

One Tree, Five Goals: Algorithmic SDG Tagging and the Multiplication of Corporate Sustainability Contribution

Michael King^{1*}, Poline Bala², Peter Nwanesi Karubi³

^{1,2,3}Institute of Borneo Studies, Universiti Malaysia Sarawak (UNIMAS), 94300 Kota Samarahan, Sarawak, Malaysia

***Corresponding author**

Michael King

Institute of Borneo Studies, Universiti Malaysia Sarawak (UNIMAS), 94300 Kota Samarahan, Sarawak, Malaysia

Email ID: 22010285@siswa.unimas.my, ORCID 0009-0002-7313-1477

ABSTRACT

Companies increasingly claim contributions to the Sustainable Development Goals (SDGs) through digital systems that classify their activities against the goals' targets. Scholarship on corporate SDG engagement has examined motives, disclosure and "SDG-washing". It has paid far less attention to the classification infrastructure that produces the claims in the first place. This article studies one such infrastructure: an employee-volunteering dashboard in a state-linked conglomerate on a resource frontier in Malaysian Borneo. The dashboard records volunteer hours and automatically assigns each activity to SDG goals and targets. The study draws on 63 semi-structured interviews, 127 organisational and public documents and overt observation. It shows that auto-tagging performs three operations. **Translation** recodes culturally specific practices, such as communal mutual-aid work, into global target numbers. **Multiplication** lets a single activity register against several goals at once; a tree-planting programme maintained by local single mothers counts towards five. **Attribution** relocates the labour of community members and partner agencies into the corporate ledger. Together, these operations produce what we term a **tagging dividend**: reported SDG coverage can expand faster than the underlying activity. We argue that auto-tagging is neither neutral measurement nor simple greenwashing. It is a performative technology of localisation that makes local practice legible to global audiences while editing what that practice means. We offer a three-part diagnostic and a set of propositions for researchers, auditors and practitioners who design, assure or study SDG-tagging systems.

Keywords: Sustainable Development Goals; commensuration; quantification; corporate volunteering; SDG-washing; sustainability accounting; Borneo

INTRODUCTION

A single afternoon of tree planting can now be counted five times. In the case examined here, a reforestation programme run with a state forestry agency, and maintained for five years per site by single mothers from a nearby community, was registered by the firm's volunteering dashboard against SDG 1 (No Poverty), SDG 5 (Gender Equality), SDG 12 (Responsible Consumption and Production), SDG 15 (Life on Land) and SDG 17 (Partnerships for the Goals). Nothing about the trees changed between the field and the dashboard. What changed was their accounting.

This article asks a simple question with wide implications: **what happens to local sustainability practice when it is automatically classified against the SDGs?** The question matters because corporate SDG claims are increasingly produced by software rather than by narrative. Firms map activities to targets in reporting platforms, volunteering applications and ESG data systems, and the outputs (goal "heat maps", coverage counts, hours per goal) circulate as evidence of contribution to investors, regulators and communities.

The literature on business and the SDGs has concentrated on three questions: why firms engage (van der Waal & Thijssens, 2020), how they report (Bebbington & Unerman, 2018), and whether their claims are selective or symbolic, captured in the language of "cherry-picking" and "SDG-washing" (Heras-Saizarbitoria et al., 2022). Each takes the classification of corporate activity against the goals as given and asks what firms do with it. Yet classification is not given. Sociologists of quantification have shown that rendering different things commensurable is social work that reshapes what is counted (Espeland & Stevens, 1998; Mennicken & Espeland, 2019), and that measures can change the behaviour they measure (Espeland & Sauder, 2007). Seen this way, an SDG-tagging system is an engine of localisation, not a mirror of it.

We study an employee-volunteering dashboard in a large state-linked conglomerate operating on a resource frontier in Malaysian Borneo. The case is unusual in two respects. First, the system auto-assigns each volunteer activity to SDG goals and their sub-targets, so the classification logic is explicit and inspectable. Second, the activities it classifies are deeply embedded in local cultural practice: communal mutual-aid work (gotong royong), renovation of places of worship across several faith communities, blood donation drives and reforestation. This

gives an unusually clear view of what is translated, what is multiplied and what is lost when local practice becomes SDG data.

The article makes three contributions. First, it specifies **three operations of algorithmic SDG tagging** (translation, multiplication and attribution) that together account for how a classification system produces SDG contribution rather than recording it. Second, it names the **tagging dividend**, the gap between growth in reported SDG coverage and growth in underlying activity, as a measurable risk distinct from intentional SDG-washing. Third, it offers a **practical diagnostic and research propositions** that others can apply to the many SDG-tagging systems now in use.

