections.</td>
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<tr>
<td>Replicability of principles</td>
<td>Processes are replicable in many contexts globally since basic principles are applicable across a wide range of contexts</td>
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<tr>
<td>Initial conditions commonly facing marginalised/impoverished communities include</td>
<td>A status quo of acceptance of &amp; despair about historically degraded ecological systems: long-term community-felt needs arise from systemic abuse of the environment—exacerbated by elite capture, undermines mutual accountability &amp; love which deprive communities of the right to enjoy life</td>
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<tr>
<td></td>
<td>- Lack of ownership rights to trees on their own farms</td>
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<td></td>
<td>- Neither social pressure nor strong leadership from chiefs or government protect and sustain use of trees</td>
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<td>- Theft of trees as well as free access to wider community</td>
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<td></td>
<td>- Lack of understanding on the value of trees to ecosystems, agriculture, life and sustainability</td>
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<td></td>
<td>- Low availability of fuelwood &amp; building timber and consequent hardship especially for women and children</td>
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<td></td>
<td>Crop failure due to degraded &amp; infertile soils, impact of strong winds, high temperatures, drought and pests – (all exacerbated by loss of trees)</td>
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<td></td>
<td>Child Malnutrition/undernutrition &amp; low school attendance rates are common.</td>
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<tr>
<td>Shared assumptions of FMNR and CV&amp;A praxis</td>
<td>God created &amp; keeps sustaining His blessing of the whole created order to humanity, while delegating skilled mastery of it to us. Since everyone, male and female, is made in the image of God, all are equal in dignity, should be free to choose &amp; (?) enjoy life in all its fulness (John 10:10) including the right to life, and can learn to do so.</td>
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</table>
However, because all humanity is complicit in structural sin, (e.g. Gen 3:1-16; Romans 3: 9-23) such freedom is opposed, making a moral reordering essential (Genesis 3:17-19; Ephesian 6; 10-18; 1 Jn 2: 18).
Empowered freedom exists only in community as fellowship, as solidarity and as mutual trust (Acts 2: 43-47; John 17:1-26)
we empower each other to be community by being accountable to each other
Life-giving systems subject to social corruption/sin are complex adaptive systems
2 Peter 1:3 ‘God has given us everything we need for life (physical needs) and godliness (spiritual needs) through our knowledge of him. – i.e. everything that we need for a full life has been provided.
Governments exist to serve and protect citizens (Romans 13:1-7)

<table>
<thead>
<tr>
<th>Major obstacles to change are</th>
<th>Social, systemic and policy/rules (systemic &amp; structural sin)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common root causes of collective action problems are systemic, relational and historical</td>
<td>Tragedy of the commons (ecological or public service system) – a vicious self-reinforcing cycle traps communities in poverty &amp; futility</td>
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<td>Failure to be accountable to God for each other’s wellbeing (Gen 4:9-15) and for caring for the land (Lev 24:42)</td>
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<td>Root causes of system failure are historical &amp; involve altering theological understanding, and mindsets</td>
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<tr>
<td>Hidden/invisible internal and external systemic resources and strengths include</td>
<td>Seemingly tree-less landscapes often contain a vast repository of living tree stumps with the capacity to regenerate – at low cost, quickly and simply (with low technology), and this can be done at scale. Where ecological systems have no, or few living tree stumps, usually there are tree seeds in the soil and/or natural mechanisms (transport by wind, birds, livestock…) which can result in restoration, once behaviour (how land is managed) changes. Human behaviour change through removal of constraints and management is key to restoration.</td>
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<td>Communities seemingly trapped in poverty have existing cultural capabilities (e.g. language and low technology cultural practices) by which they can learn at low cost, quickly and simply as systems thinkers to manage public systems as life-giving systems, at increasing scale, Often neglected as a source of wisdom, local customary &amp; religious leaders can unlock access to cultural capabilities; powerful local language (e.g. proverbs, idioms) to name injustice. Voice to express lived experiences of injustice needed to create inclusive change agendas; Local ‘eyes and ‘ears’ to monitor &amp; expose blatant or creeping elite capture/corruption</td>
</tr>
<tr>
<td>Role of existing local knowledge</td>
<td>FMNR builds on traditional knowledge – sometimes lost or neglected or retained by only older members of the community. Yet many pre colonization / ‘modernization’ cultures had some form of tree management &amp; Landcare ethic or traditional landscape management mechanisms which are recoverable</td>
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<tr>
<td></td>
<td>CV&amp;A builds on traditional (sometimes precolonial) knowledge, sometimes held by older community members. Often suppressed by modernisation, processes of social learning fostered mutual accountability via an ethic of care for each other &amp; the common good.</td>
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<tr>
<td>Key initial learning processes (Note: synergies between these are crucial; they are not distinct)</td>
<td>Prayer as dialogue with God and engaged spirituality</td>
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<td>Sensitisation to repair and restore relationships</td>
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<td></td>
<td>Envisioning a future for service systems better than the past and present</td>
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<tr>
<td></td>
<td>Awareness raising/education about gaps between past, present and envisioned future (see social auditing below); learning to change beliefs about citizen-government relationships (e.g. that governments exist to serve and protect communities)</td>
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<td>Ability to mobilise each other (households and communities) for collective self-development</td>
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<tr>
<td></td>
<td>Awareness</td>
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<td>Ability to mobilise each other (households and communities) for collective self-development</td>
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<tr>
<td><strong>Ability to mobilise households &amp; communities</strong></td>
<td>Legitimating collective action</td>
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### Key systemic tools for democratic monitoring and evaluation include

