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To cite this article: Suhadi Cholil & Lyn Parker (2021): Environmental education and eco-theology: insights from Franciscan schools in Indonesia, Environmental Education Research, DOI: [10.1080/13504622.2021.1968349](https://doi.org/10.1080/13504622.2021.1968349)

To link to this article: <https://doi.org/10.1080/13504622.2021.1968349>



Published online: 11 Sep 2021.



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Environmental education and eco-theology: insights from Franciscan schools in Indonesia

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ABSTRACT

This paper examines how the eco-theology of St Francis of Assisi is translated into practice in Franciscan schools in Jakarta, Indonesia. We also investigate if the environmental conclusions of the Pope's Encyclical, *Laudato Si'*, are understood by students. An ethnographic approach, using participant observation, interviews and focus group discussions with the friars and nuns, teachers and students, was used. We found that Franciscan religious practise Francis's teachings, but it is difficult to bridge the gap between his teachings and the contemporary context. Students generally identify as environmentalists and respect the environment, but their environmental practice is highly dependent on home life. Both schools and students have to contend with a broader socio-economic context which is pro-Development, with scant regard for the environment. Student understanding of complex global environmental problems, and their causes, is minimal. Nevertheless, we argue the relevance of St Francis's eco-theology in a world searching for environmental sustainability.

ARTICLE HISTORY

Received 22 July 2020
Accepted 6 August 2021

KEYWORDS



St Francis; Indonesia; schools; eco-theology; environmental education

Introduction

This paper explores the Environmental Education (EE) found in Franciscan schools in Indonesia. The Franciscans follow the teachings of St Francis of Assisi, the Patron Saint of Ecology. The Franciscan Order is a famous Order within the Catholic Church, with schools in many countries and a reputation for being pro-environment. We want to see how Franciscan schools, which have a vision inspired by the eco-theology of St. Francis of Assisi, address the serious environmental problems in Indonesia through environmental education. However, Franciscan EE has not been well studied in the academic literature on EE. In fact, there is only one article on Franciscan EE in the major EE journals (Salomone 2006, see below). Franciscan EE is an example of religious EE (Parker 2016), a type of EE that is much neglected in research on EE.

Religious environmental education

The lack of attention to religious EE is symptomatic of the basically a-religious nature of social science research on EE. As Gough pointed out, the academic literature on EE in schools is

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basically a Western, secular, science-based discourse (2008 [2003]).¹ In part, this has been due to the sociological miscalculation that with modernity, the world would become secular (Parker and Hoon 2013). However, perhaps 84 per cent of the world's population can be described as 'religiously affiliated' (Pew Research Centre, Religion & Public Life 2012). For this reason alone, it behoves social scientists to attend to religious EE.

Another reason for the lacuna in research on EE is the fact that most research has been conducted in countries of the Global North, where social scientists are mainly secular, and the discourse and teaching of EE is science-based. Underlying this is the assumption of social scientists that religion and science are incompatible, if not mutually antithetical. The issue of creationism versus evolution encapsulates this philosophical antagonism. At its most serious, this opposition is a clash of cosmologies, epistemologies and ontologies. However, it should also be noted that while some religious people believe that science is outside religion because it is based purely on human observation, experimentation and thought, others believe that science is within religion, since, for them, God created all things, including humans, and humans created science. Without wishing to downplay the seriousness of this issue, we point out that religious organizations of many stripes are now engaged in environmental (advocacy, conservation, education and restoration) work; and there is much evidence – some presented in this paper – of the 'greening' of the world's religions (e.g. Gottlieb 2006; Reuter 2015).

A third reason for the neglect of religion in social science research on EE is perhaps the assumption, following the work of medieval historian Lynn White, that religion, and specifically the Judeo-Christian tradition, is at least partly to blame for the environmental crisis of late capitalism (1967). The thesis is that the overweening quest for material prosperity has roots in the Christian idea that man (sic) has dominance over nature (Hitzhusen 2007). Regardless of the historical veracity of this thesis, there is no doubt that people of many religions have joined the quest for material development, notably in rapidly developing countries such as Indonesia, the largest Muslim-majority in the world.

Thus, this paper on Franciscan EE in Indonesia sits atop a minuscule base of academic work on the topic. The main academic work in religious EE has consisted of a search for 'resources' in religious teachings, in an attempt to show both that religion has something to offer and that religion and science can work together in the great task of environmental restitution, and to alert religious adherents to their duty to attend to environmental issues (Haluza-DeLay 2014; Hitzhusen 2007). Such work is also beginning to be produced from within the discipline of Religious Education (e.g. Altmeyer 2021). This work usually consists of identifying basic teachings within a world religion that demonstrate that humans should work as stewards to care for the earth and nature; finding 'quotable quotes' from the relevant Holy Book that show this ethical concern and can be used to inspire adherents to environmental care; and highlighting environmental values that are common to both the society and religion, the better to attract and enlist citizens to environmental causes. For example, Kearns (1996) identified three primary traditions of Christian ecotheology in the USA as stewardship, eco-justice, and creation spirituality, and Salomone identified the great Franciscan traditions of monasticism and associationism as resources that could be mobilized in care of the earth (2006). However, as can be seen, this work tends to be less about education and more about environmental philosophy and theology. It is rare indeed to find work about classic education subjects such as curriculum and pedagogy in religious EE.

One exception to the neglect of religion in EE is the special issue of the *Canadian Journal of Environmental Education* on 'Religion and Environmental Education' (vol. 11, 2006), which asks, 'Where is the place for religion in environmental education?' In answering that question, Beringer suggests that EE

bear[s] responsibility to re-introduce, on a cultural level and global scale, lost dimensions of a religious-spiritual knowledge of nature. This includes reclaiming environmental ethics embedded in timeless metaphysical, epistemological, and ontological understandings of the cosmos, and validating non-scientific ways of knowing. (2006, 26)

While this is again more in the sphere of philosophy-theology than ‘education’, Haluza-DeLay points out that

One benefit of religious environmentalism is its presentation of alternative ways of conceptualizing the human–environment relationship. As citizens try to address environmental degradation, these alternative praxes may be considered as expanding the cultural repertoire. (2014, 262)

The eco-theology of St Francis of Assisi is another such ‘resource’, and Franciscan EE expands our ‘cultural repertoire’. Francis’s eco-theology and renunciation of material wealth constitute the distinctive moral foundation of Franciscan religious communities. Francis’s philosophy about ‘creation’ has its own context in the European medieval era and it is well to remember that context. Nevertheless, the moral relevance of his theology was made clear by Pope Francis in his Encyclical, *Laudato Si’*, of 2015 (Francis 2015, 3–4, 25–26). In this rather wonderful work, the intrinsic value of nature and the inter-dependence of humans and the natural world were affirmed; and the Pope appealed for a global ‘conversion’ to an ‘integral ecology’ where all humans would work together for the restoration and preservation of ‘our common home’ (Francis 2015). This call to action on environmental degradation and social injustice made it clear that humans’ unchecked exploitation of nature, greed and rampant consumerism, and ‘industrial civilization’ linked to ‘business interests’ had created a moral and spiritual crisis (Francis 2015).

However, it must also be noted that the strongly pro-environment stance of Pope Francis, the Encyclical and the Franciscan Order do not cover all of Catholicism.² Many public pronouncements by Catholics other than by the Franciscans are strongly pro-environment and even Franciscan in their language (e.g. Catholic Australia n.d.), but there are also Catholics who are apathetic, uninterested, confused or ideologically (politically) anti-environment.

Research questions, rationale and interpretive framing

Given this contemporary Catholic context, we explore how Francis’s followers have not only established educational institutions that explicitly follow Francis’s spirituality, but also have been trying to adapt his theology to solve contemporary ecological problems. The main research question we address in this paper is: How have Franciscan schools in Indonesia put his eco-theology into practice in environmental education? A sub-question here is about the effectiveness of the Franciscan EE, as revealed by students and in the school culture. A secondary but no less important question is: In what ways have Franciscan schools addressed the global environmental crisis, as indicated in *Laudato Si’*?

The research on which this paper is based is part of a large team project on EE in Indonesia, which began in 2013.³ The main rationale for the project was twofold. First, Indonesia is an important country globally for its biodiversity but is a country of dire environmental problems: untrammled exploitation of land and marine resources; massive sea, land and air pollution; a large and growing population; a rapidly developing economy and a large and growing middle class set on material prosperity (World Bank 2016). Indonesia is the second worst plastics polluter in the world after China (Jambeck et al. 2015) and the third largest emitter of greenhouse gases in the developing world after China and India (World Bank 2016). Second, there is a very low level of environmental awareness among the populace (Parker and Prabawa-Sear 2019). There are no green political parties, and elections are absent of environmental issues. There is national-level government rhetoric about climate change, and waste, and national commitments to international targets, and to Education for Sustainable Development, but there is little meaningful government action. While there is growing awareness of environmental problems – particularly the issue of waste – there is also a strong patriotic sense of the super-abundance of natural resources in Indonesia and no sense of the loss of biodiversity. At the level of society, the World Bank concluded that ‘environmental values are not deeply embedded in society, leading to undervaluation of natural resources and environmental services’ (World Bank 2014). We were keen to see if EE, and environmentalism more broadly, could address these twin problems.