2. LITERATURE AND CONCEPTUAL FRAMING

2.1 From SDG engagement to SDG infrastructure

Research on corporate SDG engagement has mapped firms' motives and the goals they favour, showing a consistent bias towards goals that fit existing business models (van der Waal & Thijssens, 2020). Critical work has shown that firms often select goals after the fact to frame existing activity, and that SDG language can serve legitimacy more than change (Heras-Saizarbitoria et al., 2022). Accounting scholars have argued that the SDGs open a new space for accounting research precisely because contribution must be made visible and measurable (Bebbington & Unerman, 2018). What remains thin is analysis of the **devices** through which that visibility is produced: the coding frames, mapping tables and software that turn a corporate activity into a goal-and-target claim.

2.2 Commensuration, classification and reactivity

Three ideas from the sociology of quantification frame our analysis. **Commensuration** transforms qualitatively different things into a common metric, making them comparable while discarding what does not fit the metric (Espeland & Stevens, 1998). **Classification systems** embed choices about what counts and what stays invisible, and those choices become hard to see once infrastructures are in routine use (Bowker & Star, 1999). **Reactivity** describes how people and organisations change their behaviour in response to being measured (Espeland & Sauder, 2007). Global indicator regimes such as the SDGs are themselves products of contested quantification (Fukuda-Parr & McNeill, 2019; Merry, 2016). When firms build their own tagging systems on top of these indicators, they add a second layer of classification, under corporate control and largely outside external scrutiny.

2.3 Corporate volunteering as an SDG object

Employee volunteering has been studied mainly for its effects on employees and employers (Rodell et al., 2016). Its role as a source of SDG claims is less examined, though it is an attractive one: volunteering is visible, countable in hours, and spans social, environmental and health domains. It is also where corporate activity meets community life most directly, so classifying it raises sharp questions about whose effort and whose meanings are being counted.

2.4 Analytical lens

We therefore treat the dashboard as a **performative classification device**: a system whose categories do not merely describe activity but help constitute what counts as SDG contribution. Our analysis asks what the device does to activities as they pass through it. Three questions guide the analysis: How are local practices converted into SDG categories? How is the quantity of contribution determined? Whose contribution is recorded?

3. RESEARCH SETTING AND METHODS

3.1 Setting

The case organisation is a publicly listed, state-linked conglomerate with more than 40 subsidiaries in construction materials, infrastructure and related sectors. It operates on a resource frontier in Malaysian Borneo marked by ethnic and religious diversity and by state-led development. Its community programme has three components: corporate philanthropy funded from profits; an employee volunteering initiative (EVI); and a community engagement initiative that "adopts" schools and religious and community institutions within a 20-kilometre radius of operating sites. The EVI is organised into five pillars (Table 1). Volunteer activity is logged on a dashboard that records man-hours and auto-assigns each activity to matching SDG numbers by reference to the goals' sub-targets.

Table 1. EVI pillars and activities

EVI pillar	Activities recorded
Gotong Royong	Community clean-up of schools and religious centres, drawing on the tradition of collective mutual assistance
Rebuilding Communities	Renovation of community schools, halls, religious centres, NGO facilities and orphanages
Sustaining Charity	Sale of work, cash and in-kind donations, volunteering at charity events
Environmental and Health Awareness	Running, cycling and recycling campaigns; tree planting
Saving Lives	Blood donation drives

Source: organisational documents and annual report. The dashboard assigns goals by reference to SDG sub-targets; this article analyses the resulting goal assignments rather than the software's internal rule set.

3.2 Data

The article draws on a qualitative case study of the organisation's SDG localisation. Data comprise 63 semi-structured interviews (52 with board members, managers, sustainability staff and operational employees; 11 with regulators, industry representatives and community leaders), a corpus of 127 organisational and public documents, and overt observation of sustainability events, community engagement activities and operational sites. For this article we additionally analysed the EVI dashboard records and associated programme documentation. The study received university research-ethics approval (see Declarations), and all participants are identified by role category only.

3.3 Analysis

We followed the activities through the device. For each EVI pillar we compared (i) how the activity was described in programme documents and interviews, (ii) how the dashboard classified it, and (iii) how participants and observers described what the activity meant and who carried it out. Interview and document data were coded in NVivo 14 using a codebook that included, among others, codes for interpretation, performative compliance and cultural mediation. Divergences between the dashboard classification and lived accounts were treated as analytically central rather than as error. The Arbor Day reforestation programme was selected for close tracing because it illustrates multi-goal mapping most fully in the programme documentation. One author was employed by the organisation during the study; safeguards included an independent research assistant, two-stream analysis of internal and external accounts, and a reflexive journal.

