

Environmental Prioritization: Employee Beliefs about Environmental Concerns and Actions

Angela T. Ragusa

Abstract—Whilst developing and developed nations work to prioritize pro-environmental action, Australia ranked 130 in a global sustainability index in 2020, well behind economically comparable nations. This exists alongside national surveys showing high public support for pro-environmental behavior. As employees increasingly utilize ‘green’ credentials to make career decisions in globally competitive marketplaces, understanding if an employer’s environmental track-record is concerning, and what employer pro-environmental action awareness exists, may encourage large organizations to think critically about future trajectories. This research presents results from primary data collected to explore if employees thought environmental sustainability issues were an employer concern, what issues concerned their employer the most, and what, if any, environmental actions were undertaken. Compared with participants’ demographics, personal environmental concerns, actions, and literacy, results are globally contextualized to demonstrate issue salience and highlight local and global imperatives.

Index Terms—Green workplaces, environmental literacy, environmental sociology, organizational practice.

I. INTRODUCTION

Mounting scientific evidence reveals human-driven behavior has facilitated the earth’s entry into its sixth event of mass extinction [1]-[3]. The severity of consequences derived from climate change and environmental degradation can make finding ‘everyday’ environmental solutions seem overwhelming at a time when society wrestles with public health pandemics, depressed economies, and decreased mental wellness. To continue progressing global environmental goals, as outlined by the United Nations [4], however, requires substantial steps be taken that mitigate actions deleteriously affecting human and environmental health. Industrialized practices continue to degrade air [5], land and water [6] quality, despite society’s technological advances. As economies and individuals emerge from COVID-19 and recession, it is timely to prioritize better environmental hygiene, as well.

In Australia, as elsewhere, government action and legislation are affected largely by political and economic priorities. Despite countries, such as the United States, having Clean Air acts, scientific research documents extensive public health problems arise from air pollution [5]. Other nations, such as Australia, have environmental legislation that varies by jurisdiction and supports major government and industrial pollution [7]. Such systemic

conditions have prompted the privatization of pro-environmental initiatives by an increasing array of ‘concerned’ organizations, corporations, and individuals. Privatized environmental concern and issue prioritization, however, remain challenged not only by fiscal priorities and personal benefit/interest, but, furthermore, legislated power.

For example, despite major Australian banks promoting ‘green’ credentials, industry watchdog research found banks committed to meeting Paris Agreement ‘zero emissions’ targets by 2050 nevertheless increased financing fossil fuel expansion projects by 18% in 2020, an action that will double the nation’s emissions annually and pollute the atmosphere with over a billion tons of carbon-dioxide [8]. One such expansion project is the Whitehaven’s Vickery coal mine in the state of New South Wales, the current research location. Shareholder voting and lawsuits by children to file a class-action negligence claim against the federal environment minister Sussan Ley have failed to stymie Australian coal mine expansion and investment. In a landmark Australian Federal Court case held May 2021 (with evidence proved by Australian Government climate scientists), intergenerational health, economic, and environmental injustice claims were dismissed in favor of allowing the environment minister discretion to approve, or reject, coal mine expansion. Comparing Australia’s court ruling with the Netherlands Supreme Court, which protected human rights duties by ordering a multinational fossil fuel corporation, Royal Dutch Shell, to reduce CO₂ emissions through its corporate policy, the power of governments to support or challenge industrial pollution, irrespective of citizens’ proactivity, is revealed [9].

Pro-environmental academic research has focused on understanding individualistic ‘sustainability’ behavior, values, and attitudes, following social psychological theory and investigation [10]-[13], with sociological studies finding societal perceptions fail to correspond with environmental risks posed by industrial pollution [14]-[15]. Theoretically, pathways for promoting environmental health bifurcate between neoliberal advocacy of market-driven solutions and calls for reconfiguring society to reduce persistent societal inequities, or ‘injustice’, unlikely resolvable through technocratic innovation [16]. The role business plays in addressing or perpetuating socioeconomic and environmental disadvantage related to ‘sustainability goals’ is inequitably researched, with over-representation manifesting in the academic disciplines of accounting and management, European geographies, and related to mining industries [17]. In an era of information overload, issue salience (academic, business, and cultural) also is a political subject.