- Not universally developed. In some communities (e.g. Dan Saga, Niger Rep.) commissions from sales of FMNR fuel wood pay stipend of ‘Scouts’ who survey farms, prevent theft and capture those who are illegally cutting trees. Only those who meet pre-agreed on standards for FMNR (No. trees, etc) can sell wood in the market.
- Social auditing (measure & compare existing ‘system inputs’ against entitlements); community scorecards (shared visual mental model of system performance) using rubrics as indicators of system performance. Augmenting these are tools adapted for local use (e.g. to enable participatory budgeting).

### Key kinds of interconnected social learning yielding synergies needed for socio-cultural and/or ecological change

- **Single-loop feedback** — simple: monitor & adapt relevant bounded systems
- **Double-loop feedback** — complicated: involves questioning to overcomes low awareness, to escape self-limiting mental models/paradigms/assumptions.
- **Triple-loop feedback** — complex, questions/critiques the ‘rules of the game’ — i.e. the systems in question, to institutionalise change.

### Social movement processes (scaling up movements from localised collective action)

- In some contexts (Niger, Ghana, Senegal, Uganda, Kenya, Ethiopia), FMNR is spreading organically without ongoing project input. Farmers are learning by observation and from each other, and simply implementing what they see; visionary chiefs who want to avoid the loss deforestation is causing facilitate adoption of FMNR in the villages; enthusiastic individuals become self-appointed local champions and encourage neighbours to follow their lead.
- In some contexts, CV&A is spreading organically as neighbouring communities witness or hear about outcomes (see below). In some regions, networks of accountability (including civil society, trade unions & government and intergovernmental organisations) now collaborate and advocate, within and between countries. By observing, acting and reflecting on, evaluating and planning outcomes, citizens creatively mimic governmental processes and champion accountability from each other and government.

### Social movement outcomes

<table>
<thead>
<tr>
<th><strong>Outcomes</strong></th>
<th><strong>Long-term sustained collective action</strong></th>
<th><strong>Scaled-up collective action local-&gt;national -&gt;global</strong></th>
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- **Tangible** — enhanced eco-systems goods (timber, fodder, wild foods...... and services (climate, soil fertility, pollination, restored water cycle, protection from pests.).
  - Increased food and livestock production, diversification of income streams, greater resilience to environmental shocks. Increased income. Visibly transformed landscapes

- **Intangible** — restoration of dignity, self-reliance, hope and ownership.
  - Greater community collaboration & cohesiveness, reduced conflict. Reduced outmigration as food and natural resource supply grows.
  - ‘Democratization’ as people work together to solve common problems, empowering each other to achieve common goals.

- **Markedly increased availability & accessibility of public services, boosting maternal & child healthcare utilisation as clinics become well-equipped with furniture, bedding, equipment, toilets and clean water; new well-equipped health & education buildings with adequate land; ambulance services; in stock drug supplies; patients & pupils treated with dignity and respect; wheelchair-accessible**
  - Visibly enhanced and transformed schools, clinics & other services (schools equipped with enough toilets, books, furniture, water supply, well-maintained buildings as parents participate, and teachers attend & teach & pupils turn up and learn; **Intangible**: Increased acceptability and quality of public services
  - Major changes in individual/collective empowerment (collective self-efficacy; raised shared awareness; legitimacy of collective action and...
| Ownership of public systems; communities empower each other; gender empowerment e.g. boosted electoral representation of women & more equitable household power relations; repaired relationships; restoration of dignity, self-reliance, hope.  
Greater community cohesiveness & networking, reduced conflict. Reduced outmigration as public services improve. Better educational & health outcomes, boosted over time by referrals through the health system to higher-level clinics & hospitals and pupil graduation rates to high school  
Enhanced accountability and transparency  
‘Democratization’ as people work together, collaborating to solve common problems, empowering each other to achieve common goals. Increased willingness to pay taxes when public services work |