A large portion of team resources and time was devoted to EE in public schools in Indonesia, but we were disappointed with what we found: the national curriculum was almost bereft of EE content but did mention caring for the environment as a competency objective and value to be instilled in children (Parker 2016); teachers had no idea how to incorporate environmental issues into existing subjects (Parker and Prabawa-Sear 2019); and a national program of EE in schools called the Adiwiyata program reached only a small percentage of schools and lacked educational efficacy (Parker and Prabawa-Sear 2019). We decided to turn to private religious schools which were explicitly 'pro-environment' in their vision or mission statements, or which had developed a reputation for 'being green'. As Indonesia is the largest Muslim-majority country in the world, some of these are Islamic schools – usually *pesantren* (Islamic boarding schools) – and these are the topic of other works (e.g. Fahrurrazi 2019; Gade 2012; Gade 2019, *passim*; Ghazali 2002; Hidayat 2014; Mangunjaya 2011). In Jakarta and elsewhere in Indonesia, Franciscan religious are known for being environment-friendly – not only in their schools but also in their work among farmers.

For this paper, we use an underlying theoretical framework of what we call critical eco-pedagogy. It represents the work of critical education theorist, Paulo Freire, and the approach of Kahn (2010) and Misiaszek, which Misiaszek calls 'ecopedagogy'. Freire's book, *The Pedagogy of the Oppressed* (1996), is well known and popular among education scholars in Indonesia. It expounds a postcolonial critique of conventional schooling known as critical pedagogy. Critical pedagogy seeks to reveal how schooling benefits dominant groups and disadvantages the subordinate – the oppressed in the title – helping to sustain and intensify oppressions. The aim is to dismantle the structures and processes within education that shape significant socio-economic and epistemic inequalities and power relations which historically oppress some groups and work to the advantage of the powerful. Freire's book does not address environmental issues, but Misiaszek opens the analysis to environmental harms. Thus, ecopedagogy is 'the teaching and learning of connections between environmental and social problems' (Misiaszek 2015, p. 280). We retain the word 'critical' both to keep the Freire genealogy, and to refer to other critical literatures. For instance, the work of education scholars such as Apple (2004) and Giroux (1992, 1997, 2011) critically examines discourses and socioeconomic structures and processes, the interconnections among growing social inequality, inequitable power relations, global market forces, and the need for an ethos of social justice. Ecopedagogy does not just add the environment to the list of harms: it aims 'to promote transformative action by helping to reveal socio-environmental connections that oppress individuals and societies' (Misiaszek 2015, 280).

The critical ecopedagogy approach facilitates a critical analysis of the data, enabling us to interrogate the EE in schools in relation to the underlying economic causes of environmental problems. It is particularly useful in helping us answer our second research question, on how Franciscan EE teaches about environmental problems and the global environmental crisis. However, it is not a religious or spiritual framework, and even though it advocates transformative change, it does not address the spiritual and moral aspects of the global environmental crisis: what Pope Francis calls the 'the ethical, cultural and spiritual crisis of modernity' (Francis 2015, para.119).

The paper proceeds as follows. We begin by outlining St Francis's eco-theology, and its place in the Pope's 'environmental crisis' Encyclical, *Laudato Si'*. We then turn to Indonesia, providing some background on those aspects of society, economy and education system that speak to our school setting. The Indonesia context is important, and has an impact on the Franciscan EE we found in schools. We then describe and justify our fieldwork methodology. The ethnographic body of the paper reports on EE in two Franciscan schools in Jakarta, the capital city, and Bekasi, a large city next to Jakarta, describing the modelling of environmentally-friendly practices by the teaching friars and nuns, school lessons, school culture, student attitudes to caring for the environment and their self-identity, the importance of support at home for environmental practices, and the community and government context. Finally we reflect upon the impact of Franciscan eco-theology and *Laudato Si'* in dealing with the global ecological crisis at the level of the school.

St Francis of Assisi – Patron Saint of Ecology

Francis was born in Assisi, now in Italy, in 1182. He was born from rich cloth merchant parents (Esser 1976, 17) and lived a life of luxury. Catholic tradition has it that in 1204 he had his first vision, in which he recognized that God was calling him to live in a simple way, as Jesus had (Sorrell 2009, 3). He renounced all his wealth and became a poor ascetic, ministering to the poor and sick. The story goes that his father expelled him from the family home, but Francis continued to serve the weak, living a life of emetical practices and radical poverty. He was a popular and charismatic preacher. He developed a love of 'creation' (nature), and reportedly delivered sermons to 'creatures', most famously his Sermon to the Birds. In 1209, Francis and eleven of his followers went to Rome where Pope Innocent III permitted him to commence the Order of Franciscus (Moorman 1968, 16). Franciscans became one of the four great mendicant orders of the Catholic Church, and to this day members of this Order strive to cultivate the ideals of poverty and charity. Francis was canonized two years after his death in 1226 (Warner 2011a, 145).

Francis demonstrated love and concern for the wellbeing of 'creatures', including insects, for the human cultivation of nature such as in cornfields and vineyards, and for non-living elements in the natural world such as air and wind. The way he called creatures and other elements 'brothers' and 'sisters' has been interpreted to mean that they were to be considered as equal with humans and not as objects to be dominated, as 'family', as having a common origin and to emphasize 'belongingness' (Francis of Assisi 1999; Samuel n.d.; Sorell 2009, 13). In the 'Sermon to the Birds' and the 'Canticle of the Creatures', Francis is said to show the importance of 'the virtue of humility' in dealing with other creatures (White 1967, 1206), and 'that humanity should concern itself with the welfare of creatures as a part of the Christian mission' (Sorrell 2009, 141). With his concern for the wellbeing of animals, he 'proclaimed the indissoluble kinship and community between humans and their fellow creatures under God' (Sorrell 2009, 141).

It is important to understand St. Francis's religious motivation, and not to impose modern understandings of environmentalism on his philosophy. Francis never used terms such as 'ecology', 'environment' or even 'nature' – in keeping with medieval discourse. Instead, he is said to have spoken about 'creation' and 'creatures' (Sorell 2009, 6).⁴ The sacredness of the life of every creature is the basis of Francis' eco-philosophy, but in his apparent assumption of the rationality of non-human creatures, in his appeals to their understanding, and in his exhortations to creatures to praise God, we see that his understanding is pre-modern. His appreciation of the intrinsic worth of nature is profound and complex; it is also deeply religious: he is said to have protected flowers 'out of love for Him'; he 'spared the vital parts of trees "out of love for Christ"' and advocated for the feeding of birds through the winter because of their 'edifying symbolic value' (Sorrell 2009, 139). The motivation behind it was to praise God for creation, to express religious devotion by caring for God's creation, and to exhort people to respect and appreciate creation. He 'loved nature as an expression of divine love' (Warner 2011a, 144).

The greening of the popes

In 1972, Pope Paul VI sent a ground-breaking message, 'A Hospitable Earth for Future Generations', to the Stockholm UN Conference on the Human Environment, which led to the Stockholm Declaration and concepts of sustainability and sustainable development – now enshrined in the Sustainability Development Goals. He linked environmental problems with the development themes of previous encyclicals, and in 1975 described environmental care as 'a form of solidarity with future generations. This was the first time that future generations were proposed as having moral standing in Catholic environmental teachings' (Warner 2008, 118). In 1979, Pope John Paul II declared Saint Francis the Patron Saint of Ecology. Then, in 1990, Pope John Paul II wrote *The Ecological Crisis: A Common Responsibility*, charging Catholics with environmental duties. He saw the ecological crisis as a crisis of morality – of the indiscriminate use of science and technology; lack of respect for life, the dignity of the human

person and the integrity of creation; and disregard for the interconnectedness of all aspects of the environment (John Paul 1990). He called for an '*education in ecological responsibility ...: responsibility for oneself, for others, and for the earth*' (John Paul 1990, 186).