Survey research finds environmental issues not only are increasingly politicized, they also are subject to receiving pressure from employers as employees are asked to ‘downplay’ or ‘avoid’ disseminating research outcomes [18].

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Employees as diverse as environmental scientists, academics, industry consultants, non-governmental organization and government employees in Australia and North/South America reported employers, media, and academic publication outlets edited or silenced their research due to political or vested interests, particularly about “threatened species, urban development, mining, logging and climate change” resulting in public deception, ignorance, and policy uninformed by data [18], [19, p. 19]. Communication research evidences culture also taints individuals’ interaction with information, Information is sought that confirms existing biases or is perceived interesting, salient, or palatable [20]. Hence, why specific issues garner the bulk of society’s focus demands critical reflection as they may, or may not, be those warranting greatest attention or resources.

Environmental problems have a divisive social history. Given the actions/changes required for climate change, pollution, biodiversity/habitat loss, and other ‘big’ problems, the interconnected nature of ecosystems demands concerted effort across time and place. Scientists linking extinction and species decline to habitat loss and climate change implore humanity to learn from history [21]. Achieving this requires tomorrow’s employees, heralded as demanding ‘greener’ workplaces and employers than prior generations [22]-[23], not only be supported by policy and governance structures, but also accomplish environmental literacy for holding accountable the environmental priorities professed. This paper contributes to the dearth of investigations about pro-environmental issue salience and behavior in workplaces [24]. Specifically, the paper explores what employees perceived as environmental priorities to their employers and what actions garnered sufficient visibility for employees to recognize them as key employer environmental actions, comparing these findings with their own concerns, actions, and related knowledge.

II. METHODS

Mixed methods (questionnaires and face-to-face interviews) were used to collect information from employees about environmental sustainability concerns and action priorities (their own and their employers). Purposive sampling was used to recruit employees. This method is suitable for conducting exploratory social research [25]. The recruitment followed protocols of invited research participation because targeted participants’ social role and/or expertise may contribute meaningfully to answering the research questions [26]. A strength of this method is its ability to yield deep insights, albeit, due to its non-representative or random nature, necessitates results are not generalized beyond the sample [27]. Recruitment strategies included research call dissemination using university and professional networks in the research area (rural-regional New South Wales). Research participation criteria included being over age eighteen, willingness and capacity to provide informed consent to participate without remuneration, and current or past workplace experience in a professional or managerial role. No external grant funding was sought or received.

A pre-interview questionnaire containing demographic and substantive questions (close- and open-ended) was

designed based upon gaps in environmental sustainability literature. The research design and conduct were approved by the university’s Human Research Ethics Committee. All interviewees gave informed consent. No conflict of interests existed related to the conduct or reporting of results. All interviews were conducted face-to-face by the author in office settings of convenience for participants. Interviews averaged 40-60 minutes and digitally recorded. Transcripts were transcribed verbatim. Hardcopy questionnaires were completed by participants immediately prior to interview participation. All questionnaire data were deidentified and entered in SPSS (version 27).

The research aim was to identify key strategies undertaken to promote and enact environmental sustainability at professional and personal levels. This paper presents results from four questions to explore employee beliefs about their employer’s environmental concerns/actions and compare these with personal concerns/actions: 1). Do you think environmental sustainability issues are of concern to your employer? If yes, what issues do you think matter most to them? 2). Are you aware of any action your employer is taking around environmental sustainability? If yes, of what actions are you aware? 3). Do you think environmental sustainability issues are of concern to your personal health and well-being? If yes, what issues matter most? 4). Have you done anything in the past 3 months you feel positively affected environmental sustainability? If yes, what did you do?

Data analysis conducted descriptive statistics, non-parametric correlations, and content analysis suitable for achieving the research aim. Given preliminary content analysis found ‘energy’ and ‘waste’ were perceived to be employer priorities, the environmental literacy question, ‘Which are renewable resources?’, was included in this analysis. Answer options (coal, steel, plastics, wood, oil, none) allowed for multiple answer selection. Results from question five are included in this paper to lend insight about participants’ environmental literacy related to renewable ‘energy’ and ‘waste’ resources alongside personal and perceived employer environmental concerns and actions.

