OCCASIONAL PAPER

Forest landscape restoration

A comparison of two participatory approaches

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Occasional Paper 239

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Executive summary

This Occasional Paper begins by acknowledging the global focus on forest landscape restoration and recognizing that inadequate attention has been paid to the human side of restoration. Global policies call for setting aside huge amounts of land for tree planting; but far less concern has been voiced regarding the people who live on or near those lands, and the implications of large-scale forest restoration for their livelihoods. Some have complained of inadequate attention being paid to people's welfare in such a situation, but few have proposed practical steps for ensuring such care.

This document examines two approaches that have attempted to incorporate people's concerns into such landscape changes: (1) the US-based Collaborative Forest Landscape Restoration Program (CFLRP), which has been in operation since 2009; and (2) CIFOR's Adaptive Collaborative Management (ACM) programme, which began in 1998 with the intention of encouraging a form of sustainable forest management (SFM) that focused on forestry, ecology and human well-being. At the time this programme began, in most of the tropical countries where CIFOR worked, forests were in far better shape than they are now. The subsequent switch from SFM to restoration is a symptom of the change in forest quantity and quality. We argue that (1) SFM inherently includes restoration – providing some restoration examples from our earlier SFM research – and that (2) an approach that began focused on SFM can as usefully be applied to restoration efforts.

Another benefit we anticipated in making this comparison pertains to our desire to upscale ACM. Two recent books included longitudinal assessments of ACM (Colfer et al. 2022; Colfer and Prabhu 2023). These have shown the longevity and effectiveness of much community-level work, but have also proved the necessity of incorporating more intermediate, broader-scale actors and systems more effectively if we really want to manage landscapes sustainably.

Our comparison here begins with the identification of six similarities in theory/terminology between these two approaches: (1) collaboration, (2) future scenarios, (3) monitoring and social learning, (4) adaptiveness, (5) third party facilitation, and (6) the centrality of trust. The ways these play out in each are examined. The next section examines seven clear differences between CFLRP and ACM: (1) purpose, (2) funding, (3) project timelines, (4) data availability, (5) decision-making authority, (6) prior collaborative action, and (7) inclusivity. We conclude with a discussion of the 'differences that make a difference'. Here, longer duration of funding, broader scale, and stronger institutionalization represent distinct strengths of the CFLRP. Meanwhile ACM advantages include (1) apparently more effective facilitation of power differences among diverse participants, (2) greater inclusivity of within-[local] community variation (including access to diverse knowledges and other contextual social features), (3) greater ability to incorporate into management adaptive lessons derived from monitoring, and (4) a stronger willingness and ability to devolve important decision-making to communities. We conclude that both approaches could improve results by working more vertically – with ACM strengthening upward and outward links, and CFLRP attending better to human variation and local sociocultural systems – and both approaches integrating higher and lower levels of action and decision making more effectively.

1 Introduction: Two participatory forest management approaches

As with conservation and development, the world of international forestry has been characterized by evolving trends and fads. In the late 1990s, as the Adaptive Collaborative Management (ACM) programme[1] got underway at the Center for International Forestry Research (CIFOR), the international forestry world was dominated by a search for 'sustainable forest management' (SFM). It was within that context that ACM was initially developed there.

By the early 2010s, global interest in reforestation had begun to eclipse the earlier emphasis on SFM; at the same time the nationally-focused Collaborative Forest Landscape Restoration Program (CFLRP, hereafter referred to as the Collaboratives -- to reflect the multiple initiatives that took place under this programme)[2] began in the United States.

Global forestry, development and conservation communities are now seriously interested in restoring forests. The multiple institutions now calling for forest restoration, as well as the expansive hectarages promised by governments in recent years, have been described by numerous authors (e.g., Adams et al. 2016; Chazdon et al. 2020; Delabre et al. 2020; Duguma et al. 2020; Mansourian 2018a; McLain et al. 2018; Williams 2020, and others). Keenan et al. (2023, forthcoming)), highlight the most well-known and grandiose:

> [T]he Bonn Challenge and the New York Declaration on Forests set goals to restore 350 million hectares by 2030 and in January 2020, the World Economic Forum launched a global initiative to grow, restore and conserve 1 trillion trees around the world to conserve biodiversity and help fight climate change. The United Nations recently declared the 2020s the 'Decade of Ecosystem Restoration'. At COP26 of the United Nations Framework Convention on Climate Change (UNFCCC) in Glasgow, over 120 countries committed to working collectively to halt and reverse forest loss and land degradation by 2030 while delivering sustainable development and promoting an inclusive rural transformation (UN Climate Summit 2021).

In sum, the areas and populations potentially affected are enormous.

Given this shift in emphasis from SFM to restoration, the recurring restoration initiatives within ACM projects, and the now-widespread acceptance of the importance of collaboration, a thorough examination of ACM and CFLRP – two collaborative approaches that show such promise in addressing restoration globally – seems timely and important.

1.1 From sustainable forest management to restoration

In the late 1990s, when we were developing our version of ACM at CIFOR in Bogor, Indonesia, the forests we were visiting were in comparatively good shape. Still, we complained bitterly at the time about the damage unsustainable logging was

1 See extensive early analyses available at ACM Highlights (cifor.org); and most recently, described in detail in the collections edited by Colfer et al. (2022) and Colfer and Prabhu (2023); here the focus is on a comparative study with the CFLRP.

2 The term, Collaboratives, is widely used, within the USFS and elsewhere, to describe a variety of collaborative restoration efforts. Here we use the term only with reference to our focus, the CFLRP Collaboratives, i.e., projects that are funded under this programme alone. The CFLRP has funded 23 Collaboratives nationwide. As of 27 August 2020, there were 28 Collaboratives of all kinds, for instance, in Oregon and Washington states (personal communication, Lindsay Buchanan, US Forest Service, 26 August 2020).

doing to those forests and to local communities – in Cameroon, Indonesia, Brazil, the US, and elsewhere – and we worked on developing an approach we hoped would result in SFM.[3] Our concept of SFM included the idea that logs and non-timber forest products (NTFPs) would be harvested at or lower than the replacement rate of the desirable species. We imagined the forests would be maintained, hopefully improved, and, insofar as SFM was realized, there would be no need for the restoration we now find ourselves struggling to bring about. The link to restoration was strengthened in these contexts because of the usual 'tradition' of granting communities rights to manage forests that were already being degraded (to varying degrees). Some 'restoration' was hoped for, even then.

Now, in 2022, we have a different world, one in which many of the beautiful forests we visited in the developing world have been converted to large-scale oil palm and fast-growing pulp wood monocultures, pioneer agricultural fields or even mining sites. In the western United States, forests are burning. Restoration is now front and centre on the international agenda.

This Occasional Paper, in an effort to contribute to the implementation (or adaptation) of global restoration goals in a more just and people-centred way, examines and builds on our own experience. We focus on two collaborative approaches, one initially to SFM and the other explicitly to restoration, which we hope, together, can improve our capacities to restore forests while strengthening communities.

1.2 Growing recognition of the importance of collaboration

The large hectarages considered globally for restoration have been alluded to above. Erbaugh et al. (2020) argue that "the success of global forest restoration critically depends on prioritizing local communities." We agree.

Meanwhile, over the past two decades, there has been increasing recognition that working collaboratively with various stakeholders is necessary if we hope to halt or reduce forest degradation and loss, while successfully reforesting. Butler and Schultz (2019a), for instance, maintain that:

> "Collaboration in forest management in the United States and globally has become more than just a trend; it has become ubiquitous…. The anecdotal, case study, and survey-based evidence overwhelmingly indicates the value of collaborative governance for leveraging resources, promoting sustainable management, and supporting participatory approaches for managing social-ecological systems."

Similar sentiments are reiterated by authors in the collections by Mansourian and Parrotta (2018) and by Butler and Schultz (2019b), primarily for the United States; Galabuzi et al. (2014) for Uganda; and Pirard, Petit, and Baral (2017) for Indonesia. Numerous others prescribe approaches contributing to participation and collaboration, recognizing their importance (e.g., De Sy et al. 2018; Matuk et al. 2020; Macqueen and Mayers 2020); while others lay out challenges, including Delabre et al. (2020) and Mansourian unpublished (2020); Kusumanto et al. (2005) in Indonesia; Mutimukuru-Maravanyika and Matose (2013) in Zimbabwe; or Colfer (2013a) globally.

1.3 Rationale for comparing the two approaches

ACM evolved in the context of the global interest in SFM, seen in our CIFOR cases to include forest people's empowerment, voice, health and more. Prabhu, for instance, led our search during the mid to late 1990s, for criteria and indicators (C&I) for an SFM that included human well-being (CIFOR 1999). Our focus was on forest management units (FMUs) in tropical countries,[4] where we utilized three kinds of expertise: forestry, ecology and social science. We were stimulated to develop

3 This definition (from Forest Europe, also adopted by FAO) and others all emphasize the importance of maintaining access to forest products for people's future use (thereby including the function of restoration):

> "The stewardship and use of forests and forest lands in a way, and at a rate, *that maintains their biodiversity, productivity, regeneration capacity, vitality and their potential to fulfil, now and in the future*, relevant ecological, economic and social functions, at local, national, and global levels, and that does not cause damage to other ecosystems." https://www.pefc.org/what-we-do/our-approach/what-is-sustainable-forest-management (accessed 28 October 2022). [our italics]

4 Brazil, Côte d'Ivoire and Indonesia initially; later expanded, some by self-financing partners, in Austria, Cameroon, Canada, Gabon and the United States.

ACM at CIFOR in recognition that C&I *alone* were unlikely to make a significant difference for either people's lives or the forests in which they lived. We initially sought a way to use these C&I, or others more appropriate for particular contexts, to contribute to real world change. We hoped to improve forest management and the environment, while also enhancing human well-being (including empowerment) *and* conducting good research on the approach. Similar ideas had evolved in another CIFOR project, on devolution of forest management, led by Lini Wollenberg; these two fledgling ideas were put together into the ACM programme. The methods developed during that programme were then applied in three further programmes at CIFOR.

By 2000, we had developed our approach, secured funding (for 2 to 4-year periods) and established field teams in 11 countries, involving some 90 researchers/practitioners. Our focus was firmly on the micro-level, with a few tentative sorties upwards and outwards. We wanted to demonstrate the relevance of local communities' knowledge, motivation and goals for sustaining development or conservation efforts; and we wanted to test the collaborative learning approach we were proposing.