Referring to St. Francis of Assisi, Pope Francis published an Encyclical – the most authoritative teaching document a pope can proclaim— in 2015, showing how very serious the contemporary ecological crisis is. The Encyclical is titled *Laudato Si*, which means 'Praise Be', referring to Francis of Assisi's 'Canticle of the Creatures': '*...Laudato Si'e, mi Signore cum tucte le Tue creature* (Be praised, my Lord, through all Your creatures). Pope Francis criticised our 'excessive anthropocentrism' – 'a Promethean vision of mastery over the world... Instead, our "dominion" over the universe should be understood more properly in the sense of responsible stewardship' (Francis 2015, 34). He repeated themes from the work of Pope John Paul and Pope Benedictus XVI, such as the inter-connectedness of life ('everything is connected'), and that the ecological crisis is a moral (spiritual) crisis. He was pointed in stating that our cavalier treatment of the planet is a sin, quoting Ecumenical Patriarch Bartholomew:

'For human beings... to destroy the biological diversity of God's creation; for human beings to degrade the integrity of the earth by causing changes in its climate, by stripping the earth of its natural forests or destroying its wetlands; for human beings to contaminate the earth's waters, its land, its air, and its life – these are sins'. For 'to commit a crime against the natural world is a sin against ourselves and a sin against God'. (Francis 2015, 3)

There are two imperative concerns of *Laudato Si'*: the contemporary 'environmental crisis' and 'the sufferings of the excluded' (Francis 2015, 5). On environmental crisis, Pope Francis criticised the ineffectiveness of our efforts to overcome the environmental crisis, and advocated conversion to a simple lifestyle. Readers might be interested to know that Pope Francis has a section on environmental education and says it should aim:

210....to restore the various levels of ecological equilibrium, establishing harmony within ourselves, with others, with nature and other living creatures, and with God. Environmental education should facilitate making the leap towards the transcendent which gives ecological ethics its deepest meaning. It needs educators capable of developing an ethics of ecology, and helping people, through effective pedagogy, to grow in solidarity, responsibility and compassionate care.

211. ...[T]his education [is] aimed at creating an 'ecological citizenship'.... Education in environmental responsibility can encourage ways of acting which directly and significantly affect the world around us, such as avoiding the use of plastic and paper, reducing water consumption, separating refuse, cooking only what can reasonably be consumed, showing care for other living beings, using public transport or car-pooling, planting trees, turning off unnecessary lights, or any number of other practices. All of these reflect a generous and worthy creativity which brings out the best in human beings. Reusing something instead of immediately discarding it, when done for the right reasons, can be an act of love which expresses our own dignity. (Francis 2015, 60–61)

Pope Francis's *Laudato Si'* strongly elevated the role of actual practices and experiences. Four out of six chapters of *Laudato Si'* are explicitly concerned with environmental realities, practices and experiences. However, most of the studies on *Laudato Si'* have been in the field of theology or ethics and have given very little attention to the practical aspects of how it might be applied in the community and the challenges of doing so. Van Wieren has recently emphasized the importance of the practical aspects of *Laudato Si'* compared to its ideas (Van Wieren 2020), though unfortunately the book of which this is but one chapter does not pay adequate attention to how *Laudato Si'* has been put to work in the field, including in the field of environmental education. This study begins to fill that gap.

The great awakening?

In academic writing about St Francis of Assisi, and especially of his eco-theology, it is *de rigeur* to mention the extremely influential article of medieval historian Lynn White, 'The Historical

Roots of our Ecological Crisis' (1967).⁵ White's thesis was that Christianity's 'orthodox ... arrogance toward nature' (White 1967, 180) was the cause of the mass destruction of nature and the ecological crisis. Nevertheless, he singled out St Francis for providing an 'alternative', less anthro-centric, Christian view of nature. White misrepresented Francis as a radical heretic,⁶ but he led the way in appreciating St. Francis.

Nevertheless, most are aware of limitations in applying Francis' philosophy and methods to our present environmental crisis. St. Francis did not have to confront 'a world gone mad' (Samuel n.d.): a powerful global fossil fuel industry, late capitalism, massive loss of biodiversity and climate warming. Warner (2011b, 121), a Franciscan brother, notes the importance of combining the inspiration from Francis with 'a contemporary moral vision' and 'the best scientific information' in order to transform Francis' eco-theology in our age of ecological crisis.

We must acknowledge that some elements of Christianity are (potentially) environmentally obstructive. For instance, even in the *Laudato Si'*, the earth is presented as a gift to humans from God. This idea is potentially anti-environment and anthropocentric, in that it could be said that the earth is ours to do with as we will (McKim 2019, 6–7). Pope Francis did argue specifically against this interpretation, as undesirable extreme anthropocentrism (Francis 2015, para. 115). Nevertheless, there is a hierarchy of species in *Laudato Si'*: the idea that human beings are 'stewards of all creation' maintains the hierarchy that places humans above other animals, and some more ecocentric environmentalists object to this (Francis 2015, para 236; see also O'Brien 2019). Heeding warnings of the misinterpretation of inspirational figures such as St. Francis, as well as the pitfalls of hagiography and the retrospective 'green mining' of sacred texts, it is still important to note the 'greening' of the world's religions that has occurred since the 1970s (Warner 2008; Sponsel 2020). This greening, as well as the unpredicted growth in religious belief and spirituality (Parker and Hoon 2013), have perhaps been ignored by mainstream EE. Sponsel has noted:

Most secular approaches only treat specific superficial symptoms, rather than the underlying root causes of the unprecedented global environmental crisis as a whole. ...[M]ost ignore the fact that *ultimately the environmental crisis as a whole is a spiritual and moral crisis* ... that ... can only be resolved by radical transformations in the ways in which industrial capitalist and consumerist societies, in particular, relate to nature (Foster et al. 2010; Gottlieb 2006; Rockefeller and Elder 1992). This has been variously called the Great Awakening or the Great Turning. This transformation from the Industrial Age (Anthropocene) to the Ecological Age (Ecocene) involves fundamental changes in world views, values, attitudes, behaviors, and institutions relating humans to nature in far more sustainable and green ways (Sponsel 2020, 1).

This paper will investigate if there is evidence of a Great Awakening in the Franciscan schools we study in Indonesia, and it now turns to Indonesia.

Overview of Indonesia

With a total population of ~270 million (World Bank 2019a), Indonesia is the fourth largest country in the world by population, and, as mentioned, the largest Muslim-majority country in the world. Islam is the dominant religion: some 87 per cent of the population of Indonesia follows Islam. According to the 2010 census, there were 207 million Muslims in Indonesia (BPS 2010 Census). (Figures for the 2020 Census are not yet published.) The number of Franciscans is not known, but it must be a small portion of the 2.91 per cent of the population (numbering almost 7 million) who are Catholics (BPS 2010 Census).

Indonesia is neither a secular nor an Islamic state, but it is a religious country. Being religious is normal in Indonesia, and everyone must have a religious identity. Citizens must identify their religious affiliation in official documents required by government, e.g. birth and marriage certificates, and the national ID card. But more than this, 'religion and faith are essential parts of national culture and daily life' in Indonesia (Azra 2005, 1). Religion is a key index of citizenship (Hidayah 2012, 124). In the public sphere, including schools, formal and informal events are

opened with prayers; Indonesia has public holidays that mark important days for its six recognized religions. In the sphere of education, religion is an inherent and very public element of schooling. Religion is a compulsory and examinable subject at all levels of schooling. In this context, all EE is 'religious': the 2013 Curriculum states that God created the world, and creationism underpins all school subjects, including science subjects such as Chemistry and Biology (Parker 2016).⁷ Indonesian teachers have an obligation to connect all knowledge taught in school with religion, in order to strengthen students' religious beliefs and piety.

As noted above, Catholics are a religious minority. Unfortunately, religious intolerance is on the rise in Indonesia, particularly in Jakarta, though Catholics have not been particularly targeted. The most famous case is the blasphemy case of Chinese Christian Jakarta Governor, Basuki Tjahaja Purnama, better known as Ahok. In this context, it is difficult for members of religious minorities to speak out or dissent in public.

Indonesia was recently 'promoted' to the ranks of the lower middle economies and some optimistic (pre-Covid-19) forecasts have Indonesia as the fourth largest economy in the world by 2050 (e.g. PWC (PricewaterhouseCoopers) 2015). Under authoritarian President Suharto (1966–98), the economy was put on a development trajectory, producing remarkable economic growth based on exports of commodities (mainly carbon-based natural resources), domestic consumption and deregulation. In the period 1967–2015, average annual economic growth was a remarkable 5.6 per cent (World Bank 2019b, 4). Poverty declined significantly: in 1984, some 70 per cent of the population was classified as poor; by 2016 it was 11 per cent (World Bank 2019b, 3 and 8). There has been a significant shift of population to the cities, and now the urban population makes up 56.6% of the total population (2020); the rate of urbanization is 2.27% per annum (2015–20 est., CIA 2020). Our field sites are schools in central Jakarta and Bekasi, one of the satellite cities of Jakarta that make up the megalopolis known as Jabodetabek. The population of Jabodetabek is ~31 million, and the population of this urban agglomeration constitutes about 11.5 per cent of the total population of Indonesia (City Population 2015). There was extraordinary expansion of the middle class in Indonesia during the last 20 years of the twentieth century: the World Bank reports that the middle class grew from 7 per cent of the total population in 2002 to 20 per cent of the population in 2015, with 52 million Indonesians currently belonging to this group (World Bank 2019b, 8). It is this middle class and the lower middle class which produce the senior high students who attend the Franciscan schools we studied.