III. RESULTS

A. Sample Characteristics and Question One Results

Although the majority (77%) of interviewees were affiliated with the university, 39% were employed elsewhere. Those employed by the university worked primarily in administrative (10%) and academic (52%) roles, with the remainder retired and/or serving on committees. Non-university sector employment included business and finance, engineering, government, healthcare, journalism, technology, and retail. The youngest interviewee was born in 1994 and the oldest in 1949. Although 81% of interviewees believed environmental issues mattered to their employer, those employed in large organizations reported greater concern about environmental sustainability issues (-0.458 , $p=.01$, $n=31$). Content analysis identified thirteen environmental issues employees thought were priorities for their employer (Table I).

TABLE I: EMPLOYEE-IDENTIFIED EMPLOYER PRIORITIES

Issue	N	Perceived employer environmental issue priorities
Carbon neutrality	6	Reducing carbon footprint
Climate change	4	Acting to address climate change
Education	2	Staff environmental education, community impact assessment
Energy	6	Reducing consumption, using renewables (solar),
Emissions	1	Reducing vehicle emissions in work-travel
Environmental compliance	1	Meeting compliance criteria
Land management	3	Environmental planning
Packaging	2	Alternatives to plastic
Pollution	4	Reducing air/water pollution/woodsmoke, managing sediment
Recycling	5	e-waste, paper
Threatened species	1	Protecting wild species
Waste	3	Reducing consumption, resource usage
Water management	1	Reducing water consumption and quality
TOTAL: 13 Priority Issues (n=31)		

TABLE II: EMPLOYEE-IDENTIFIED EMPLOYER STRATEGIES ACHIEVING PRO-ENVIRONMENT ACTION

Organization Strategy	Environmental actions undertaken by Australian employers
Education	Educating about pollution
Evaluation & Monitoring	Waste reporting & monitoring
Investment	Creating environmental/sustainability research grants; Purchasing renewable energy/solar panels, offsetting schemes, biobank participation, and green infrastructure (e.g. housing) development; Co-generation
Management	Managing waste sustainably with “strict control of garbage and recycling”, creating an environment division; Fostering environmental partnerships, ‘green’ plant/botanical decisions, and facilities management; Enforcing organizational-wide policy
Policy	Creating compliance policies for building design and regulation, cemeteries, environmental pollution regulation, and development control, cleaning contaminated lands; Prioritizing sustainable strategies and key strategic action to reduce ecological footprint and greenhouse gas emissions; Promoting environmental sustainability actions; Promote a recycling program
Practices	Change – purchasing decisions (buy new, green cars/goods with higher environmental/energy star rating, recycled photocopy/paper products) Reduce – paper consumption/printing; travel by videoconferencing; water consumption by stormwater harvesting; plastic bottles by installing drinking water stations; littering with clean-up activities Re-use – black water, packaging; goods/hardware Recycle – e-waste, batteries, printer cartridges, etc.
Target Setting	Achieving industry/sector carbon-neutrality targets; Participating in Environmental Protection Agency projects
TOTAL: n=7 strategies	...and, as an interviewee proclaimed, “many!” pro-environmental sustainability actions undertaken

B. Question Two Results

Beliefs about employers’ environmental concern

significantly correlated with high awareness of employers’ pro-environmental actions (.658, $p=.001$, $n=31$). Employers’ efforts to promote their pro-environmental actions were detailed in qualitative responses. Content analysis categorization revealed seven key organizational strategies (Table II) informed environmental actions most employees thought were underway.