In the 2010s, others began using ACM. Here we refer to three other CIFOR projects: (1) the CAPRI (Collective Action and Property Rights)[5] project, focused on tenure and governance; (2) the Landscape Mosaics programme, which was stimulated by the then-burgeoning interest in landscape approaches;[6] and (3) a project that used ACM in Nicaragua and Uganda to address gender inequities and SFM (here called ACM-Gender).

Twenty years after the ACM approach was developed, in 2020, Colfer invited the 90 researchers initially involved to share what they had learned in the intervening two decades that might help move the ACM concept forward (or abandon it). The result is two collections documenting their experience (Colfer, Prabhu, and Larson 2022, and Colfer and Prabhu 2023 (in press)). A central finding is the critical need for still-closer ties between forest communities and broader-scale actors – *not* that we should abandon the local, but rather that we should also strengthen the (upward, outward) links. Without that, we have seen surrounding landscapes taken over by more powerful actors and converted to non-forest uses – again and again – even when local actors have managed to protect their own adjacent lands.

In 2009, the Forest Landscape Restoration Act was passed by the United States Congress, establishing the Collaborative Forest Landscape Restoration Program, managed by the United States Forest Service (USFS). This programme was designed to "encourage the collaborative, science-based ecosystem restoration of priority forest landscapes" (Schultz and Butler 2019, 9). In 2010, ten landscapes were selected,[7] receiving initially USD 10 million; by 2012, USD 40 million had been appropriated for such projects and by 2013, 23 such landscapes had been funded.

In 2022,

> "A total of $31 million made available through a combination of annual appropriations and funding from the Bipartisan Infrastructure Law will fund an additional twelve projects in eight states in Fiscal Year 2022. Taken together, these landscapes cover 17 million acres – an area larger than the size of West Virginia. With three ongoing projects, the total number of currently funded CFLRP projects is now fifteen." https://www.fs.usda.gov/restoration/CFLRP/ (accessed 28 October 2022)

As this programme has evolved in practice, it shares many features with ACM (discussed below); yet it has been able to maintain itself in ways that

5 CAPRI was a two-year project (2005-2007), involving two ACM sites in Jambi, Sumatra, Indonesia. Whereas the first ACM programme focused on collaborative and sustainable forest management, CAPRI emphasized governance, gender and improving tenure security, while also contributing to better forest management within forested areas (see e.g., Komarudin et al. 2008a; Komarudin et al. 2012; Wiliam-deVries 2006).

6 The Landscape Mosaics project worked in Cameroon, Indonesia, Laos, Madagascar, and Tanzania between 2007 and 2010, attempting to implement a landscape approach. Although there was overlap in two countries – Cameroon and Indonesia – between the original ACM programme and this one, the villages involved differed, as did the degree to which the ACM approach was actually used (see also Colfer and Pfund 2011; Colfer 2013b).

7 Lindsay Buchanan, a USFS employee, explains the process: "Local Forest Service National Forest System units develop proposals for funding through a collaborative process. These proposals are reviewed by a Federal Advisory Committee of experts outside of the Agency in fire ecology, fire management, ecological restoration, rural development, woody biomass and small diameter tree utilization, fish and wildlife ecology, and adaptation to climate change. The Committee's recommendations are considered by the Secretary of Agriculture for final CFLRP project decision. Funding can only be spent on National Forest System lands for implementation and monitoring. Program funds can cover up to 50% of the costs" (personal communication July 2022).

A group of Indonesian collaborators at the intermediate (Kabupaten) level in March 2004.
Photo by Carol J. Pierce Colfer

ACM has not. We concluded that it behooves us to examine the similarities and differences between these programmes carefully, to see what each could learn from the other.[8]

1.4 Comparabilities between SFM and restoration

ACM was conceived to address issues related to SFM – including, in CIFOR's case, healthy forests, environments *and* human systems. Restoration was not initially highlighted or focused upon, as it is now. The inherent concern within SFM with *maintaining* forest cover into the future inherently includes something at least akin to restoration, in some cases actual restoration. Here we highlight three ACM examples that qualify as restoration, a term rarely used in these initial analyses.

The forests of Nepal are well known for both the national concern with restoration (due to fears of landslides and other environmental disasters) and commitment to community forestry. Much ACM work there focused on strengthening the social capital and knowledge about forest management within the Community Forest User Groups where the teams worked. This required strengthening the voices of the marginalized (women, lower castes) and developing more equitable benefit sharing from allowed forest uses. Specific environmental activities undertaken included "a bamboo nursery project, a forest protection system (involving passing of a stick among rotating guards), a community forestry nursery, planting of broom grass, fine-tuning of regulations on forest product harvesting" (Colfer 2005, 83).

Witness Kozanayi (personal communication, 26 October 2022) identified four ways that the ACM communities in Gokwe, Zimbabwe contributed to 'restoration':

1. A group of women, 'the broom grass group' changed their harvesting methods (from uprooting to cutting using sickles, an approach designed for and resulting in more sustainable broom grass).[9]
2. Effective monitoring of timber and NTFP harvests, leaving some parts of the forest time to regenerate after each harvest cycle.

8 See also Egunyu (2023, in press) and Kamoto et al. (2023, in press), who compare ACM with two governmental programmes, Uganda's Collaborative Forest Management, and Malawi's Participatory Forest Management, respectively, in somewhat similar fashion.

9 Standa-Gunda et al. (2003) document the broom grass issue and show early planning of the other activities; see also Vanclay, Prabhu, and Sinclair (2006) and Prabhu et al. (2003). Kozanayi et al. (in press, 2023) update happenings on these Gokwe sites.

3. Collective efforts to control forest fires which had destroyed forest biodiversity yearly, so regularly Kozanayi referred to it as "a ritual".
4. Careful harvesting of forest resources, including dead wood. Previously residents living outside the forest had only been allowed to access a few NTFPs. Consequently, there was a significant fuel load on the forest floor which fed veld fires and also masked growth of certain grasses and shrubs.

In Uganda, where one of the later ACM projects (focused on gender) was conducted (2011–1016), more explicit attention to restoration was seen. Mukasa et al. (2022, 113) for instance, describes on-farm activities there that

> …were intended to reduce pressure on forests while generating income for both men and women. These on-farm activities included the establishment of individual and group tree nurseries, tree planting in agroforestry systems and woodlots, improved coffee, banana and vegetable production for income and improved food security, water harvesting and intensive fish farming in water tanks."

These examples highlight just a fraction of the wealth of experience to be drawn upon. If we are genuine in our concerns both to restore forests biophysically and to empower local communities to protect their own needs and interests, an approach that builds on the experience of ACM and the restoration-focused CFLRP will be of value.

1.5 Examining ACM and CFLRP with future use in mind

Here we compare the approaches taken internationally by CIFOR's ACM teams (2000– 2016) with a more recent North American programme, the CFLRP (2010 to the present).[10] These programmes share many similar terms and goals ('boundary objects') and differ on some fundamental issues of implementation.

Colfer, who has worked in the Pacific Northwest (United States) as well as internationally, became interested in CFLRP as she encountered the works of authors such as Nuss and Davis (2015); Davis, Nuss, and White (2015); Butler, Monroe, and McCaffrey (2015); Hopkinson et al. (2017); Walpole et al. (2017b), and others. Recognizing many points of agreement between the CFLRP and ACM approaches prompted this more systematic comparison.

Our hope is that analysing and highlighting the similarities and differences between ACM (primarily international and micro in scale) and the US-based 'Landscapes'[11] (broader scale) can improve the design of new collaborative work and minimize future hurdles. Side-by-side comparison may also be helpful in picking and choosing particular elements to replicate, enhance or abandon. We believe there is sufficient value in both approaches to warrant continued use, experimentation and improvement. We begin with what we term 'similarities', recognizing that even these shared foci have been implemented in different ways.

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10 We draw heavily here on the excellent collection by Butler and Schultz (2019b), which provides recent assessments of this national programme, providing many details of its different manifestations. We also gratefully acknowledge vital input from Lindsay Buchanan and Bryce Esch, who reviewed and shared their hands-on experience of the CFLRP.

11 The term used within the CFLRP Collaborative for the regions they were trying to restore.

2 Similarities between ACM and the CFLRP Collaboratives

We identify six key 'similarities' in theory/terminology between these two approaches: (1) collaboration, (2) future scenarios, (3) monitoring and social learning, (4) adaptiveness, (5) third party facilitation, and (6) the centrality of trust. Practice is often somewhat different, nonetheless (see Table 1 for a summary).

2.1 Collaboration[12]

The idea of collaboration was fundamental to both approaches. The CFLRP Collaboratives were mandated by the US Congress to approach restoration of national forests in partnership,[13] though participants' commitment to the idea

Table 1. Similarities between the Collaborative Forest Landscape Restoration Program (CFLRP) and the Adaptive Collaborative Management (ACM) programme

	CFLRP	ACM
Collaboration	Focused on formal groups, with attention primarily at intermediate scale.	Focused on small community subgroupings at village/forest management unit (FMU) scale.
Future scenarios	Recognition of importance of shared visions, but less consistent implementation; strict adherence to CFLRP's restoration mandate.	Routine determination of community visions, with comparative freedom to support communities pursuing such visions.
Monitoring and social learning	Required by CFLRP; emphasis on scientific excellence, often by external actors, with recognition in some places that informal monitoring with communities helped develop shared visions and trust.	Initial monitoring focused on Criteria & Indicators, but this morphed into more qualitative, reflective approaches in many sites; monitoring conducted within communities, aided by ACM teams, emphasis on simplicity and practicality.
Adaptiveness	Time lags were a significant constraint in using lessons in the sites where monitoring was conducted, though some utility elsewhere was anticipated.	A focus on simple indicators and qualitative reflections reduced the time lags, so findings were often immediately usable.
Trust	Recognition that trust among collaborators was important grew.	Concern was initially with 'developing rapport'; the importance of trust also grew rapidly within ACM teams.

12 Although the ACM team philosophically favoured collaboration/participation, we understood the legitimate concerns some partners raised: Porro (2001) examined the involvement of people in Brazilian Amazonian forests, which were an integral part of their ordinary daily lives. She argued that talking about 'participation' in that context didn't really make sense. It implied that others might join in managing, perhaps taking directive roles, key elements of people's personal lives. Rice (2001) also resisted the idea of shared management of the forests that the Ikalahan (Philippines) had managed well on their own.