The rapid economic development of Indonesia, the phenomenal growth of the middle class, mass urbanization, the rapid expansion of formal education and upward credentialing of the labour force (Parker and Nilan 2013, 7) are all features of the socio-economic context in which students who are our main focus in this paper live. In a year or two (most of our interlocutors were 16 and 17 years old), they will be leaving school and looking for work or university places. The labour market for young people is particularly difficult. Although we should consider statistics in Indonesia as rather unreliable, the recorded youth unemployment rate is around 19 per cent (CIA 2016 cited in Priyono and Nankervis 2017, 106).

Education in Indonesia can be said to be one of its 'success stories'. Since Independence in 1945, there has been an enormous effort to educate the population. From a low base under colonialism – only about 2 per cent of Indonesian women were literate, and nearly 11 per cent of men –, now, in the early twenty-first century, there is almost universal literacy for those under 25 years of age, an adult literacy rate (percentage of those 15 years and above) of 95.12 per cent (UNESCO 2017) and almost universal completion of primary school. While the 'quantity' of schooling is a solved problem (with the exception of some remote areas and eastern provinces), the quality of education is now considered the main problem. For instance, Indonesia's performance in international testing such as the OECD's PISA test is abysmal: it is one of the lowest among the 69 PISA-participating countries in all three subject areas, for both girls and boys (OECD 2016). Teacher expertise (in both pedagogy and in their subject areas) has been

identified as a particular weakness; unfortunately, the quality of in-service professional development leaves a lot to be desired.

All schools (public and private, religious and non-religious) in Indonesia must follow the national curriculum, and there are compulsory examinations at the end of each level of schooling. Despite the expressed desire of the Ministry of Education and Culture (e.g. in curriculum documents), the main pedagogy used in schools is textbook-based and assumes rote learning. Multiple studies have identified the text-based, rote learning, examination-driven pedagogy as problematic. Bjork, for instance, reckoned that only 5 per cent of the lessons he witnessed included student discussion (Bjork 2013, 60). Utomo wrote, 'Teachers claimed to know what CBC [Competency Based Curriculum] is, but in actual classroom implementation of CBC, these teachers were lost, returning instead to the former curriculum, which they were more comfortable teaching' (Utomo 2005, v). These patterns of reliance on repetitive, text-based study indoors, teaching to the exam, and teachers' lack of confidence and knowledge have been found in several studies of EE in Indonesia (e.g. Kusmawan et al. 2009, Prabawa-Sear 2019).

The education system in Indonesia is huge, and Franciscan schools represent a tiny portion of one per cent of all schools. The Franciscan Order has been most active in eastern Indonesia. The establishment and running of schools has been an enduring focus of their work since the sixteenth century, though they have only been active in Jakarta (then Batavia) since 1929.

Francis's eco-theology has not only influenced individual friars, but also their practice of life at the institutional level. The Indonesian Franciscan friars of OFM⁸ formed JPIC Indonesia (Justice, Peace and Integrity of Creation in Indonesia⁹), which works on environmental advocacy and activism, organic farming and EE. In eastern Indonesia, JPIC has been advocating for a sustainable environment and amplifying the voices of vulnerable local people affected by environmental destruction, or potentially affected due to the exploitation of natural resources and geo-thermal mining. Their advocacy choices are not infrequently very risky because they challenge the interests of corporate capitalism supported by government, as happened in East Nusa Tenggara (Denar 2015).¹⁰ In Manggarai, Flores, they developed a flourishing organization of over 500 Ecofarmers, who learn organic agriculture and practise care that has attracted many farmers to take up the priestly vocation and enter a seminary.¹¹ JPIC conducts seminars, discussions, training and assistance for teachers and students in Franciscan schools.

Fieldwork methodology

The main methodology of the larger project was anthropological fieldwork involving participant observation, interviews and focus group discussions (FGDs) in many different locations around the country – in different provinces, in rural and urban locations, and in many different settings (in senior high schools, universities, among farmers' groups and environmental non-government organizations, at events such as Coral Day and environmental competitions and performances, short courses, and among individual environmental activists). The aim was to capture a wide range of EE actors and types of education in diverse contexts in order to get a nationwide picture of EE – it would not be comprehensive, given the size of the archipelago, but would be indicative.

The qualitative fieldwork was complemented with a survey, conducted wherever possible in conjunction with the immersion fieldwork. While the basic survey was conducted among 1,000 students in senior high schools in the cities of Yogyakarta and Surabaya which had EE programs running, the same survey was also conducted among much smaller groups of farmers, university students and such. The main aim was to find commonalities and elicit patterns such as common identifications, attitudes and self-identified pro-environment practices across the diverse sites. Some of the results were reported in Parker, Prabawa-Sear, and Kustiningsih (2018). Two hundred questionnaires were collected from students in the two Franciscan schools.

For the schools component of the larger project, we chose to focus on senior high schools, with students in grades 10–12, and aged 16–18 years, because students at this level are

articulate in Indonesian; have long been exposed to the values inculcated by schools, families and communities; and have some awareness of community values and political issues. (See Prabawa-Sear 2019 for the most comprehensive report of the schools component.) The project had University Human Research Ethics approval,¹² and followed agreed conventions about the anonymity of individuals and schools, privacy and confidentiality, informed consent and the storage and management of data.

The Franciscan sub-component of the project was devised, as mentioned above, because of the paucity of the EE found in public high schools. Fieldwork in the two Franciscan schools was conducted by the first author in January 2019, and April-May 2019. At the beginning of the fieldwork, he held two FGDs with five students in each school in order to elicit general information about environmental lessons, co- and extra-curricular activities, the practice of EE in school and home, etc. Basic information from these FGDs was explored more deeply in the individual interviews with students. Interviews were conducted with 25 religious leaders, teachers and students. Some people were interviewed several times. Most of the interviews were conducted face-to-face with a single individual. In addition, the researcher interviewed Franciscan friars and sisters working for the school and outside the school, in Yogyakarta, an enclave of Catholic priest education, and in Ciloto, West Java, at the Franciscan green farm.

The first author also conducted observations in the schools, the friars' and sisters' houses, and the students' homes. The observations in schools were done to see the implementation of green school management as well as the students' practice.

We chose two Franciscan schools that cater to distinctly different socio-economic classes. St Francis's in Jakarta has about 60 students, and caters to those of lower to middle socio-economic status, and St Mary's in Bekasi has about 850 students and most students are from the middle to upper class. (See below for more on this.) St. Francis's Senior High School is one of several schools organized by the St Francis Foundation, which was founded and managed by OFM friars. St Mary's Senior High School was founded and managed by the Foundation of OFS sisters and follows the teachings of St Francis of Assisi and Magdalena Daeman (1757–1858), the founder of the Congregation of the Franciscan Sisters of Heythuysen (within the OFS). The students of both schools know very well that their school identity derives from those figures. However, the composition of the student body is religiously mixed. At St Mary's, less than half the student body is Catholic; Protestants and Catholics make up 88 per cent. At St Francis's, less than one-third of the student body is Catholic; Protestants and Catholics make up 85 per cent. Both schools include primary, junior high and vocational schools.

The economic background of the student body affects the provision of facilities to support environmental education. The student admission fee at St Francis's was about IDR 2.5 million (USD177.58 at 20/4/2020) and its monthly tuition fee was around IDR 450,000 (USD31.51 at 20/5/2020, depending on parents' financial capacity); the student admission fee at St Mary's was around IDR 20 million (USD1,440.64 at 20/5/2020) and the monthly tuition fee was approximately IDR 1.5 million (USD108.05 at 20/5/2020) (interviews with the school principals, 14 and 20 April, 2019; student FGD, 20 April 2019). St Mary's has superior 'green' facilities such as three different types of rubbish bins in front of each class room, and a greenhouse for plant propagation; St Francis's has no such facilities.

Our chosen methodologies, and purposive selection of schools, of course shaped the data we collected. While our main subjects of focus were the students, the teachers and religious were also important, and we did find that the decision to research schools with different socio-economic catchments was productive. Students freely reported on their home and family life in relation to environmental practice. We were only able to conduct a couple of visits to parental homes, but this too was an effective methodology. This method of collecting data enabled us to identify three levels that affect EE in these schools: school policy, teaching and student practice at the micro level; the environmental practice of students' families at home at the meso level; and

community attitudes, and local government as well as broader provincial and national government policies and programmes related to the environment at the macro level.