TABLE III: PERSONAL ENVIRONMENTAL ISSUE PRIORITY DETAILS

Priority Issues	N	Detailed personal concern
Climate Change & Energy	17	greenhouse emissions, global warming, fossil fuel/non-renewable energy consumption, coal-seam gas
Biodiversity & Habitat Loss	11	land use, loss of habitat for wildlife, land degradation, urban planning, protection of flora/fauna, species extinction, deforestation, balanced ecology
Pollution	9	air/water quality, plastic, water
Human Health & Welfare	7	healthy lifestyle, health for workers at landfill tips, mental wellbeing, poverty, reduced natural environment access for humans, financial impacts
Food	5	food security, food contamination, sustainable food choices, reducing ecofootprint of food resources
Water	5	access, quantity, reticulation
Waste	4	recycling, reducing, landfill is a community concern
Overpopulation	2	(not detailed)
ISSUE VARIATION:		(n=60)

C. Questions Three and Four Results

At a personal level, over 93% ($n=29$) of the sample thought environmental sustainability was a priority concern to their health and well-being. No significant correlations emerged for demographic characteristics and personal environmental issue priorities. Personal environmental priorities and actions only differed slightly from those they believed their workplace prioritized. Table II revealed workplace environmental focus was thought to concentrate on energy (climate change, energy, emissions) (35%/ $n=11$) and waste management (packing, recycling, waste) (32%/ $n=10$). Whilst employees personal concerns reflected alignment with energy and climate change salience (28%/ $n=17$), waste management was of much less concern (7%/ $n=4$). Similarly, although employees thought managing land and threatened species were a focus for their rural employers, this manifested as a lower employer priority (13%/ $n=4$) than personal priority. Eighteen percent ($n=11$) noted protecting natural habitats for flora and fauna was a personal priority (Fig. 1). Addressing pollution achieved similar employer (13%/ $n=4$) and personal prioritization (15%/ $n=9$) as an area of priority.

Whereas the impact of climate change/energy and habitat/biodiversity loss affect both humans and non-humans, the third greatest personal environmental concern raised by the sample related to the negative impacts environmental degradation had on human health and well-being (12%/ $n=9$). This included preventing healthy lifestyles and mental

wellbeing, increasing poverty, making workers sick (especially those working in landfill facilities), reducing environmental access for human recreation and the financial cost of both environmental sustainability and dealing with consequences of its avoidance. Table III reveals the diversity of environmental problems employees personally believed most important.

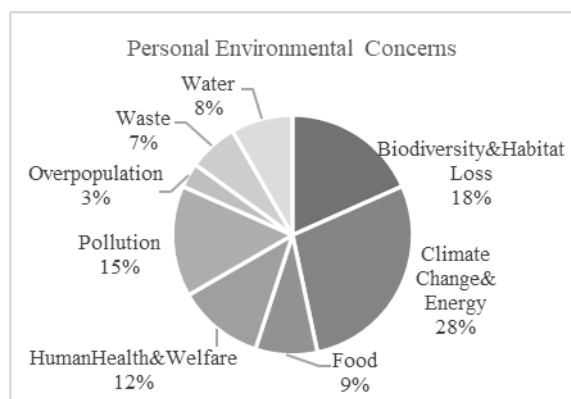


Fig. 1. Employees' personal environmental concerns.

Raising sixty distinguishable personal concerns, these nearly doubled those participants identified as environmental priorities for their employer ($n=31$). Congruency existed about issues priorities between what employees thought their employer prioritized and employees' personal concerns for all except four issues: food, overpopulation, human health/welfare (personal priorities) and education (employer priority). Despite the pervasiveness of energy and climate change as environmental action priorities (for employers and individuals), statistical variation in environmental literacy about renewables suggests the ubiquity of an environmental problem may insufficiently illustrate its technical comprehension. Only age-related demographics were significant to renewables knowledge. Lower birthyear ($r=-.412$, $p=.05$, $n=31$) correlated with higher renewable literacy; the oldest interviewees exhibited the most literacy. Seventy-five percent of those aged 50-67 ($n=16$), compared with 40% of those 22-47 ($n=15$), correctly identified renewables. Twenty-eight percent did not know 'wood' is renewable and 16% thought steel and/or plastic are renewables. Years of employment by the employer interviewees provided data about environment sustainability priorities had a mean of 19 years, ranging from less than a year to 40 years. Similar findings manifested as for age; Of those employed, sixteen accrued 1-17 years and fourteen between 18-40 years of working with their current employer. Crosstabs revealed 37% of those 1-17 years could correctly identify renewables compared with 78% of those employed 18-40 years. Correlations supported this finding, with those employed the longest with their current employer associated with higher renewable literacy ($r=-.417$, $p=.05$, $n=31$). Employment by the university was un-associated with renewable literacy.