13 The legislation specifies collaborative approaches, defined as a process that "includes multiple interested persons representing diverse interests and is transparent and nonexclusive."

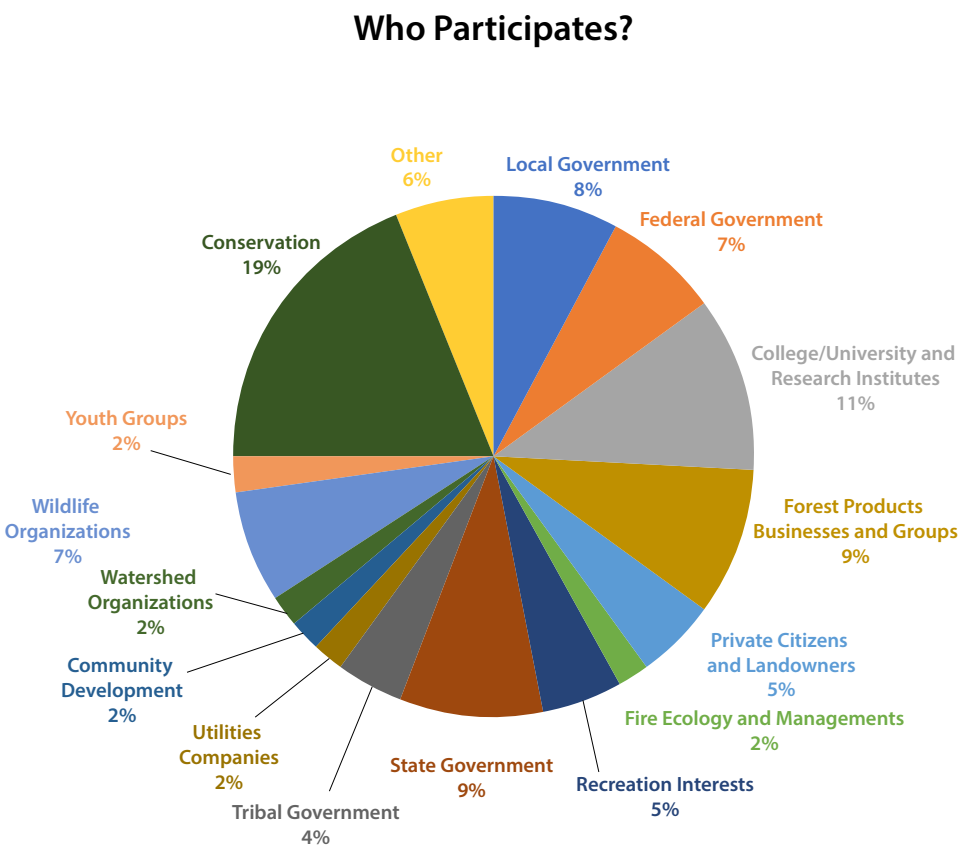

Figure 1. Who participates in CFLRP Collaboratives
Source: USFS (2020)

varied from project to project. The USFS was the prescribed implementing agency all over the country, with final authority and accountability (discussed below).

But the question of *who* should be collaborating, and in whose interests, have proven to be key axes of differentiation between the two approaches. Mansourian (2018b) on CFLRP and Colfer et al. (1999) on ACM both emphasize the importance of such choices but base their discussions on differing assumptions and differing contexts. Participants in the Collaboratives tended to be members of formal institutions,[14] (many at grassroots level), though all the Collaboratives invited a variety of stakeholders to join in their planning (see Figure 1); and most involved some subset of non-USFS partners, to varying degrees, in implementation and monitoring.[15]

Emerson and Nabatchi (2015) found four elements generally to be key in maintaining collaboration: resources, knowledge, procedural and institutional arrangements, and leadership. Ryan and Urgenson (2019) likewise found these useful for the Collaboratives, and as such they represent useful issues for comparison. Although all four are relevant in comparing the two approaches, in this section we focus only on the latter two (see below).

14 Walpole et al. (2017a; 7) note that "the general public was not very involved in decision making in any of our [three] locations". They describe typical stakeholders in Collaborative partnerships as

> "federal and state land management agencies, local industry representatives, environmental nongovernmental organizations, and public interest groups such as recreation organizations and homeowners associations (Wondolleck and Yaffee 2000; Margerum 2011)." (p. 2)

15 Butler, Monroe, and McCaffrey (2019, 161) conclude that "while the US Forest Service has had extensive experience in collaboration, much collaborative practice to date has focused on the planning phase" — a phase not included in Collaborative funding. Categories of participants in all the Collaboratives are listed in Butler and Esch (2019). Bergemann, Schultz, and Cheng (2019, 185) report, for the Uncompahgre Plateau Collaborative in Colorado, that "Despite the strong participation of stakeholders in planning efforts, several interviewees reported that there was less involvement from stakeholders as the project transitioned into implementation." They also note these community-based stakeholders' significant involvement in planning in the Unc Mesa and Escalante projects.

The ACM team was also fundamentally committed to collaboration. Leaders and team members; emphasized the importance of inclusivity (involving all significant stakeholders in decision making about local forests, Wollenberg, Anderson, and Edmunds 2001; Wollenberg, Anderson, and Lopez 2005), from an equity standpoint. This commitment was based on both ethical and pragmatic considerations.

We were also convinced that each context differed both socioculturally and ecologically; and that real sustainability would depend on a mechanism for learning about that context and developing solutions that genuinely fit there. Without good collaboration, we considered such knowledge would be very difficult to obtain. We, like so many others (e.g., Parrotta and Mansourian 2018), did not believe that a cookie-cutter approach with standardized solutions would work in either good forest management or restoration.

The commitment to collaboration within the original ACM research and the subsequent CAPRI project was widely shared among team members. In CIFOR's Landscape Mosaics programme though, this was not the case (see Colfer, Andriamampandry, et al. 2011a) for an analysis of the collaborative shortcomings within this programme). Most fundamentally, project leadership and donors were unwilling to trust community members to make sensible decisions (trust is discussed below).

A group of Indonesian women collaborators in the village of Baru Pelepat (March 2004).
Photo by Carol J. Pierce Colfer

Indonesian official visiting the community of Baru Pelepat (March 2004).
Photo by Carol J. Pierce Colfer

Although within ACM, we espoused a broad team philosophy minimizing leadership based on hierarchy, the degree to which we succeeded varied. Our approach to leadership within the core CIFOR team (which focused on the *research* elements of the programme) involved recognition that different individuals could assume leadership roles at different times. Although Colfer was the formal leader and responsible to CIFOR, most team members agreed with her in thinking that we could obtain greater motivation and buy-in from team members if their own leadership capabilities were recognized and used. We also tried to use this same approach with in-country ACM teams, as well as among community participants (who together *implemented* the ACM approach), with varying degrees of success. The research teams tried to be internally consistent in that both hierarchy and original proposals were less important than

learning; and that for certain issues or contexts particular people were recognized as leaders based, e.g., on special knowledge or management skills, regardless of formal position.

In our efforts to establish procedures and institutional arrangements, many sites divided participants into smaller subgroups, as was done among some Collaboratives (discussed, e.g., in Ryan and Urgenson 2019). The ACM approach aimed for greater equity in participation; this often reduced conflict and gave voice to less powerful individuals/groups in a particular context. In Nepal, McDougall et al. (2010), for instance, found significantly greater opportunity for marginalized individuals (women, lower castes) to speak their minds in the smaller, hamlet-based meetings that evolved in the collaborative process than had been the case in the previous community-wide meetings, which had been dominated by elites.

Cronkleton (2005), by separating men from women in Bolivia, was able to obtain a clearer vision of differing community preferences than had been possible when men and women met together. Women, as in many places, were reluctant to speak up in mixed gender groups. Prabhu found that in Zimbabwe, the team was able to get far better collaboration from women once they added a woman researcher to their team (see e.g., Mutimukuru-Maravanyika 2010; Nyirenda and Kozanayi 2007; and Vanclay, Prabhu, and Sinclair 2006, for accounts of ACM processes in Zimbabwe).

Prabhu and the African teams he supervised found that such discrepancies in power could have wide-ranging adverse impacts on a team's ability to instil a collaborative management culture/regime. At one site in Malawi, the absolute power exercised by a traditional leader – seemingly interested only in his own benefit – completely negated the work of community groups, whereas at another nearby Malawi site, in an area where power disparities were less extreme and external facilitation was better, the co-learning action groups were able to develop considerable management momentum.

Field teams worked with communities to develop various ways to institutionalize their processes. In Zimbabwe, Chahweta and Mandondo (2008) discuss their emphasis on developing bylaws for conservation; Mutimukuru-Maravanyika et al. (2008) reflect on their establishment of user groups, training activities and their partially successful attempts to insert an ACM process into the Forestry Commission (within a context of near-civil war). In Nepal, McDougall's team worked closely with the existing Community Forest User Groups (CFUGs), instituting a tiered decision-making process which held significant equity gains for the marginalized (responding also to the Forest Department's concerns about equity; see e.g., Dangol 2005). In the CAPRI project, multistakeholder meetings were regularized, bringing officials from the district (*kabupaten*) together to harmonize their policies toward communities' priorities; and in nearby Baru Pelepat, also in Jambi, links were strengthened with NGOs that could continue to help the communities as they strove to obtain legal rights to manage a nearby conservation area after project funding ceased (see Yuliani et al. 2023 (in press)).

Crucial differences in ACM and CFLRP Collaboratives' approaches to collaboration include:

- the scale, with most initial ACM work conducted primarily at the village or forest management unit level with community members,[16] with secondary attention upwards to higher levels. The CFLRP Collaboratives meanwhile were focused on an intermediate scale,[17] primarily working with individuals involved in formal organizations (whether government, industry, NGOs, etc.) and focusing their efforts on larger landscape units.
- Greater concern within ACM than in the CFLRP Collaboratives to involve a broad spectrum of community members (gender, ethnicity, occupation, caste, etc.), seeking

16 ACM work in Cameroon, by contrast, began at the national level, identifying six 'policy domains', and working down toward lower levels (see the collection by Diaw et al. 2009; Diaw, Aseh, and Prabhu 2009; Diaw 2009 and Neba 2009). This tighter integration with central governmental policy was also evident in the Landscape Mosaics project, the latter with less success (see Colfer, Pfund, and Sunderland 2011c). Wollenberg et al. (2007) discuss similar 'muddling' problems in Malinau, another Indonesia site.