4. FINDINGS: THREE OPERATIONS OF SDG TAGGING

4.1 Translation: from gotong royong to target codes

The first operation converts locally meaningful practice into global target numbers. Gotong royong, the communal mutual-aid work through which villages and longhouses maintain shared spaces, enters the dashboard as an EVI activity with man-hours and SDG codes. Employees from different ethnic and religious backgrounds took part in clean-ups at longhouses, renovation of temples, maintenance of community halls and support for Muslim prayer houses. In interviews and observation, these activities were described in terms of neighbourliness, reciprocity and cross-community belonging. The dashboard records them as hours against goals.

Participants' wider accounts of community engagement show why this matters. Some argued that communities should shape what is counted, not only receive it:

"If we're serious about partnership – about shared value and collaborative development – then stakeholders need real voice, not just opportunity to comment. Co-creative engagement means communities help decide which SDGs we prioritise, what targets we set, how we measure success." (MO3)

Others noted that the channels through which community meaning reaches the firm are themselves selective:

"When we partner with official community representatives – elected leaders, established organisations – we get political legitimacy and structured engagement. But we also risk missing voices that aren't represented in formal structures: women, youth, minority groups, poor households." (MO5)

Translation is productive: it lets a community clean-up appear in the same frame as global goals, which participants valued as "thinking global, doing local". Each recorded hour, as several participants put it, told a story beyond the region. But translation is also selective. What the codes hold is the activity's type and duration. What they do not hold is its relational content (with whom, at whose invitation, for what shared occasion), which is

precisely what gives the practice its local meaning. In Espeland and Stevens's (1998) terms, the commensurating move gains comparability by shedding particularity.

4.2 Multiplication: one tree, five goals

The second operation determines how much contribution an activity produces. Because the dashboard tags by sub-target, a single activity can be assigned to several goals at once. The Arbor Day programme shows this most clearly (Table 2). The firm funds tree planting with the state forestry department at designated sites and commits to five years' maintenance per site. Single mothers from a nearby community are engaged to maintain the seedlings. The dashboard registers the programme against five goals.

Table 2. Multi-goal mapping of the Arbor Day programme

SDG	Rationale for tag	What the tag rests on
15 Life on Land	Reforestation	Planting and five-year maintenance of seedlings
1 No Poverty	Income for vulnerable households	Paid maintenance work by single mothers
5 Gender Equality	Economic participation of women	The same maintenance work
12 Responsible Consumption and Production	Responsible production practice	Recorded as promoting responsible production practices; the documentation does not specify the mechanism
17 Partnerships	Corporate–government–community partnership	Collaboration with the forestry department and community

Source: EVI dashboard records and programme documents. The analysis concerns goal assignment; how volunteer hours are apportioned across the five goals is not examined here (see Proposition P1).

Each tag has a defensible rationale. Read together, they show multiplication at work: SDG 1 and SDG 5 rest on the same paid maintenance labour, and that labour is counted again inside the reforestation outcome claimed under SDG 15. Within the organisation, the multi-goal mapping was valued as evidence that the firm's measurement was granular enough to capture the interconnected nature of development, which is a real virtue. The analytical point is that the same design choice that captures interconnection also lets reported SDG coverage grow without any change in what happens on the ground.

The SDG 12 tag is telling in this respect: it is recorded as promoting responsible production practices, but the programme documentation does not specify what production practice a reforestation programme changes. The tag adds coverage while its basis remains unstated. Participants valued measurement precisely because it made sustainability tractable:

"Before comprehensive SDG measurement, sustainability was qualitative and subjective – we knew we cared about it, but we couldn't track progress systematically. ... Measurement transformed sustainability from aspiration to operational discipline." (TO1)

The same quality that makes measurement disciplining makes it generative: once contribution is a count, the rules of counting shape how much contribution there is.

4.3 Attribution: whose contribution is counted?

The third operation decides whose effort the contribution belongs to. In the Arbor Day programme, the work that sustains the trees over five years is done by community women. The technical expertise and land designation come from a state agency. The programme sits on the firm's volunteering dashboard, so the resulting SDG contribution appears in the corporate ledger. Attribution is not concealment: the partnership is acknowledged, and it is tagged under SDG 17. But the classification structure has one owner, and community labour enters it as an input to the firm's contribution rather than as a contribution in its own right.