High 'awareness' of environmental issues, with 100% ($n=31$) of interviewees contributing issues of personal concern, existed alongside the majority (74%/n=29) reporting they undertook pro-environmental actions in the previous three months. Content analysis revealed, in contrast with the 'big picture' awareness and concern about global environmental issues, personal actions undertaken could be

categorized into five categories (Fig. 2).

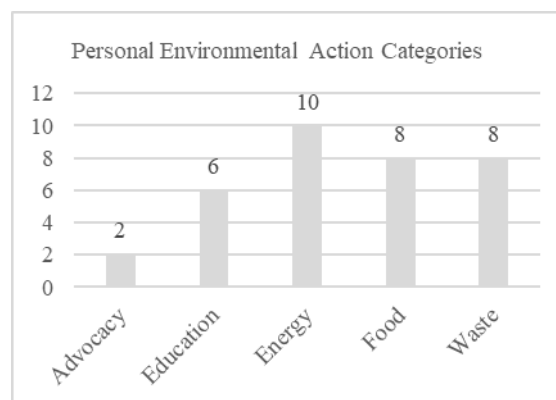


Fig. 2. Personal environmental action categories.

Participants most frequently channeled personal pro-environmental actions into 'Energy' (29%/n=10). Four sub-categories reflect energy-actions: minimizing consumption, purchasing green/renewable energy, reducing car driving, insulating houses. Two participants noted they "pay [a] premium" or "contributed to Climate Council financially" to support energy-actions. 'Food' and 'Waste' were the second most frequent (23.5% respectively) personal actions. Food actions typically entailed vegetable gardens ($n=5$), supplemented by 'conscious consumption' (e.g. meat reduction and product source-based decisions). Recycling ($n=5$) constituted most waste-focused activities. Others were "on my daily walks around the river I collect rubbish", taking one's "own water bottle", "didn't print out paper", and generally "try[ing] to minimise footprint via minimal consumption". Actions categorized 'Education' (18%/n=6) involved 'teaching' or 'researching' issues (e.g. woodsmoke, sustainable living, overpopulation, nature). 'Advocacy' was the most uncommon action (6%/n=2), with two participants lobbying government to "save wildlife" or affect "street vegetation". No significant correlations existed for interviewees' demographic characteristics and propensity to undertake pro-environmental actions for personal reasons.

IV. CONCLUSION

Living in an era where climate change and other 'green' issues are increasingly pervasive in popular culture, whilst experiencing pandemics and economic downturns, can make critical investigation of vital environmental achievements seem a lower priority. Scientific research, however, alerts that deemphasis of environmental problem management and change fails to correspond with the urgency issues such as habitat loss, extinction, and climate change pose [1]-[3]; [18], [19]. Findings highlight employees widely believed employers were taking 'action' to mitigate key environmental problems widely promoted in broader society. Existing research, however, shows beliefs about action-taking, compared with evidence-based documentation of pro-environmental achievements/compliance, may differ [5], [7]. Expansive analysis of research literature reveals sizable variation in discipline interest, foci and publication, as well as industry and government strategies, alongside an absence of accountability measures for achieving environmental sustainability goals which are divergently

measured and vary by nation-states [17]. Furthermore, pro-environmental behavior, attitude, and value research has been heavily influenced by environmental psychology theory and research, whilst over-focusing on households than workplaces for several decades [24]. Subsequently, individualistic theories predominate for changing and managing individual actions, rather than systemic approaches required to address the deep-rooted socioeconomic and environmental injustices sustained by power relations characterizing neoliberal political economies [16].

The modest present study, limited in its generalizability due to small sample size [27] and Australian context, posed four research questions to commence understanding whether 'environmental sustainability' is a 'real' concern in Australian workplaces, what/how issues are being actioned or prioritized, and how these compare with employees' personal environmental concerns and actions. Results reflect broader societal trends manifesting the normalization of 'green' business marketing [16] and variation of environmental 'concern' by age/generation found in corporate research [22]-[23]. Environmental concern, however, risks falling prey to greenwashing, rather than contributing to concerted environmental change, in cultures where legislation, government, and industry support pollution and degradation practices paling in contrast with European actions [5]-[9].