The practice of environmental education in Franciscan schools

In order to answer the first of our questions – how the Franciscan schools put Francis' eco-theology into practice –, we first present information on the school culture and teaching programs, with a focus on EE.

School culture and programs

Despite the fact that it is not easy for Franciscan religious living in monasteries to practise the eco-philosophy of St Francis, especially in the large cities, Franciscan friars and nuns are trying their best to practise the green life (interview with friar, Jakarta, 15 April 2019). We could see this in their separation of waste, making of compost, recycling of recyclables (given away free to informal waste collectors), serving of tea in glasses (instead of in plastic bottles or canned drinks), re-using of bags, making of sellable bags from plastic sachets (e.g. for laundry detergent, shampoo, drinks), and planting of vegetables, fruit trees and flowers around their monasteries and communal houses in Jakarta, Bekasi and Yogyakarta. While these practices may seem routine to readers who live in the cities and suburbs of the Global North, in Indonesia such practices are rare and remarkable. Students are exposed to this modelling of a simple, considered lifestyle every day.

Following St. Francis, Franciscan religious in the schools and in their monasteries routinely call the sun and earth 'brother sun' and 'sister earth' in their daily conversation. In celebrating Advent and Christmas, they have nine days of prayer (novena), Day One being a prayer for all of creation, Day Two for animals, and so on for plants, the land, water, air, climate, the poor and finally a prayer of thankfulness to the Creator on Christmas Eve.¹³ Thus, besides their work of environmental advocacy, modelling of environmentally-friendly everyday life, support for the poor and marginalized, and EE, they also practise green rituals.

St Mary's School has a core subject in the curriculum which we will call St Mary Studies. The vision and spirituality of Magdalena Daeman are taught to students through this subject (one lesson per week of about 38 lessons). Though there is no such similar subject in St Francis School, the vision and spirituality of St Francis are transmitted to students through workshops, training and other co-curricular school activities. Both schools comply with the national curriculum, which mandates the teaching of Religion and Character Education (three lessons per week).

The principal of St Mary's identified two characteristics of Franciscan schools as points of distinction: their teamwork and togetherness, and their valuing of manual labour (*kerja tangan*). The pastor noted that they wash their own clothes, sweep and mop. 'For Franciscans, these practices are common'. The point is not so much self-sufficiency or independence (*kemandirian*), which is emphasized in other schools such as Islamic boarding schools (*pesantren*) (Parker and Nilan 2013, 99–101), but that manual work has value in itself, and that doing manual work is humbling and part of living a simple lifestyle.

In 2019, St Francis's School had a motto, 'My Green School, My Green Home'. JPIC played an important role in strengthening the Franciscan environmental vision among students and teachers through its 'JPIC goes to school' programs. JPIC held student training workshops on the 'My Green School, My Green Home' theme in February 2019 in which several OFM brothers tried to build students' commitment to reducing the use of plastic, to bring drink bottles to school, to save electricity and water, to use public transport, to care for plants and to practise other, everyday, environmentally-friendly activities, as suggested in *Laudato Si'*. Apart from these practical measures that connected school and home, there were overarching messages about the arrogance of humankind toward nature, and the need for students to live a 'lifestyle' that was 'thrifty, caring, simple, sharing, meaningful and hopeful' (JPIC-OFM Indonesia n.d.). The

students mentioned that through this workshop they gained knowledge and motivation to live in an environmentally friendly manner. Some of them said that it was the first time for them to participate in that kind of environmental training, though those students who had been through the Franciscan system since kindergarten were much more thoroughly socialized into environmentalism and connected it to St Francis (student FGD, Jakarta, 20 April 2019).

At St Mary's, the work of instilling environmental values was conducted less directly by school management through a series of annual student excursions. First, the character-building program. In this program, Year 10 students participated in an outward-bound program for several days. The essence of the program was self-reflection, including reflection about the natural world and creation. Second, the Magdalena School Social Program for Year 11 students. This was a week-long program of practicing the values of St Francis of Assisi and Magdalena Daemen in remote villages. In 2018 the Program was held in Temanggung, Central Java (about 450 km from Bekasi), where the students lived in farmers' homes and learned how to farm in the fields and to plant trees. Third, the retreat for students in Year 12, which emphasized spiritual and ethical reflection. The retreat was held outside the school for several days. The goal was to strengthen the character of students in accordance with the principles of St Mary Studies before they graduated from school (interviews with principal and vice principal, Bekasi, 14 and 16 April 2019). Compared to the practice at St Francis's, the transmission of environmental Franciscan values at St Mary's was more institutionalised, and with strong emphasis on character building, which has become fashionable in Indonesia and even institutionalised in the national curriculum, as part of the compulsory Religion subject.

In what subjects did students say they were learning *for* the environment, rather than just *about* the environment (Lucas 1972; Parker 2016)? In general, students mentioned Biology, Geography and Religion. They did not mention Physics and Chemistry, which teach *about* nature. In the subject of Biology, students were most impressed with the practice of planting and a semester-long 'experiment' with hydroponics. Both at St Mary's and at St Francis's, the students were invited to try planting directly. At St Mary's, the students planted vegetables in the school's greenhouse, while at St Francis's the students planted in pots in the school grounds. We return to this below.

Although there is no specific section about environmental education in the curriculum for the Religion and Character Education subject (Parker 2016), the teachers of religious education in both schools went beyond the curriculum to discuss environmental spirituality in religious education classes. Both schools used the Catholic Religious Education book, 'Sent as Disciples of Jesus' (*Diutus sebagai Murid Yesus*), which unfortunately does not cover any environmental issues. However, the teachers of religious education often delivered environmental values to students during class. Both teachers and students described how, despite the absence of EE in the formal curriculum, teachers conveyed pro-environmental values and practices.

The Religious Education teacher said, 'We do not have a specific section [about the environment in the curriculum] ... But because we follow Franciscan spirituality, ... as Religion teachers, we do not only teach... but also emphasise the praxis [of an environmentally friendly life]'.

In the subject of St Mary Studies, a section of the textbook for Year 10 students consists of a reading titled 'Adeline Tiffanie Suwana: "Virus Spreader" of Environmental Love'. In 2007, Tiffanie's family home in Kelapa Gading, Jakarta, was hit by a flash flood that displaced her family for some time. Tiffanie, who was 11 years old at the time, wondered why one particular area in Jakarta was flooding, while other areas were not flooding. From the school and the neighbours, she obtained different answers to her questions, including that the flood was God's will, that flooding occurs because of the accumulation of garbage that clogs the rivers, and that floods occur due to global warming. Afterward she learned about the environment from different sources. Then she and her friends began a group named Friends of Nature (Sahabat Alam), beginning with the planting of mangrove seedlings. Friends of Nature focused on environmental conservation. Currently, the group has 25,000 volunteers and has carried out more than 100 environmentally-friendly activities (Student Book Year 10 2016, 159–161).

Another section of the textbook talks about two figures, Sarji (63 years old) and Dimin (64 years old), who initiated environmental actions at the village level in Kalimantan. Starting with the domestic (kitchen) waste of his neighbours, Sarji created a community-based waste management business. Waste from households was turned into organic fertiliser which was very useful for agriculture and gardening. Currently Sarji and the villagers have a waste bank (*bank sampah*) with a total of 1,595 members. Dimin initiated a similar movement but the basic materials were organic waste from a 'wet' or traditional market (Student Book Year X 2016, 172–174).

The school slogan of 'My Green School' at St Francis's has been put into practice by planting hundreds of big and small trees in the school yard, among other activities. Compared to other schools in Jakarta, this school can be categorised as literally a very green school. The Franciscan sister house, kindergarten, elementary school and junior high school are also very green, such that the school complex is like an urban forest, which is extremely rare in Jakarta.¹⁴

A prominent green policy at St Mary's was the implementation of the paperless program. At the beginning of 2019, the new school principal announced the implementation of a paperless policy. Besides the economic efficiency consideration, the main motivation for the initiative was based on environmental consciousness: that is, to reduce logging. Both double-sided printing and the increased use of digital technology aimed to reduce paper use in classrooms and in exams (interview with principal, 14 April 2019). Again, while this might seem unremarkable to some readers, it is extraordinary in Indonesia. Our survey of 1,000 students in schools where EE was practised revealed that 530 students 'rarely' printed on both sides of the paper (Parker, Prabawa-Sear, and Kustiningsih 2018). In addition to contributing to a reduction in logging, the implementation of the paperless policy also contributes to the lessening of paper waste. Paper waste is not yet well recycled in Indonesia.

A striking gap between the idea of an environmentally friendly culture and its practice in daily life was the inability of school leaders to force school canteen managers to reduce the use of plastic and polystyrene foam and to implement environmentally friendly waste management (interviews with principals, 14 and 15 April 2019). The canteens in the two schools were not integrated into the school's environmentally friendly program.