The same pattern appears across the volunteering architecture, where corporate philanthropy funds a project, employee volunteers supply hours and the community engagement programme supplies a long-term relationship. A single school renovation can thus draw on all three, and the dashboard records the employee hours. During document analysis, an independent research assistant questioned the reading of community consultation records as two-way participation; on review, many documented corporate presentations to communities rather than dialogue. This reinforces the point: what the infrastructure records is corporate action towards communities, not community agency.

Internal participants recognised the asymmetry that attribution formalises:

“We strive for equitable partnership, but there are real power differences. We control resources, technical expertise, and implementation capacity. Communities possess local knowledge, political legitimacy, and social networks.” (MO9)

The dashboard encodes the first half of that sentence more readily than the second: resources and hours are countable inputs, while local knowledge and legitimacy enter the ledger only implicitly.

5. DISCUSSION

5.1 The tagging dividend

Taken together, the three operations generate what we call a **tagging dividend**: the amount by which reported SDG contribution exceeds what the underlying activity would support under a one-activity, one-primary-goal rule. The dividend arises from design choices (tag granularity, whether hours are duplicated across goals, who owns the ledger), not from intent to mislead. This distinguishes it from SDG-washing as usually understood. A firm can earn a large tagging dividend with entirely sincere staff and well-meant programmes, which is exactly why it escapes critiques aimed at motives.

Two implications follow. For **assurance and reporting**, SDG coverage counts and hours-per-goal figures are not comparable across firms unless the tagging rules are disclosed. For **SDG localisation research**, the device is itself a site of localisation: it is where a global framework is made to speak about a longhouse clean-up, and where some of that clean-up’s meaning is left behind.

5.2 Performativity without reactivity (yet)

The literature on reactivity predicts that, once activities are tagged, organisations will favour activities that tag well (Espeland & Sauder, 2007). Our data show the conditions for this, namely an explicit, rewarded and multi-goal classification, but do not establish that programme choices have shifted towards high-yield activities. We therefore state it as a proposition for longitudinal work rather than a finding.

Table 3. Diagnostic for SDG-tagging systems

Operation	Diagnostic question	Disclosure that would answer it
Translation	What local meaning is lost when an activity is coded?	Activity descriptions published alongside codes; community-defined outcomes recorded
Multiplication	How many goal-tags does one activity generate, and are hours duplicated?	Tagging rule; tags per activity; hours counted once with a primary goal
Attribution	Whose labour, knowledge and land underpin the contribution?	Partner and community inputs recorded as contributions, not only as context

5.3 Propositions

P1. The finer the tagging granularity (sub-target rather than goal), the larger the tagging dividend, other things equal.

P2. Activities rooted in local cultural practice lose more relational meaning in translation than activities defined by global templates such as blood donation.

P3. Where tagging outputs are reported externally, programme portfolios will drift over time towards activities that generate more tags per hour.

P4. Tagging dividends will be larger where community and state partners supply most of the labour or expertise but the classification ledger is owned by the firm.

6. CONCLUSION

The SDGs reach company practice through devices as much as through strategy. By following volunteer activities through an auto-tagging dashboard, this article shows how such devices translate local practice into global codes, multiply contribution across goals and attribute shared effort to the firm. Tagging lets a resource-frontier company tell a global story about a local afternoon’s work, and that is valuable. It also means the story can grow without the work changing. Researchers should study tagging rules as closely as they study disclosures; auditors should ask for them; and designers can build systems that count hours once, record community contributions as contributions and keep local meanings attached to the codes.

Limitations. The study rests on a single organisation and one tagging system, observed with insider access. The dashboard records and documents analysed were those accessible during fieldwork and do not allow outcomes

for communities or ecosystems to be assessed. The propositions above are offered for testing across organisations and over time.

DECLARATIONS

Ethics. Ethical approval was granted by the Universiti Malaysia Sarawak (UNIMAS) Research Ethics Committee (Ref: UNIMAS/NC-21.02/03-02 Jld.5(47)). **Consent.** Informed consent was obtained from all participants; participants are identified by role category only. **Data availability.** Interview transcripts, field notes and internal documents cannot be shared publicly because of the conditions of ethical approval and the risk of re-identification in a single-organisation study. The codebook and a description of the data are available from the corresponding author on reasonable request. **Competing interests.** The first author was employed by the case organisation during the study; the research arrangement was formally acknowledged by the organisation before data collection and was conducted independently as part of a doctoral programme. **Author contributions.** M.K. conceived the study, conducted the fieldwork and analysis, and drafted the manuscript. P.B. and P.N.K. supervised the research and critically revised the manuscript. All authors approved the final version. **Funding.** No specific funding was received.

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