17 In CFLRP, "Landscapes varied by size ranging from the original proposal of 130,000 acres on the Deschutes Collaborative Forest Project to the expansive 2.4 million acres of the Four Forest Restoration Initiative" (Butler, Monroe, and McCaffrey 2015, 24). One USFS interviewee in the Walpole et al. (2017a) study describes the relevant population for his/her Collaborative in the Pacific Northwest as 250,000 people.

intersectional equity. See Magerum (2019) for an informed critique of the CFLRP Collaboratives on this issue.

2.2 Future scenarios or visioning

Many authors recognize the value of shared visioning processes (see, e.g., Sayer and Boedhihartono 2018). Defining such aspirational goals is important in being able to evaluate the degree to which subsequent steps in an adaptive process succeed or fail. Both ACM and those involved in CFLRP Collaboratives have recognized the importance of stakeholders coming together to agree on, or at least develop complementary visions of, a future to which they aspire. In the case of the CFLRP Collaboratives though, these were focused tightly on forest restoration (as mandated by the legislation) and constrained by US Forest Service and other federal government policies.

A training program for intermediate level forest stakeholders regarding a visioning tool – near Amani Nature Reserve in the East Usambaras, Tanzania (April 2008).
Photo by Carol J. Pierce Colfer

Ryan and Urgenson (2019) and Toman, Walpole, and Heeren (2019) emphasize the importance of shared visions among stakeholders within the Collaboratives. The concept of shared vision in this US context relates to the kind of restoration that the groups considered desirable – an issue that was contested in many areas. Toman et al. (2019, 117) conclude,

> "Despite the emphasis on social, economic and ecological outcomes in the guiding legislation that established the CFLRP, our analysis found that ecological aspects of restoration are emphasized to a greater extent than associated social or economic considerations."

Schultz and McIntyre (2019, 196), in a formal evaluation of the programme, refer to several studies showing that "…community-based forestry groups demanded greater space for participation with the US Forest Service in defining the objectives of forest management in specific contexts (Cortner and Moote, 1999; Cromley, 2005; Maier and Abrams, 2017)." – a sentiment Colfer also found in Bushler Bay, Washington (a pseudonym) in 2017 (as well as in her 1970s research there). Butler and Esch (2019, 24) acknowledge that "One of the key challenges [in programme development] was that CFLRP funding could not be used for planning…", another serious impediment to developing shared visions. On a more positive note, Bergemann, Schultz, and Cheng (2019, 185) discuss the development of 'principles' by stakeholders in one of the Collaboratives, noting that these "…helped to ensure that their vision for the landscape would be carried into implementation."

Within the ACM process, the development of a shared vision, which we referred to as "a star to guide you by" (see e.g., Evans et al. 2006; Wollenberg, Edmunds, and Buck 2000), was a key early step in the process. But the realm of allowable futures was much broader. As CIFOR projects, we needed some connection to the forest, but otherwise, the vision and steps to get there were quite open. Activities were evaluated by the degree to which they progressed toward that locally defined star; the possibility of altering the vision

was also acknowledged, as new information came in, or as life changed in a particular context.

ACM field teams approached this task in a variety of ways. Hartanto et al. (2003) describe using workshops and small group discussions among stakeholders in the Philippines to identify people's desired futures. There, participants first drew pictures together of their ideal world. These broad images were then made more concrete and practical by using locally developed C&I, which in turn would allow them to better monitor their progress toward such visions.

Cronkleton (2005) describes a two-day workshop in Salvatierra, a village in the Bolivian Amazon. In developing future scenarios, his team began with the guided imagery described by Borrini-Feyerabend and Buchan (1997). Participants were invited to relax, close their eyes and imagine a period five years hence, when the forest management plan would have evolved to their complete satisfaction. The participants were then split into smaller groups by gender and age, which discussed and produced shared images of ideal futures. These in turn were shared among the subgroups and further discussed. Fascinating differences between men's and women's visions emerged; and the process resulted in what was clearly a more equitable set of conclusions and steps forward.

In Zimbabwe, the ACM team was initially dismayed at the passive attitudes of community residents. They opted to make use of ideas from Paulo Freire in a workshop entitled Training for Transformation. A specific vision or map was not created; instead the team facilitated several analytical exercises, from questioning existing community ethnic and gender norms, to the value of community dialogue and diversity in achieving shared goals, to playing a game (the game of squares) illustrating the values of collaboration and information sharing among forest users. Similar processes were later useful within the smaller forest user groups for defining their own 'guiding stars'. See Mutimukuru, Nyirenda, and Matose (2005b).

Differences between ACM approaches and those of the Collaboratives revolve around these two issues (issues that would be even more complex at broader scales):

- The comparatively minimal, externally-determined constraints on ACM researchers allowing for creative and proactive responses to community wishes for project direction and goals.
- The more explicit and consistent ability of ACM field staff to explore, document and incorporate community hopes for the future into project planning and implementation.

2.3 Monitoring and social learning

Holling (1978), Walters (1997), and Walters and Hilborn (1978) were early proponents of adaptive management (without a collaborative element) – a process that incorporates monitoring and social learning within it. Others who wrote about the subject more recently and influenced the ACM programme directly include Stankey and Clark (1998); Stankey and Shindler (1997); Hilborn and Walters (1992), and particularly Lee (1993, 1999).[18] These authors were thinking on a grander scale, about policy experiments – e.g., the management of the Columbia Basin bordering Oregon and Washington – from which we could learn and thereby improve future policy and management. Holling and Lee are both also cited in Butler and Schultz's book on the Collaboratives (2019).

In 1998, Prabhu discovered Lee's 1993 book, *Compass and Gyroscope;* and together he and Colfer added the 'collaborative' element, building on Lee's ideas for their own approach. Wollenberg and Louise Buck (of Cornell University), working on a parallel CIFOR project on devolution, were phrasing their collaborative element as '*social* learning'.

Both approaches, ACM and the Collaboratives, expressed similar ideas about learning – both obviously influenced by the above-mentioned theorists. Colavito (2019, 150), for instance, in discussing the Collaboratives, says: "Collaborative forest restoration is inherently a learning process." Cheng, Aplet, and Waltz (2019, 119) summarize

18 Other scholars whose work influenced our thinking included Axelrod and Cohen (1999), Waldrop (1992), and still early on, Gunderson and Holling (2002). Fuller documentation of early influences is provided in Colfer, Prabhu, and Larson (2022).

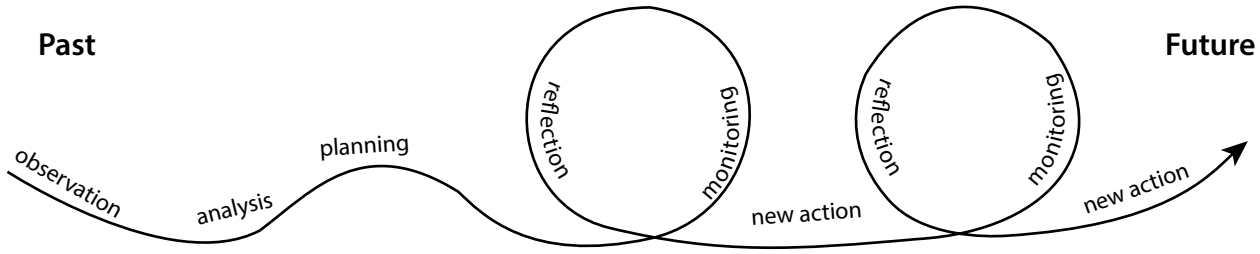

Figure 2. Participatory action research process

the perspective of the Collaboratives (for which they reverse our acronym, calling it 'Collaborative Adaptive Management', or CAM):

> "In principle, CAM engages all interested parties in a continuous cycle of setting goals, identifying assumptions and uncertainties, implementing a range of management actions, monitoring the effects of actions, and evaluating the need for changes of goals and management actions based on monitoring results."

A similar view is also expressed in several of Butler's writings about this programme (e.g., Butler, Monroe, and McCaffrey 2019).

We took the same sort of approach in ACM, regularly representing the process we proposed with the 'worm' (most recently reproduced in Mukasa et al. 2022, 108); see Figure 2).

We initially assumed that indicators would play an important role in the needed monitoring for this approach,[19] as it did in many contexts. See for example, Hartanto (2007) and Hartanto et al. (2003) for the Philippines; McDougall, Khadka, and Dangol (2007), McDougall et al. (2010) and McDougall et al. (2009) for Nepal; Kamoto (2007) for Malawi; Cunha dos Santos, Stone, and Schmink (2007) for Acre in Brazil, and others who found indicators helpful.

But differences of opinion emerged. Whereas Pandey (2002) was enthusiastic about indicators, which he reported prompting friendly, intra-community competition toward better community hygiene, Paudel and Ojha (2007) disliked them, reporting difficulties both explaining the concepts of monitoring and indicators to, and getting agreement about them among, Nepali villagers. Pokorny, Cayres, and Nunes (2007) also complained about difficulties with the approach in Parà, Brazil.

Meanwhile a stronger emphasis on more qualitative monitoring was gaining ground in other circles. Buck and Wollenberg's interest in social learning has been mentioned; while Kusumanto (in Indonesia) and Mutimukuru-Maravanyika (in Zimbabwe) had studied at Wageningen where this had been an important topic of study (e.g., Leeuwis and Pyburn 2002). Collaborative monitoring evolved differently on different sites, but was generally effective in routinely assessing progress toward local goals.

Multi-party monitoring was mandated in the legislation for the CFLRP Collaboratives;[20] and quantification of indicators is generally highly desirable within the US Forest Service. Although collaborative monitoring was envisioned within that programme, it seems to have taken several forms. A common one has been a rather informal approach – despite the strong commitment

19 See Guijt (2007) for fuller coverage of monitoring in the ACM programme.

20 The fact that formal mandates and field practices do not always align is reflected in observations by Egunyu (2023, 233) about Uganda's formal programme:

> "ACM-like features are more obvious in the CFM [Collaborative Forest Management programme] implementation than in descriptions of the CFM approach and legislation. These features, as applied while implementing CFM in Uganda however, included learning, some empowerment and developing a vision – much like ACM. These elements were not highlighted as central by the NFA [National Forest Administration] to CFM practice, as they had been among ACM practitioners and theorists. Yet, many of the quotations suggest that learning, empowerment, and shared visioning independently evolved in the Ugandan context."