In the following section, we continue to answer our first main question, on how Franciscan schools have put his eco-theology into practice, but now the emphasis is on the effectiveness of that education. In this section we probe students' response to that education: their evaluation of their lessons about the environment, their self-identity and their environmental behaviours.

Students' environmental learning, identity and behaviour

Students often commented that they appreciated how formal lessons were 'extended' or 'expanded' by teachers, in order to convey environmental messages. For example, a student said,

One day Mr. [Teacher] took a session of the Religious Education class to explain about the idea of 'My green school, my green home'. Part of his explanation was that our school is already green so we should also do greening at home.

Another student reflected on his Religious Education class,

In our religion, the environment comes from God. God asked us to take care of the environment... God wants beautiful things. [Environmental] harm comes from human greed and attitudes. For instance, the exploitation of trees, the exploitation of animals. Those protected animals that are sold to somewhere, smuggled... The men are not afraid of sinning, they only think about money.

A few students did seem to have absorbed the Pope's message that environmental issues were also social and moral issues. In Geography, students had learned about the problem of flooding, which occurs every year in Jakarta (Akmalah and Grigg 2011). The situation is now so bad that the government has declared that it will build a new national capital in East Kalimantan (Henley and Frigo 2020; Tacconi 2019). The teacher had described how there had been social conflict as a result of the flooding, and suggested measures that could be taken to reduce flooding in the future, for instance, by sorting rubbish so it does not clog the rivers

and canals (FGD St Mary's, also see below). The two environmental issues most often mentioned by our student participants were flooding and waste management.

The experience of planting and the semester-long hydroponics experiment were meaningful for these urban young people. Some students mentioned that this was the first time in their life they had planted vegetables. After the Biology hydroponics lessons, one of the students whose experiment had 'failed', said he was really 'happy' and 'excited' about the '*praktek*' (practical) and went home and bought cotton, rockwool and fertiliser in order to repeat the experiment, and then brought the results in to school to show the teacher, 'I didn't fail the prac. I did it!' he said proudly. This incident revealed that for many students, there was congruence between home and school, and the level of economic sufficiency at home was such that a student could follow up, using home resources, when necessary. While the enthusiasm was laudable, it seemed to us that the students were most impressed by the fact that these lessons involved *praktek*, rather than the usual, boring, desktop rote learning (Parker and Prabawa-Sear 2019).

Two hundred students at the Franciscan schools completed written surveys that were identical to surveys designed by the larger project and completed by 1,000 students at senior high schools in the cities of Yogyakarta and Surabaya that had EE programs running. A key question in the survey was: Do you identify as an environmentalist? In the Franciscan schools, 74.5 per cent of students identified as an environmentalist, compared to 81.9 per cent of the 1,000 students (Parker, Prabawa-Sear, and Kustiningsih 2018). Of course, the question of what it means to be an environmentalist is still open. However, it is perhaps instructive that another team member conducted the same survey among 804 undergraduates in four large public universities in Jakarta, Bandung, Yogyakarta and Palembang. She did not select the universities, the courses or the respondents with reference to any environmental attributes or environmentalist affiliations. In contrast to the results from the students at 'EE' schools and Franciscan schools, only 47.8 per cent of the university students identified as an environmentalist (Parker, Prabawa-Sear, and Kustiningsih 2018).

What is the influence of Franciscan EE on students' practices in their daily life? Before answering that question, it is vital to remember the limitations imposed by the context of Indonesian urban society, and by the fact that most of the students' everyday environmental practices are determined by their families and the broader community. They are not autonomous beings, and in fact in Indonesian families and schools, children are expected to obey their seniors (parents and teachers), not challenge existing norms or suggest new practices. While 'student voice' in education generally, and EE in particular, has become fashionable, for Indonesia we concur with Jucker:

The highly idealistic notion – which assumes that we just need to change the way we educate our kids and students in order to make sustainability fall into our lap – is both horribly naïve *and* utterly unfair to the younger generation. (Jucker 2002, p. 9, emphasis in original)

Indeed, it seems likely that the 'student voice' movement is mainly applicable in Global North countries (Chineka and Yasukawa 2020).

The researcher observed that students at the two schools were used to disposing of garbage into a rubbish bin. This is no small achievement in Indonesia, where the prevailing middle-class understanding is that someone else will clean up the rubbish. For instance, in the survey of 1,000 students at schools with EE programs, 809 students said that, 'If there were no bins' they would 'often' just throw rubbish onto the ground (Parker, Prabawa-Sear, and Kustiningsih 2018). However, sorting rubbish is a different matter. St Mary's provided three garbage bins (one each for organic, recyclable and general waste) for each classroom. All bins contained mixed organic waste, papers, bottles, polystyrene foam, plastic and other garbage. This practice was the most striking mismatch between the theory of separating waste and its practice. However, it might have just been realistic. Prabawa-Sear observed that just outside the school gate, the garbage

collector ignored the separate piles of waste that had been sorted into organic, recyclable and general waste by the students, and recombined the piles, in full view of the students (Parker and Prabawa-Sear 2019). This unfortunate incident underlines the fact that schools are not islands, isolated from their communities and local governments. We return to this point shortly.

In both schools, students were very aware that it was desirable to bring drinking water to school in reusable water bottles, and food in a lunchbox. (Indonesia's tap water is not potable.) Many students did indeed bring food in reusable containers, some making the point that this food was healthier than the food that could be bought on the street or in the canteen, and most brought drinks in reused bottles.

The importance of home

Such practices require good home-school communication. This is not an area of strength in Indonesia's education system. There has long been a tradition that parents should not intervene in schools, and, despite the introduction of school-based management, parents' only contribution is often to make funding contributions to the Parents' Committee (Bandur 2008, Bjork 2009, Sumintono 2006). In this regard, this long quotation from a male student at St Mary's highlights that the environmentalism enjoined at school is also practised at home (FGD 16 April 2019).

We are a family that is very concerned about the environment. So, for example, I go to school by bicycle ... I will never use plastic straws or plastic bags ever again. The plastic bags (at my home) are left over from shopping in the past and now we reuse them as garbage liners. On electricity, for instance, after watching TV, if I don't turn off the TV, then I will be rebuked (by my parents), so it must be turned off. Lights, after doing homework, must be turned off. Any fan which is not being used must be turned off. At night, my home is dark. The rooms that are bright are only those being used - for instance my room (when I am using it). When a common room is not being used, for instance, when my parents are in their bedroom and I am in my bedroom, then the light will be turned off.

Some of these declarations are very strong statements of this student's pro-environment practice, and indeed his identity. Some other students in the two schools said similar things about reducing the use of plastic at home. The student's reportedly thrifty use of electricity is unusual in Indonesia; his habit of riding a bicycle to school is exceptional in Jakarta and Bekasi as it is dangerous: roads do not have bicycle lanes, and traffic is dense and undisciplined.

When talking about their green behaviours, students often mentioned the practices of their parents or family members. One student said, 'My Mum keeps the plastic bags that are brought home from Matahari Mall or from elsewhere. Later they are used for shopping at the traditional market' (interview, 30 April 2019). 'My sister does not like to consume plastic. She refuses to use plastic straws. When she orders food at McDonalds, she asks the servers not to give her a plastic spoon, because she brings her own re-usable stainless-steel spoon' (interview, 21 April 2019). From interviews, we found that students tended to practise an environmentally friendly way of living more consistently when they had support from their family members. The support was not in the sense of approval or moral advice, but rather practical: how an environmentally friendly lifestyle could be practised by the members of a family together.

It seems likely that many families are in line with the school's environmentalism, particularly in the case of St Mary's. Being private schools, where parents have to pay a considerable sum for tuition (unlike public schools, which are supposed to be free), parents have made a very deliberate choice to send their children to these schools.

However, the following vignette from field notes of the home life of two students at St Francis's suggests that this apparent congruent environmentalism should be qualified by socio-economic class:

There are two students from St Francis's whose profiles are somewhat similar, one male student (Muslim) and one female student (Catholic). The two students come from low socio-economic class families, and live in small simple houses in densely populated urban areas.

In the family of the male student, used water and excreta from the family bathroom and toilet are just thrown into a ditch in front of their house. This makes the drain very dirty and unhealthy. Noone has planted any trees, vegetables or flowers around the house for the reason of limited space. The mother diligently separates plastic bottles and cardboard junk from other waste every day. This family also rents out some simple rooms (*kos-kosan*) to others. The student sometimes helps his mother pick up plastic bottles and cardboard junk from the *kos-kosan*. The family do this more because of economic motivation, than on the basis of environmental awareness. The plastic bottles and cardboard are sold to get additional casual income. It seems that the thinking is very pragmatic. On the other hand, the family minimises the daily use of plastic, for example, when shopping, they bring own bags. The student brings food to school from home using re-used containers and a tumbler for drinking water. However this student did not reflect deeply on his actions with reference to the spirituality of St. Francis.