Questionnaires completed by 31 employees (with workplace experience in organizations as diverse as universities, churches, hospitals, government, and policing, to business, journalism, and information technology freelancing) revealed 'the environment' is a major workplace concern. Most (81%) believed their employer was actively addressing environmental problems. Content analysis found 13 distinct environmental issues believed to be employer priorities. Energy and waste were most pervasive. Seven strategies were discernible (education, evaluation and monitoring, investment, management, policy, practices, target setting) to address problems employers faced. Reducing emissions/carbon consumption/footprint through 'greener' renewables, recycling, and education were common practices. Employees also noted activities were undertaken for planning and compliance purposes to meet legislated requirements (e.g. native species/land protection and air/water quality standards). Employees' personal environmental concerns aligned with, and exceeded, priorities attributed to employers. Minor variation existed, albeit widespread pro-environmental sentiment was exhibited; 93% personally believed the environment's health 'matters' to their well-being. This norm surpassed demographic variation. Content analysis found food and population were personal environmental priorities not perceived employer priorities and confirmed climate change/energy salience. This contrasts with research finding less climate change concern in wealthier nations [28]-[29].

Environmental concern was met with action; 74% reported actively undertaking a pro-environment activity. Most actions related to 'energy', including addressing climate change by buying renewable energy and donations. This aligns with environmental action theory and research showing behaviors are determined by personal attitudes existing within, and affected by, group norms and action

capacity [11], [29]-[31]. If socioeconomic justice theories are applied, positing a "green economy" striving for carbon freedom inevitably fails where power relations are ignored [16, p. 306], then actioning personal preferences (e.g. buying renewable energy, planting vegetable gardens and recycling) enabled by economic and infrastructural privilege may fail in workplaces where employees lack status or power to influence employers undertaking environmental actions for compliance or market advantage. Further, where pollution/practice compliance is legislated by governments or industries prioritizing market growth, environmental actions necessary to address major problems, such as climate change, are unlikely achievable by fostering issue concern since government policy commonly ignores public preference about issue salience [32].

Findings draw attention to the need for depoliticized environmental action. Neither employee environmental action-taking, issue salience, nor employment sector experience related to renewables literacy. Energy and climate change, two highly salient actions/priorities also did not correspond with correct identification of renewable resources. Only time-related variables (age and length of employment) were associated statistically with renewables knowledge. Older participants were nearly twice as likely to know wood is a renewable resource, and that steel and plastic are not, compared with younger participants. Touting younger generations' desire for 'green' employment/employers [22]-[23], without the corresponding environmental literacy exhibited by older generations accused of creating climate crises [9], may fail to attenuate environmental problems. Further, individuals may lack self-awareness about their literacy. Such complexities are areas where future research is needed.

Finally, the study commences the long road to documenting 'what' environmental goals industries are achieving; the strategies employees recounted their employers pursued may, or may not, reflect measured performance. With research noting such data is absent, along with corporate disclosure, [17], it is timely to shift focus away from researching 'values' [10], [12]-[13] in favor of using depoliticized scientific data to determine and set imperatives to ensure the health and well-being of all species. Although employees hailed from multiple professions and brought a wealth of professional expertise, lack of basic science literacy may derail understanding or recognizing environmental issues identified as personally and/or professionally concerning. Accurate assessment of if or how employers are achieving environmental goals remains problematic. Thus, findings support research noting environmental science literacy is necessary to transcend local and immediate issues unlikely to be most vital actions necessary for global health [33]. Aligning intent – societal will – to be environmentally-sustainable requires marrying scientific knowledge with corporate and organizational goal-achievement, and personal practice, that, in Australian culture, works to 'keep them honest' by improving environmental accountability practice.

CONFLICT OF INTEREST

The author reports no conflict of interest.

AUTHOR CONTRIBUTIONS

The author completed every aspect of this research and article.

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