An American logger in Bushler Bay, Washington, USA, examining his privately owned stand (June 2017).
Photo by Carol J. Pierce Colfer

within American science to quantification[21] and a widespread distrust of citizen involvement among many forestry professionals.[22] Butler, Monroe, and McCaffrey (2019, 169) found that the most substantive involvement of communities in monitoring was via informal field visits with USFS personnel. They note that

> "…at the time of our interviews, more than five years into the program, no landscape collaborative had reported completing systematic monitoring to the point where data was being fed back into models to adjust management strategies."

These authors continue by pointing out that joint field trips were performing a significant part of the monitoring activity that *was* underway: "They were collecting data, albeit informally".

Based on a review of 23 CFLRP Collaboratives in 2019, Esch and Waltz (2019) concluded that whereas local-level monitoring was fairly common, the degree of landscape-level monitoring was disappointing, both in terms of quantity and quality. They identified a range of constraints, including time lags, insufficient technical expertise, leadership and management shortcomings. Demeo et al. (2015) describe a serious and substantive form of collaborative monitoring in four of the Pacific Northwest Collaboratives, one in which all stakeholders appeared to participate fully. They emphasize the importance of having "full ownership by members throughout the process, timely reporting in clear language, and full engagement of all decisionmakers" (Ibid, p. 12).

As in ACM, the Collaboratives found informal interaction among stakeholders to be crucial, as Demeo et al. 2015, 170) explain:

> "On the Uncompahgre [a Collaborative], participants went on camping trips together to collect monitoring data and started to grapple with value differences. Stakeholders and agency staff learned that the joint monitoring process did more than just expand the monitoring data available; it also helped build relationships and enabled discussion of different social values and perspectives. Both agency staff and collaborative members of the group described this experience as a 'game changer' as it created a shared understanding and started to forge bonds of trust".

Another element, often ignored, represents a potentially valuable link to social learning and adaptation: various kinds of local and indigenous knowledge (as identified by several contributors to Mansourian and Parrotta 2018 and recognized by most anthropologists). Indeed, the intimate interaction with forest communities, anticipated by CIFOR's ACM framers, was partially intended to incorporate such knowledge, though this was not as fully realized as hoped.

Within the Collaboratives, the field trips mentioned by several authors in the Butler and Schultz (2019b) collection, surely allowed some sharing of local knowledge as part of informal

21 See Colfer (2021) for an analytical discussion of global (especially American) scientists' views, which commonly link masculinity and quantification.

22 Though students of the Collaboratives are very aware, as are many participants, of the importance of trust for effective collaboration (most fully addressed in Stern and Coleman (2019).

interactions. Ryan and Urgenson's (2019) article suggests an emphasis more on enhancing locals' understanding of science and 'collaborative capacity' than scientists' acquisiton of local knowledge (as do Esch and Waltz 2019). The high proportion of members of formal agencies and action/interest groups vis-a-vis the number of ordinary community members on the collaborative committees and among the partners (e.g., Walpole et al. 2017a) makes the availability of much of this knowledge improbable. The lack of reported attention to community equity issues (gender, age, ethnicity) also suggests that much local knowledge was untapped.

Key points here include:

- Strong recognition of the value of shared learning under both Collaborative and ACM approaches.
- Greater and more systematic and diverse participation by regular community members in monitoring in ACM.
- More attention to local knowledge in ACM, and to formal scientific knowledge in CFLRP Collaboratives.

2.4 Adaptation

The purpose of monitoring and social learning, of course, is to contribute to adaptation; to altering current policy, practice and understanding as needed, so that local systems can adapt to changing circumstances and/or improve current conditions. As noted above by Butler et al. (2019), substantive use of monitoring information from the Collaboratives had still not been incorporated five years after the projects had begun; and what incorporation appeared to be underway was reported as informal and ad hoc. Esch and Waltz (2019) report continuing problems with landscape-level monitoring, let alone incorporation into decision/policy making.

Butler, Monroe, and McCaffrey (2019) provide a figure, which emphasizes the importance of feedback of information from monitoring to adaptive management (including prioritization, treatment enhancement activities, and qualitative field reviews). However, for the Collaboratives they studied, they concluded that,

The women of Baru Pelepat involved in the creation and marketing of handicrafts made from NTFPs, with their facilitators (March 2004).
Photo by Hasantoha Adnan

> …the time lag between data collection, analysis, and interpretation in relation to implementation means that results may not come in until the projects are completed. These monitoring efforts are more likely to inform strategies in the next landscape rather than within current landscape boundaries." (p. 174)

Demeo et al. (2015), on the other hand, outline a process that did allow feedback directly into the management process in four Collaboratives in the Pacific Northwest. Cheng, Aplet, and Waltz (2019) identify another issue: There was often a gap between those identified as collaborators and those who implemented the planned activities. For instance, "…implementers were often unaware of a collaborative vision for restoration" (p. 128).

ACM, working on a smaller scale, was able to incorporate monitoring findings effectively into local-level management. The following examples show the kinds of successful, small-scale adaptation based on monitoring toward community-specified goals that occurred in many ACM sites:

- In Nepal, the management-related decision making about community forests shifted from a central committee of elite men to a nested process where a greater variety of community members (genders, castes, wealth and land ownership categories) were freer to express their opinions and pass them along to higher levels in the Forestry Commission.
- In Jambi, Indonesia, ACM learning and collaborative action resulted in a corrupt leader who had been making natural resource related decisions benefiting himself and his family being brought to justice. In the same community, women were able, by working with higher-level political actors, to develop marketing strategies for their handicrafts made from non-timber forest products.
- In Zimbabwe, similarly, groups of women built on a field experiment, which convinced them to harvest their broom-making fibres using a more ecologically-sustainable method. By working with higher-level bureaucrats, they were also able to expand their markets for these brooms.

Several strategies were used to link the monitoring with management. One element was the use of recurring assessments of progress during the monitoring process. Some, as in Nepal, used formal indicators (e.g., Dangol 2005); others, as in Jambi, used qualitative 'reflection' meetings (e.g., Kusumanto et al. 2005). Both followed the steps specified in the 'worm' (Figure 1). Good, consistent facilitation, discussed below, was also key in all cases.

Another approach used participatory modelling (Vanclay, Prabhu, and Sinclair 2006), most fully documented in Zimbabwe, but also used to advantage in Cameroon and Indonesia (see Vanclay, Prabhu, and Sinclair's special issue 2003). Such modelling was useful for improving understanding of contexts (by locals, as well as outsiders), providing viable entrées for making management changes, assessing success, and gaining agreement about altering ways forward.

A final strategy involved networking with outside actors. In all research sites, we strove to involve government, NGO and/or academic collaborators, who proved to be helpful in bringing about the changes community groups sought. Each country had a 'steering committee' of such individuals; and we had a global steering committee to advise the programme overall. These groups were important for bringing broader-scale concerns into the work we did with communities (e.g., more equitable distribution of forest benefits in Nepal; forest protection in Zimbabwe; more sustainable timber management in Bolivia; development of timber cooperatives in the Philippines). Whereas community needs and plans were paramount, knowledge of these other, broader-scale concerns represented opportunities that sometimes coincided with, or complemented, community interests. Win-win situations were not as rare as some suppose.

Particularly in the later ACM efforts (CAPRI, Landscape Mosaics and the ACM-Gender work in Uganda),[23] considerable attention was devoted to more mid-level actors. Where we were able to persuade these individuals and groups that working with us was in their best interests, they were very helpful in bringing about the changes the communities sought. However, such efforts proved more conflictual than had those at the

23 Mukasa et al.'s (2022) study, which describes the ACM process in Uganda, was complemented by a nationwide comparison of ACM and non-ACM sites (Bomuhangi et al. 2022), which produced national policy recommendations based on the research – though like the CFLRP experience, this appears later than would be desirable.

community level (see Feintrenie and Martini 2011, for examination of the specific difficulties in Bungo District in Jambi, Indonesia; see Colfer, Pfund, and Sunderland 2011c; Colfer et al. 2011b, for generalizations from the Landscape Mosaics projects). Whereas national and local-level actors did not by and large react to the CIFOR teams as threats to their power and prestige, the mid-level actors, who had day-to-day responsibilities for and authority over the study communities and lands, often did.

Here, the important points are:
- Both approaches sought adaptation.
- ACM's much smaller-scale efforts were more successful linking monitoring to adaptive action.
- ACM developed useful methods for doing so at a small scale.

2.5 Third party facilitation

Both the Collaboratives' personnel and the ACM teams recognized the value of good, third party facilitation (see Hagmann et al. 2023 (in press), for fuller discussion of what constitutes good facilitation). The essential nature of such facilitation, with a position of neutrality (insofar as possible) was mentioned by several authors in the 2019 Butler and Schultz collection.

The roles Colavito (2019) attributes to 'boundary spanners' fulfil some facilitation functions. Boundary spanners, in her terms, are those individuals who facilitate boundary organization functions, such as convening stakeholders, translating various kinds of knowledge, facilitating collaboration to develop 'actionable information and products', and mediating interactions (see also Cheng, Aplet, and Waltz 2019).

Butler and Schultz (2019a, 227) note that

> "…third party facilitation was generally effective at helping stakeholders work through conflicts and keep strong communication processes between agency units and collaborative groups. Moreover, strong facilitation was associated with enhanced trust-building, accountability, and collaborative capacity (Stern and Coleman; Ryan and Urgenson, in this volume)".

The head of the Bushler Bay Ranger Station of the US Forest Service – Bushler Bay, Washington (June 2017).
Photo by Carol J. Pierce Colfer

Their findings with regard to the USFS, the implementing agency, also emphasize the "importance of strong leadership and adequate capacity" (Butler and Schultz 2019a, 204).

In both ACM and the Collaboratives, there were capacity issues, specifically in the lack of familiarity in some projects with collaboration and with the skills needed to bring it about (e.g., in ACM's Landscapes Mosaics programme; and Butler and Schultz 2019a). Both in the United States and internationally, projects have been dependent on boundary organizations of various kinds; for collaborative expertise, for access to scientific and other important information, for supplementary personnel and funding, and for creating opportunities for exchange among sites (as noted above under 'Adaptation').