The female student is almost the same as the male student. She and her family do not have any plants around the house, because of limited space. She never talks about environmental issues with her mother and sister at home. Although she understands the environmental spirituality of St Francis of Assisi that she learned at school, she said she does not talk about it at home with her mother and sister.

The community and government context

Although the two schools have good environmental vision, this is not the case with the local governments and communities around the schools. Environmental damage was so heavy and the reasons for it so complex, that little changed from year to year. St Francis's delivered EE in a context where heavily polluted water flowed along an open, local-government drain in front of a school building, even inside the area of the school, and it was beyond the capacity of the school to change this. (Many houses surrounding the school had no drainage for bathrooms, so the grey water and sewage flowed down the public ditch (interview with CGT, 26 April 2019). St Mary's had a painfully neat, clean, green campus, while cars, large trucks and other motor vehicles producing serious air pollution passed along a busy road in front of the school.

As noted above, every wet season, Jakarta and Bekasi become dysfunctional due to serious flooding. There has been no comprehensive planning and implementation of government policies to overcome flooding, so floods continue every year (Ernis 2020). In a FGD with students at St Francis, the researcher raised this issue with students. This probing follows the lines of critical eco-pedagogy, which seeks to identify environmental problems, and their causes, and to find solutions. The researcher asked the students if it would be appropriate to criticise the government for their ineptitude and lack of care for the urban environment. That is, the government had issued permits to allow housing developments in the highlands behind Jakarta, so that many trees were cut down, causing severe run-off. The students answered that the party that must be criticised first is 'the community', not the government. According to them, the fact that the rivers and drains in the city were full of garbage meant that the flow of water was impeded and flooding happened. They chose not to criticise the government for the absence of waste services, causing the clogging of rivers, or for allowing urban development upstream, but instead blamed 'the community'. The students appreciated the policy of the former Chinese Christian Governor of Jakarta, Ahok – who was found guilty of blaspheming against Islam and imprisoned. He had employed large numbers of 'yellow forces' (*pasukan kuning*, so-called for their hi-viz vests): cleaners who cleaned up huge amounts of rubbish, sand and soil from the canals, gutters and rivers in the city and surrounding areas. During the Ahok era, the students said, the 'yellow forces' did a great job. There was a strong class element in the support for Ahok: the middle classes want cars and traffic that flows, no floods, and a comfortable, secure lifestyle, and supported Ahok's forced slum clearances and 'neoliberal urban redevelopment', perceiving that it is the poor slum-dwellers who clog the roads and the rivers (Wilson 2017).¹⁵

This case was very similar to an exercise in practical EE conducted in Bali (Jaskolski 2007). There, in an action research project, the researcher had mobilized high school students to devise an EE project involving local citizens. The students chose to work on a polluted river and the surrounding kampung, or hamlet, in Denpasar. Residents were forced to leave garbage and

excrement around in empty spaces and throw it in the river because there were no government services (supply of water or sanitation, waste collection, etc.). The middle class students had had no idea about the lack of services, and found that they had to radically revise their former estimation of the kampung residents as dirty and uncaring.

The impact of Franciscan eco-theology and Laudato Si' in dealing with the global ecological crisis: discussion and reflection

The basis of the eco-theology of St Francis of Assisi was the sacredness of life. In the discourse and everyday practice of contemporary Franciscan academics and religious, the sacredness or divinity of life is obvious. For them, the integrity of life is important – from the conservation of nature to the recycling of cardboard. It has to be said, though, that this was not a theme that emerged from the lessons in schools or the students' discourse. However, by comparison with student discourse elsewhere, students in Franciscan schools were highly respectful of nature, and for some, an environmental sensibility and practice was an important part of their self-identity.

The radical equality of all creatures as propounded by St Francis was also not expressed by students. The hyper-urban environment in which the schools were located meant that it was a novel experience for most students to even get their hands dirty in soil during planting activities. Exposure to nature and life experiences of nature, such as bush walks or camping in national parks, and outdoor education were not part of students' lives. However, St Mary's made strenuous efforts to send students to rural retreats where students lived with farmers and learned some aspects of farming. These retreats seemed to be more aligned with objectives around character-building, the value of manual labour and a simple lifestyle and spirituality than with goals such as experience of nature or learning about the environment. A critical ecopedagogy approach would have encouraged education about human-nature interaction, e.g. in agriculture, and identified problem areas.

The student workshops run by JPIC linked quotidian pro-environment practice to less arrogant attitudes to nature and the desirability of a simple lifestyle. The poverty ethos of the Franciscan Order was practised by the Franciscan religious, and obvious to the students, but given the context of extraordinary economic development in Indonesia, and the rising socio-economic class status of the students, it is perhaps not surprising that the desirability of a modest lifestyle did not loom large in the discourse of students. In fact, anti-consumerism is almost absent in Indonesian public life. Research for the larger project in Surabaya revealed the unfortunate understanding of government (Ministry of the Environment) officials that middle- and upper-class people are good environmental citizens because their suburbs and housing complexes are neat and clean, while lower class citizens are the ones who need to be targeted with environmental awareness campaigns, because these people throw their waste into rivers or leave it lying about (Parker and Prabawa-Sear 2019, 184). The fact that the upper classes have a more deleterious environmental impact than poorer people – because they buy more consumer goods, have bigger houses, use cars and air-conditioners – and have the wherewithal to pay other people to deal with their waste, was not realized.

All students appreciated opportunities for practical lessons and activities, such as planting, rather than the boring rote learning that is ubiquitous in Indonesian schools. While such activities are admirable, it should be noted that these activities need to be embedded in more theoretical discussions about human-environment interactions, e.g. planting vegetables in the school greenhouse needs to be linked to issues of transport (and associated energy use and pollution issues) and broader issues of urbanization, food security, the flight from the agriculture sector, etc. The semester-long hydroponics experiment was actually an exercise in science, but in order to connect hydroponics to the broader environment and the inter-dependence of humans and the natural world, lessons about hydroponics would ideally have been embedded

in discussions about the sustainability of regular agriculture, the costs and benefits of hydroponics in comparison with land-based agriculture (e.g. hydroponics uses less water and has a smaller carbon footprint because fewer transport costs), issues of urbanization, land ownership and access to land, the need for urban farming, etc. Many of the short-comings of the EE and school cultures we witnessed in the Franciscan schools were shortcomings of schools in general – the rote learning, the inattention to understanding human-environment interaction, the school canteens that promote unhealthy food and the throw-away lifestyle.

Using a critical ecopedagogy lens, it became evident that most students were not critically engaged in environmental issues. They are not critical of the government or big business, and blame 'the community' for behaviour such as littering or throwing garbage into the river for causing flooding. The students were not cognisant of global warming issues. The student organizations (OSIS) in the two schools have never held activities related to climate change, and activists in the student organizations had never attended activities such as street demonstrations or even discussions on global warming. In addition, the students rarely kept up with national and international news about global warming. The researcher asked in a FGD at St Mary's, 'Here, do students care about climate change or not? The movement doesn't seem strong...'. A subdued student replied, 'The seeds are there but just haven't been realized in my opinion. This is a real world problem, I feel'. That final comment made us think that she had an inkling that the microcosm of school (and perhaps family) was a protected sphere, and that 'out there' there were strong forces and serious, complex problems that students were not dealing with.

Reflection: the great awakening?

It is clear that at least some Franciscan religious understand the depth of the global ecological crisis, the connection between St Francis's eco-theology and the simple way of life that he advocated and the Pope's call for a moral and spiritual transformation that would restore harmony among humans, nature and God. However, the radical critique of capitalist development by Franciscan religious at places of environmental conflict in eastern Indonesia is not evident in schools in Jakarta. Unfortunately, it is also not evident that the larger messages, such as those in *Laudato Si'*, are being conveyed to students in Franciscan schools. For instance, with the exception of one student showcased above, we have no evidence that students understood that rampant development (of upland areas, entailing deforestation, loss of topsoil and downstream flooding) and consumption (of desired goods and houses, of private car transportation or fossil fuels) causes the waste that clogs the rivers that flood, or, globally, that capitalism fuels the ecological, moral and spiritual crisis that Pope Francis identified.

Some students revealed that they had imbibed the Pope's message that the current ecological crisis was a moral crisis. For instance, damaging the environment by smuggling protected animals was described as a sin, not a crime – it was a moral discourse. However, what was missing from this focus on a narrow harm was understanding of the larger, much more serious environmental issue of the loss of biodiversity and rapid extinction of species.