Butler and Schultz (2019a, 221) note the dual functions of those involved in such projects: "Most [in the Collaboratives] faced capacity limitations trying to engage in the collaborative process while continuing to make progress on a demanding program of work to achieve restoration goals". Within ACM, teams were both mandated to facilitate community collaboration (an action component) while also observing what happened as they did so (a research component). In both approaches field researchers/facilitators were often stretched to the limit.

Although the ACM teams recognized the value of facilitation early on and built it into their research and implementation plans, our understanding of its vital importance – for catalysing the collective action we considered so central to successful ACM – only grew. Diaw, Aseh, and Prabhu's (2009) collection, for instance, includes several contributions showing the importance of facilitation, based on the Cameroon experience. Colfer later (2007) produced a manual, based on Indonesian ACM experience (and more broadly), to help the CAPRI teams perform this function more effectively. She emphasized many of the skills anthropologists use in conducting ethnographic research.

Key points include:
- Both approaches used and highly valued good interpersonal facilitation.
- In Collaboratives, facilitators functioned among representatives of institutions at an intermediate level (institutions that function on a larger scale), whereas ACM's facilitators operated primarily among individuals and small informal groups at the very local level.

2.6 Trust

Stern and Coleman (2019) write about the significance of trust in collaborative efforts. They propose four kinds of trust: *dispositional* (one's inherent orientation to trust or not to trust), *rational* (related to perceived competence, ability), *affinitive* (based on personal, qualitative, relational elements) and *systems-based* (the context and set of rules governing interactions) – also used in Liswanti, Tamara, and Arwida's (2023 (in press)) post-hoc assessment of an ACM-associated multistakeholder forum in Jambi (see below). Dispositional trust is something projects have little control over. But the other three all played important roles in the Collaboratives; and in the best examples, provided mutual reinforcement.

Several authors emphasized the importance of regular field visits in strengthening trust among collaborators. Butler and Schultz (2019a, 220) conclude that '…collaborative groups need to be organized in a way that ensures repeated and regular interaction among stakeholders over time" – as did ACM team members.

ACM activities were not analysed from this perspective at the time. However, we did recognize the key importance of trust between project personnel and the communities, between communities and other stakeholders, and among community members themselves – phrased more usually as 'rapport'. In retrospect, all four kinds of trust were visible in our sites as well. Our team members stressed their efforts at empowerment, reduction in conflict, building of social capital, and increased ability to work together – all dependent on a reasonable level of trust among participants.

One of Stern and Coleman's (2019) examples relates to the pre-existing collaboration that characterized many Collaboratives. In some cases, trust depended very strongly on personal relationships (affinitive trust); some Collaboratives had therefore not seen a need to develop structured rules and regulations to guide their interactions. This worked well so long as there was continuity of personnel, but when turnover occurred and these strong personal relationships were lost, the ability to perform as planned suffered. Schultz and McIntyre (2019, 205) found that

> "…the highest ranked internal barrier to success [in the Collaboratives overall] was staff turnover, with 77 per cent saying this was somewhat of a major barrier. Stakeholders said staff turnover undermined trust and slowed down projects."

Brown (2019, 157), a community participant in one of the Collaboratives, noted that "the high turnover of staff in the Forest Service is a substantial barrier to successful collaboration" (also noted by Butler and Schultz 2019a).

Similar issues occurred in some of the ACM teams, with staff turnover – though in no cases did ACM teams begin with the already fully functioning teams that some Collaboratives had available. In Jambi, Indonesia, for instance, the CAPRI project (Komarudin et al. 2008) strengthened a multistakeholder forum to involve bureaucrats from the various district-level institutions whose work had implications for forest management. We hoped that this group would support ongoing activities at the village level and expand similar activities to other areas within the District. Although we were unable to obtain ongoing funding for this work, the forum has been able

to persevere based on participants' personal commitments to the approach and to each other (affinity trust) and their recognition of the competence represented in their group (rational trust). See also Fisher et al. (2017) for a similar successful effort that built on system-based, rational and affinitive trust in Sulawesi, Indonesia.

Another, fatally-flawed example occurred in Ghana's planned ACM site – though this trust issue was between field teams and the research team, rather than between the community and the field team. One research coordinator, living in Cameroon, was intended to supervise both the work in Cameroon and that in Ghana. Cameroon had six sites within the country, occupying him fully there. Meanwhile, in Ghana, the field team leader we had hired was assigned a different job by his primary employer (the Forest Department), initially unbeknownst to us. The Ghanaian leader continued ostensibly as the 'responsible [and salaried] party' for some time, while making no progress carrying out the ACM tasks expected of him. Virtually nothing happened on that site.[24] This represented a shortage of system-based, affinitive *and* rational trust.

In most ACM sites, the facilitators considered the trust they developed with their communities (and to a lesser extent other stakeholders) to be central in their successes – though writing about 'trust' at that time was less acceptable within forestry than it is today. In Zimbabwe, levels of trust among community participants were so low that the team engaged an NGO to provide Training for Transformation (building on Paulo Freire's concepts), which involved a variety of tools to strengthen mutual understanding, acceptance, and – in a word – trust, among participants (Mutimukuru, Nyirenda, and Matose 2005a).

In our work in Zimbabwe, we had a similar problem in our team's interactions with the District Forest Officer (DFO). The community, the team and the DFO (who found the ACM idea appealing) had developed an excellent productive working relationship. That DFO died, however, and his replacement had little commitment to the ACM idea and gave other tasks priority, adversely affecting the activities the communities and the earlier DFO had planned.

Diaw and Kusumanto (2005), who compare ACM activities in Cameroon and Indonesia, document the lack of trust during their entry into their respective communities, and the methods they used to strengthen trusting relationships among original and in-migrating community members in Indonesia and between different ethnic groups and various officials in Cameroon.

Cronkleton (2005) describes a community meeting he facilitated in Bolivia that uncovered the lack of trust within marital relationships. Community women suggested that benefits from improved forest management (that went to the men doing the related work) based on ACM activities should be made public. This involved a solution to the lack of affinitive (and sometimes rational) trust between husband and wife; and a suggestion to create trust based on a systemic change, one that required greater transparency. The women expressed fears that their husband would spend money for the household on alcohol and coca.

All of the above 'similarities', except this last, trust, were explicitly addressed in both the Collaboratives and ACM activities; and trust was implicit in the activities of both and/or its importance was soon recognized. Despite the very similar narratives about these approaches, the ways the stories played out still differed significantly. Here we move along this continuum from similarities toward even greater differences between ACM and the Collaboratives.

24 The other site where nothing of ACM import happened was in Kyrgyzstan, where the very competent field researcher was stymied both by a change in his doctoral committee, and by the government bureaucrats who showed no willingness to devolve any authority to communities.

3 Points of differentiation between ACM and the Collaboratives

Table 2. Differences between the Collaborative Forest Landscape Restoration Program (CFLRP) and the Adaptive Collaborative Management (ACM) programme

	CFLRP	ACM
Purpose	Forest restoration, undertaken in a collaborative mode	Sustainable forest management (SFM) including forests, ecology and human well-being, undertaken collaboratively and iteratively
Funding	USD 40–80 million	~USD 1.5 million per global region (Africa, Latin America, Asia); ~USD 50,000/site/yr.
Project timelines	10 years renewable	2–4 years, with a few sites receiving additional funds after a gap
Data availability	Extensive high-quality quantitative data, with human data anonymized (e.g., census); significant constraints on gathering new, location-specific social data.	Contextual data usually initially minimal or non-existent; complete freedom to gather additional information as needed.
Decisionmaking authority	Although projects were planned by partners with help from the USFS, much decision making remained with the USFS because it retained legal responsibility for forest lands, subject to extensive and complex US forest-related rules and regulations.	With CIFOR's broad mandate to address human and environmental issues, ACM teams had near complete freedom to support whatever decisions and plans communities made; the only constraint being some link to forests, the environment and/or human well-being.
Prior collaborative action	Since planning for the CFLRP could not be funded under the programme, all participants had some experience together (planning their proposal if nothing else); many had a great deal.	Although sometimes ACM worked through existing formal groups, these were typically non-functioning; in other cases, new groupings were formed. In no case was there a long history of collaborative actions on which to build.

The differences between the two approaches may be even more instructive than the theoretical similarities, for identifying what we hope can work better than either in the future. Below we discuss the following seven topics: (1) purpose, (2) funding, (3) project timelines, (4) data availability, (5) decision-making authority, (6) prior collaborative action, and (7) inclusivity (see Table 2).

3.1 Purpose

An obvious difference, mentioned in the Introduction, is that ACM was designed to contribute to sustainable forest management (SFM) (to the benefit of both the environment and the people). The Collaboratives, on the other hand, were designed to *restore* forests, with some attention to the livelihoods of affected people.[25]

25 The balance between these two was a point of contention on many CFLRP sites (e.g., Walpole et al. 2017a).

Colfer with an old Kenyah friend, teaching her to wrap rice in Long Segar, East Kalimantan (March 2019).
Photo by Rinto (a teacher in Long Segar, East Kalimantan)

These two foci, 'SFM' and 'restoration', reflect both the fad-like evolution of global interests, as well as the progressive deterioration of forests generally in recent decades. Funding for CFLRP was developed by the US Federal Government, stimulated in large part by recurrent fires in the western United States, which continue to decimate huge swathes of land.[26] There was also recognition that greater citizen involvement in decision making related to land management was desirable in the eyes of the American public.

The purpose of ACM was initially to build on the findings of CIFOR's criteria and indicators (C&I) and devolution projects, to develop mechanisms to *bring about* SFM – again, with a strong emphasis on the human dimension, including empowerment, voice, tenure and more – rather than just assess SFM's absence. We were also responding to the lack of voice of communities in decisions about the forests in which they lived; and the recognition that different places and different communities had vastly divergent needs, desires and likely sustainability solutions. Similar motivations inspired the Landscape Mosaics and CAPRI projects, further stimulated by an interest in scaling up the experience.

Interestingly, these divergent purposes do not appear to have conflicted with the utility of the two rather parallel approaches.

3.2 Funding

The US Congress initially authorized up to USD 40 million for the CFLRP and ten US Collaboratives were selected in 2010, mainly in the western United States, with 23 Collaboratives active through 2019, each at least 50,000 acres (Schultz and Butler 2019, 10). In the 2018 reauthorization, the programme was authorized to receive up to USD 80 million, but Congress

26 Buchanan points out that Collaboratives were formed for other reasons as well (personal Communication, August 2020).

had continued to appropriate USD 40 million/ year or less.[27] There was significant expectation that these funds would be used in the activities that the groups had planned[28] and in monitoring their own activities.

This funding was unusual in its mandate for collaboration, its maximum 10-year duration (with one-time extensions), and the flexibility with which the funding could be used (within the realm of forest restoration) on locally-determined, landscape-scale spaces. Butler and Schultz (2019a, 219) note that "a key dynamic that stood out in CFLRP is the relative flexibility and ambiguity regarding collaboration in the legislation, which allowed groups to determine how best to navigate collaborative dynamics in their respective places". These authors also highlight the key role of long-term funding (2019a, 224).

ACM, on the other hand, relied on leaner budgets (up to around USD 1–1.5 million) amalgamated from various donors,[29] beginning in 2000. Eleven countries were selected, each with one to six sites. Some sites were in formal forest management units. Others were in public lands managed by or in some manner 'owned' by communities.[30] Such choices were determined by national partners in dialogue with ACM's coordinating researchers. We specified no prior size, so long as the area had recognizable boundaries. ACM funds were used to pay the costs of the researcher-facilitators involved in the teams, with very small amounts available for specific activities on site (cross-site visits, start-up costs, short-term consultants). The ACM research team took the view that in order to fully understand motivations and impacts of the learning, communication and collaborative processes underpinning ACM, it would be important to minimize economic incentives for changes in behaviour. We favoured instead facilitation of and support to planning, monitoring and reflection activities chosen in a participatory action learning mode. If these processes were to be successful, we reasoned, the groups concerned would adopt them only if local people perceived real benefits (tangible or intangible) in and of themselves. The subsequent CIFOR ACM projects were similar in scale to the small site-by-site ACM budgets.

Interestingly, we did at one point assess the level of financial investment against our perceived success of the original ACM sites, finding no logical connection between amounts invested and successful ACM – though no sites had significant financial resources, when compared to the Collaboratives.

3.3 Project timelines

The CFLRP was authorized for funding initially for ten years (2010–2019); and "The 2018 Farm Bill, which became law on 20 December 2018, includes a reauthorization of the Collaborative Forest Landscape Restoration Program (CFLRP) through fiscal year 2023."[31] Each CFLRP project is required to complete 15 years of monitoring.

As we developed ACM concepts, we recognized the need for 10-15 years to realize our goals, but we could only get funding for projects ranging from two to four years. Not only was the ACM concept alien within the forestry world where and when we operated – rendering us suspect – but even conventional projects were not usually funded for more than four years. A few sites managed to get further funding (Bolivia, Indonesia, Nepal), but always with an adverse gap, or relocation to a different site, between the first and second phases. The effect was a loss of personnel, interest and momentum.

The subsequent CAPRI (Komarudin et al. 2008b; Komarudin et al. 2012) and Landscape Mosaics (Colfer, Pfund, et al. 2011c) projects both attempted to upscale the process that had been so successful at the village/forest management unit level, working with district governments and communities. But these too suffered from short

27 https://www.congress.gov/bill/117th-congress/house-bill/2471/text

28 Planning was not included as an allowable expense within the Federal funding.

29 Donors included the Asian Development Bank, United Kingdom's Department for International Development, Eidgenössische Technische Hochschule Zurich, European Union, German Agency for Technical Cooperation, International Fund for Agricultural Development, International Tropical Timber Organization, Swiss Intercooperation, and United States Agency for International Development, among other partner contributions.

30 ACM was conducted in developing countries, mainly in the tropics, where land and forest ownership is/was usually contested – unlike in the United States.

31 https://www.fs.fed.us/restoration/CFLRP/; see also https://www.fs.fed.us/restoration/CFLRP/resource-library.php.

timescales (two and three years, respectively). Only the site in Jambi, Indonesia had ongoing external facilitation during the gaps in funding, undertaken by a collaborating NGO working from that province at their own expense. Even this very low level of involvement however allowed some of the planned activities to continue (e.g., the sale of handicrafts from forest fibres and the [ultimately successful] attempt to gain legal rights to manage a nearby forest the community wanted to protect). See Yuliani et al. 2023 (in press)) for the 20-year story of this site.

3.4 Data availability on research sites

This difference, between what was available to ACM and CFLRP Collaboratives, could not be starker. Research on American landscapes and communities always benefits from a plethora of mainly quantitative information, as did the Collaboratives. US bureaucracies routinely collect data and this is available to researchers. USFS data focuses on natural resources more than on communities. As Colavito (2019, 137) asserts:

> "[US] National forest management traditionally proceeded under a paradigm of scientific management, by which scientific information and technical training served as the foundations for agency decision-making."

There is also a great deal of anonymized data on communities (e.g., from the US Census Bureau). However, collecting new data about American forest communities is subject to a great many restrictions; restrictions which inhibit the kind of community-level collaboration that was possible, even necessary, within ACM.

Colfer has tried to gather information about American communities twice in collaboration with the USFS (once in Idaho on C&I, and once in Washington State on gender and rapid rural appraisal methods). If one wants to ask the same question in a community to more than nine individuals, one must get permission from the US Office of Management and Budget. In both cases, attempting to do so was discouraged by USFS collaborators, who said that it could take up to two years to obtain such permission. Although the intent of such restrictions is to protect community members from intrusive questioning, the effect is to deny them, or at least reduce, their voice in forest management. It also prevents the USFS from building on existing community knowledge and preferences – knowledge which could go far to reducing the level of conflict in American forests.

Information on forest communities and landscapes in developing countries is sparse or non-existent. In ACM communities, we might have had access to data on the population of the village, perhaps something about land holdings or wealth categories (all usually of questionable accuracy). The local Forest Commission or an NGO might have gathered a bit of information on subjects of their particular interest; but for the most part, we began 'blind'.

However, we were always free to develop surveys and use any legitimate social science methods to better understand the community with which we were working. One can decry the lack of concern by these governments to protect the privacy of their citizenry; but for collaborative work with communities, social research can (and in our experience, does) play an empowering function. The participants learn as we do about their own community; they gain the capacity that researchers on Collaboratives also considered important.

3.5 Decision-making authority

As noted earlier, there is variation with regard to the degree of USFS control within the Collaboratives. Many of the examples in the Butler and Schultz (2019) book emphasize such control, though the USFS's Buchanan disputes this conclusion for Collaboratives in her area, the Pacific Northwest (personal Communication, 27 August 2020). The USFS selected the Collaborative proposals (for a ten-year period) and retained responsibility for effective forest restoration. Collaboration with other stakeholders was mandated in the legislation. But the USFS retained ultimate authority and responsibility, leading to related tensions as the multistakeholder Collaboratives also claimed some authority (with less responsibility).

Christensen and Butler's (2019) analysis nicely summarizes the tensions between bureaucratic and collaborative accountabilities in the Collaboratives. The first issue pertains to the history of the USFS:

An elder in the village of Loa Loa in Ivindo National Park in eastern Gabon, angry at an official who represents decisions made elsewhere that adversely affect the village (2004).
Photo by Carol J. Pierce Colfer

> The US Forest Service was created during the Progressive Era when calls for efficiency, scientific management, bureaucratic organization, and democratic accountability emerged as the key organizing principles of the US Federal Government…" (Christensen and Butler 2019, 60).

USFS legitimacy "…relies on scientifically defensible actions under a hierarchical bureaucratic system which shapes its accountability practices" (Christensen and Butler 2019, 61). This history does not sit easily with collaboration. Collaborative group members generally acknowledged the USFS as the ultimate authority for decision making. But they were frustrated by staff turnover, bureaucratic procedures and capacity issues within the USFS, including a "lack of clarity in how the agency makes landscape-level restoration decisions" (Christensen and Butler 2019, 65).

ACM required project personnel to negotiate control with eleven different governments and multiple levels, though primarily with central governments, which generally had legal responsibility for forest management. But in the forests of developing countries, officialdom is often quite distant and uninvolved in day-to-day management. All sites had either traditional systems or other mechanisms that gave communities important roles in forest management. Governments were weak in governance, with little presence in many sites.

This meant that the initial ACM teams had considerable freedom to respond to community wishes. Our desire to follow this bottom-up course was strengthened by our conviction that a truly sustainable process would have to be sufficiently interesting to local people for them to continue after our project ended. Our collaborative groupings came up with their own visions and approaches to reaching them. CIFOR required that there be some link (however tenuous) to forests and human well-being within forests; and we listened to the concerns of national steering committees, inserting them where we could. But otherwise we simply facilitated the activities the communities decided upon, adhering to the 'worm' process described above. Communities

were the prime decision makers. There may be an unavoidable trade-off, or at least a balancing act, between the continuity that institutionalization allows, and the local decision making that is desirable for maintenance of local commitment and effort.

3.6 Prior collaborative action

All Collaborative groups that received the Federal grants had significant experience working together; this was partly because the legislation precluded the programme from financially supporting the planning process. This was an advantage for rapport building and ease of start-up, but was sometimes a disadvantage. In some Collaboratives, relationships of trust developed among partners to such a degree that there was no felt need to formalize procedures or agreements. When there was inevitable staff turnover, this lack proved even more disruptive than among more recently formed groups (likely to have recognized the need to formalize their procedures and decisions, Christensen and Butler 2019).

On the other hand, Bergemann, Schultz, and Cheng's (2019) comparative analysis of two Collaboratives in Colorado attributes greater success *with* prior collaborative involvement (also found by Nyirenda and Kozanayi 2007 in Zimbabwe's ACM team). The site which had a long-term partnership prior to the Collaborative functioned more smoothly, with greater trust in the Forest Service's implementation and leadership, than did the site where collaboration began with CFLRP funding. Another important difference is that activities on the longer-term site were initiated by communities and locally elected officials; whereas those on the site with shorter-term involvement were initiated and implemented by collaborating agencies and industry.

In all cases the ACM field teams established collaboration with community members as the movers and shakers. In some countries, the teams worked with existing formal groups (like Community Forest User Groups in Nepal or Resource Management Groups in Zimbabwe) earlier identified by governments, most of which were not functioning well or at all. In others (e.g., Indonesia, Bolivia), new community groups were formed specifically for ACM. ACM provided facilitators, usually from CIFOR personnel, local NGOs, or occasionally from communities. In all cases, the groups developed collaborative rules (from scratch or complementary to existing routines) for internal operation and relations with outsiders.

3.7 Inclusivity

Probably the most crucial difference among those listed here was attention to inclusivity. Although CFLRP legislation specified that the projects should be 'collaborative', exactly what that meant was unclear. It seems to have been interpreted to primarily involve people with jobs related to natural resources or formal community-based organizations. Davis, Nuss, and White (2015) and Nuss and Davis (2015) provide rare analyses of internal diversity among 25 Oregon-based collaborative organizations (some CFLRP Collaboratives). Seventy-five percent were men; two-thirds were over 50 years of age. Within the material we have found about the Collaboratives, almost no evidence exists of attention to individual community members, to the variation (gender, age, ethnicity, etc.) within communities, or to incorporating the variety of *local* voices into decision making.[32]

ACM teams were attuned to internal community differentiation from the beginning, and attended to it in meaningful ways. Action groups were often split by gender (to allow women to speak up in contexts where they were less likely to do so),[33] by age (where youth might be inhibited by their

32 Moseley et al., for instance, who studied community-based natural resource management in 11 Western states, did not report who exactly was involved in the 92 groups they studied. A search for the terms 'gender', 'women', 'age', 'youth' and 'ethnic', found no evidence thereof. There was an item in an appendix (Moseley et al. 2011, 20) indicating that 'Tribal policy' had been one 'strategy' used by 4% of the collaborative groups. We also find no evidence of such concerns in Butler and Schultz's (2019b) book on CFLRP, though an interviewee quotation in Walpole et al. (2017a, 5) mentions the likelihood that the views of a tribal nation among the partners in a Pacific Northwest Collaborative would differ from those of other partners.

33 Traditionally, women in the United States have also been reluctant to speak up in public, in mixed settings (Colfer 1977); though Colfer found a big change in this regard in her 2017 fieldwork in the same community in Washington State. Arora-Jonsson (2013) provides a telling analysis of the incompatibilities between formal forest managers and Swedish women's forest preferences and concerns; see also various works by Maureen Reed on Canadian forest women; or Norgaard (2007) on tribal and women's perceptions and how they differ from those of mainstream forest managers in California.

elders), and by caste, poverty or ethnicity where relevant. Teams were attuned to power differences that had the potential to silence particular voices in policy making or planning contexts. We used facilitation techniques that prevented dominant individuals from taking over proceedings; and field personnel learned skills to manage meetings and events to maximize sharing of perspectives. Different interests among different stakeholders could then be taken into account and built upon comparatively equitably. Besides the trust that proved so important with the Collaboratives, ACM teams recognized the value of *respect* for local knowledge, concerns, capabilities and goals.

Whereas analysts internationally recognize the importance of these intra-community differences (e.g., Rai, Bhasme, and Balaji 2018; Van Dexter and Visseren-Hamakers 2018), those looking at American forests have shown less interest. The value of local knowledge is also less recognized within the mainstream Unites States, despite being recognized in international treaties (e.g., the Biodiversity Convention), in scholarship about other countries (e.g., Lake, Giardina, et al. 2018a; Lake, Parrotta, et al. 2018b), and in studies of ethnic minorities (e.g., Turner et al. 2008; Turner 2006; Turner and Turner 2008, for adjacent Canada). The kinds of knowledge Colfer (2018) saw in Bushler Bay, Washington – among one of the two very different subcultures ('Locals') – is being lost; and has not yet been available to the USFS, due to lack of interest and personnel with relevant expertise. This respect, so necessary for collaborative management of forests, whether SFM or restoration, is absent.

Conclusions: Differences that make a difference

Our purpose in making these comparisons has been to determine what elements we should encourage in future attempts at collaborative and adaptive management. The Collaboratives and ACM share many similarities. We remain convinced that many of the shared elements are well worth retaining and indeed, expanding upon. These include the process ACM characterized as 'the worm'. That process includes visioning, monitoring/social learning, adaptation and reassessing, in an iterative manner – and appears to have been attempted in both programmes. Both made extensive use of facilitation that was seen as relatively neutral. Trust was recognized by both as key in working together.

One dissimilarity that did not seem to matter was that of purpose. ACM had a more generic, forest- and people-related purpose, whereas CFLRP was explicitly focused on restoration (with some attention to livelihoods). Yet the similarities of approach appeared to work equally well for both purposes (and there is evidence that this approach works for other natural resources as well, e.g., Sultana and Thompson (2013) in the floodplains of Bangladesh or Wilson et al. (2018) for US fisheries).

Turning to differences, scale is a central one. CFLRP is a programme that spans the nation, with the smallest legal unit being 50,000 acres,

Two old women, one from the US, one a Kenyah Dayak from Indonesia, both full of abundant wisdom, meet and laugh without words in Long Anai, East Kalimantan, Indonesia (March 2019).
Photo by Carol J. Pierce Colfer

though the actual projects range in size from 100,000 to 10 million acres. Although ACM was international in scope, its activities were focused primarily at the very local level (village or forest management unit). Our attempts to scale up have so far been less successful than was our experience at the lowest level – though our most recent analyses demonstrated the importance of doing so (Colfer and Prabhu 2023 (in press)). Although the Collaboratives drew from the local level, the approach was more top-down, without focused attention on community characteristics or their internal differentiations – except insofar as these emerged in informal interactions and field visits; CFLRP did not explicitly *try* to go downscale. Both approaches could benefit from: (a) better linking between scales; and (b) iterative collaborative action at currently-neglected scales, since evidence suggests that attention to all levels is important for good (and equitable) management.

Funding is a related issue, with two components: amount and duration. Although many assume the determining role of funding, we found the duration important; the amount, less so. The conclusion of ACM activities when funding ran out (never more than four consecutive years) felt premature in all cases – despite our efforts to create 'exit strategies', seek partners to carry on, and seek additional funding. Collaborative work takes time, and we needed more.

The locus of decision making is another key difference. The Collaboratives played an advisory role, often perceived locally as minimal in terms of implementation and monitoring; USFS personnel made the final decisions, had the real authority, as well as the real accountability (relevant sample responses and rationales in the National Forest Foundation 2020 survey; or Schultz et al. 2017). ACM researchers and field personnel were accountable to CIFOR and their donors to conduct the research, and analyse what happened. Community participants and other stakeholders had the responsibility, authority and accountability for their own decisions and actions,[34] within their communities and to higher levels of their own governments.

An older American woman who lives in the forest near the Olympic National Forest in Washington State (May 2017).
Photo by Carol J. Pierce Colfer

Huge contextual differences exist between a gargantuan, functioning bureaucracy, such as the USFS (with decades of tradition, legislation, rules, norms, etc.), on the one hand, and the minimal control typically exerted by the forest services in developing countries. Better integration into such forest services (and other relevant broader-scale actors) on the part of ACM and a greater 'letting go' of decision making by the USFS in interaction with the Collaboratives, would both be improvements.[35]

Facilitation in both cases was horizontal. That is, ACM facilitators networked, smoothed relations, addressed conflicts, etc. among villagers and with other stakeholders, with an emphasis on the local. Facilitation of Collaboratives focused more on a broader scale, with less attention to the potentialities of local involvement, also

34 And in the cases where this was not the case (e.g., the Landscape Mosaics project), ACM did not work so well.

35 See Kusumanto et al. 2023 (in press) for a fascinating 'thought experiment' in which ACM practitioners imaginatively construct an approach to using an ACM-like approach to collaboratively manage multiple agencies and other stakeholders affecting Jakarta's flooding problem.

working horizontally but higher up the chain. Both approaches could improve results by working also more vertically, integrating the higher and lower levels of action and decision making more effectively.

From an ACM perspective (where our first-hand experience lies), the most significant difference is that related to inclusivity and respect. One purpose, in both cases, we believe, of collaboration is to involve local people in the management or restoration of the natural resources in their area. Collaboration is reputed to bring many skills and resources to the table, create buy-in from stakeholders, strengthen people's motivation to care for their environment – and our experience is that it can do all these things.

From an ACM perspective, the literature suggests that the Collaboratives have expressly included few women, youth, Native Americans or other people of colour, involving mainly somewhat elderly, prosperous white men. Counter-examples include the three high school boys who served as interns on a summer field trip in the Uncompahgre Plateau CFLRP Collaborative (Colorado Forest Restoration Institute 2019); and the more substantive involvement of Klamath and Karuk tribal members in fire management in Klamath National Forest (Harling and Tripp 2014) – but in general, such inclusivity is marked by its absence. We are missing out on valuable knowledge/skills, resources, motivation and creative energy, when we fail to involve the whole range of local people and/or to seek out and use such local knowledge.

Given the urgency of global environmental issues like climate change, restoration and risk management, global actors need to move in new directions. Continuing along the path we are on will result in our reaching what so obviously lies ahead: a too hot and unpredictable climate, devastated landscapes, and too many,[36] too poor people with too little control over their environments. It is time to learn from what we have tried before, and adapt it creatively to our new conditions. We conclude this piece by saying simply that we see no real alternative to involving local people more substantively in resource management – dynamic and variable as such management will have to be. We hope this critical assessment of our ACM experience and that of CFLRP practitioners will help us reach a new, more benign and effective path.

36 And too many wealthy ones using up too many resources, as well.

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CIFOR Occasional Papers contain research results that are significant to tropical forest issues. This content has been peer reviewed internally and externally.

In this Occasional Paper, we compare a national approach designed to address restoration (the Collaborative Forest Landscape Restoration Program, CFLRP, of the United States Department of Agriculture/United States Forest Service) with CIFOR's Adaptive Collaborative Management (ACM) approach, which was originally designed to encourage sustainable forest management (SFM). CIFOR's version of SFM included equal parts forestry, ecology and human well-being, and in this case focused on the community level. This comparison – which argues that ACM can also contribute to restoration efforts – briefly alludes to the changes that have accrued in the tropics: from the rich, minimally-disturbed forests selected for study in the late 1990s when ACM began, to the current situation where the same landscapes are marked by land-use changes to huge expanses of oil palm and other commodities. This paper systematically examines both approaches, focusing first on the six conceptual similarities and then on seven distinct differences. It concludes with an examination of the 'differences that make a difference' in our experience. Most fundamentally, we conclude that both approaches need to broaden their focus: CFLRP would benefit from linking more closely with communities in all their diversity; and ACM should strengthen efforts to institutionalize its approach, while linking community-level involvement more substantively with broader-scale actors.

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