Conclusion

The friars and nuns of Franciscan schools in Jakarta and Bekasi earnestly try to follow St. Francis' eco-theology and to put green principles into practice, modelling a simple life that is frugal with natural resources, considered about waste management, and motivated to inspire young people to live more sustainably. Many students are inspired, and are committed to practices such as putting rubbish in bins, re-using food and drink containers and cutting down on the use of plastic – all unusual practices in Indonesia.

We identified three levels that affect EE in these schools: school culture and policy, and teaching and student practice in school is the micro level; the environmental practice of

students' families at home is the meso level; and local community and government as well as broader provincial and national government policies and programmes related to the environment are at the macro level.

At the micro level, there is an emphasis on the practice, rather than the theory, of EE in Franciscan schools, and this is in line with the EE mentioned in *Laudato Si'*. In many ways, this is praiseworthy, as the pro-environment behaviours are relevant to the everyday world of the students. The campuses of these schools are indeed green oases in the overwhelming ugliness of the built environment of the megalopolis of Jabodetabek. Student evaluation of the EE in Franciscan schools was positive and appreciative. It was obvious that those students who had long been educated in Franciscan schools were much more strongly habituated to an ecological sensibility than newcomers, and connected this directly to the teachings of St. Francis, and this says a lot about its effectiveness. However, the absence of teaching about the direness and complexity of the global environmental emergency – of deforestation, the loss of species, climate change, the acidification of the oceans, and so much more – is quite concerning. Indicative of these middle class students' simplistic and apolitical understanding of environmental pollution is their sheeting home of the annual flooding of Jakarta to the irresponsible disposal of waste into the rivers by slum-dwellers. Using the *Laudato Si'* as a standard, there was no sign in the schools that students understood that 'industrial civilization' linked to 'business interests' had created the 'ethical, cultural and spiritual crisis of modernity' (Francis 2015).

In the cultural context of Indonesia, children are relatively powerless – at all levels – and student environmental practice is very dependent upon their families' environmental practice (or lack of). Neither schools nor individual students can have much impact on home environmental practices, though there is obviously some 'upward' flow from the micro to the meso level, with students bringing lunches and drinks in reusable containers.

This study found a very wide gap between the understanding and practice of environmental issues at the micro level and the macro level. Students had been taught to separate rubbish into the three categories of bins provided by the school, but because there was no guarantee that the waste would not be mixed again afterwards, they tended not to dispose of waste thoughtfully and consistently. The absence of policies and programmes regarding the management of waste at the macro level feeds back into schools, discouraging individuals from taking responsibility for their own waste. At the macro level, the students lack understanding of the interconnectedness of nature and human society, and of the magnitude of environmental problems globally. They seem less than critical, and less than capable of making a difference in their community. EE in schools cannot stand alone: its ability to convince students and change behaviour depends on practices at the meso (family) level and at the macro (community and government) level.

It became clear from this study, and from the larger project, that such EE as exists in Indonesia is highly circumscribed – by the low level of environmental awareness of the general populace and bureaucracy, and by the lack of political commitment to fix (or, better still, preempt) environmental problems. The overweening preoccupation is with economic development, and there is almost no awareness that this economic development destroys the natural environment upon which it depends.

Some recommendations

- For the Franciscan schools: In the two schools studied, EE with hands-on and experimentation methods were not only the most attractive to students but also the most efficacious, e.g. planting practices and student excursions. We would like to see various other pedagogies mobilized in order to better educate students about the complex environmental problems Indonesia faces, e.g. discussions around urban development,

demographic change and hydroponics; the critical study of mass media reportage on global issues such as climate change and global warming; and projects to research these.

- For Catholic schools and practitioners more broadly: We would argue that, ideally, EE would reflect the admirable goals of *Laudato Si'*, adapted to be embedded in the socio-cultural context in which it is being taught.
- For education scholars and academics: There are Franciscan schools all over the world, and it would be helpful to see how the Franciscan religious are putting the eco-theology of St. Francis and the *Laudato Si'* into practice in other contexts.
- For the broader EE research community: it would be valuable to realize the importance of religious EE globally, and to start conducting research into this.

We noted above that the historical context of St Francis of Assisi meant that he was not grappling with issues such as climate change and the global crash of biodiversity. The nuns and friars of the Franciscan schools in Jakarta/Bekasi are adapting his eco-theology to a completely different set of circumstances in the middle of the second largest mega-city in the world. Often their green practices seem both a long way away from Francis's sermons and poems and utterly conventional, and even paltry, as green practices go. St Francis was not advocating a paperless institution or the sorting of waste. Nevertheless, his eco-theology is neither anachronistic nor irrelevant.

There is now a growing (non-Franciscan) intellectual movement that is interested in exploring the more-than-human world: how we can get away from the anthropocentrism that Pope Francis identified as one of the philosophical bases of the ecological crisis. We have scholars such as Corbey and Lanjouw (2014), Creed (2017), Haraway (2016), Houston et al. (2018), Johnson, Lobo, and Kelly (2019) and Stengers (2011) developing new concepts (making kin, entangled empathy, cosmopolitics, affective ecologies) and ways of being in the world with other species that are more aware, empathetic, egalitarian and just – just as St Francis was advocating. From the point of view of central Jakarta, the relevance of a more-than-human perspective might seem questionable; on the other hand, that might just be the point: that it is precisely amidst the hyper-urbanism of central Jakarta that human exceptionalism and 'any presumed exclusive human "right to the city" and the biosphere is increasingly untenable' (Houston et al. 2018, 191).

The 'inspiring call' of *Laudato Si'* for an 'integral ecology that will convert people, communities, and global civilization toward a more just and sustainable world' (O'Brien 2019, 511) has been heard by the Franciscan religious, but it is difficult to translate this into education about environmental problems in Indonesia in schools in the middle of one of the largest conurbations on earth. St Francis's eco-theology and the clarion call of *Laudato Si'* could inspire the resituating of the human in ecological terms and the possibility of seeing 'the nonhuman sphere in ethical terms' (Plumwood 2009). Individual Franciscan religious and the broader Roman Catholic Church, as proclaimed by a succession of popes, have the theological, philosophical and spiritual resources for much more action in this space.

Notes

1. On a larger scale, 'relatively little social science research has focused specifically on the interaction of religious bodies and human-induced climate change' (Haluza-Delay 2014, 261).
2. We are grateful to an anonymous reviewer for this point.
3. See footnote 12 for details.
4. We reproduce this excerpt from the Sermon to the Birds here in order to convey something of the religious motivations behind Francis's love for nature: 'My little sisters, the birds, much bounden are ye unto God, your Creator, and always in every place ought ye to praise Him, for that He hath given you liberty to fly about everywhere, and hath also given you double and triple raiment; moreover He preserved your seed in the ark of Noah, that your race might not perish out of the world; still more are ye beholden to Him for the element of the air which He hath appointed for you; beyond all this, ye sow not, neither do you

reap; and God feedeth you, and giveth you the streams and fountains for your drink; the mountains and valleys for your refuge and the high trees whereon to make your nests; and because ye know not how to spin or sow, God clotheth you, you and your children; wherefore your Creator loveth you much, seeing that He hath bestowed on you so many benefits; and therefore, my little sisters, beware of the sin of ingratitude, and study always to give praises unto God" (Saint Francis of Assisi. c1220. Accessed April 21 2020. <https://www.historyplace.com/speeches/saintfran.htm>)

5. It is worth noting that Chapter Three of *Laudato Si'* is cheekily titled "The Human Roots of the Ecological Crisis", in apparent rebuttal of White's thesis.
6. Francis's canonization two years after his death suggests he was not considered heretical.
7. Scholars have begun researching how Biology teachers reconcile this fundamental aspect of the Curriculum with the theory of evolution, e.g. Aini et al. (2020), Rachmatullah et al. (2018), and Rachmatullah et al (2021).
8. There are three large groups of Franciscans. The first Order consists of Friars Minor (OFM), Conventual Friars (OFM Conv.) and the Friars Minor Capuchin (OFM Cap.).
9. There is an OFM International Council for Justice, Peace and Integrity of Creation office in Rome.
10. See also <https://jpicofmindonesia.com/category/berita/advokasi/>
11. See, for instance, <http://www.franciscans.org.au/laudato-si-week-in-new-zealand/>; <https://hnp.org/number-of-friars-increases-in-indonesia/>; <https://international.la-croix.com/news/franciscans-nature-indonesian-youth-awareness-on-nature/10315#>
12. The research was funded by an Australia Research Council Discovery Grant, DP130100051, titled "Fostering Pro-Environment Consciousness and Practice: Environmentalism, Environmentality and Environmental Education in Indonesia". Field research in Indonesia with human subjects was approved by the Human Research Ethics Office at The University of Western Australia, RA/4/1/6573. Dr Suhadi approached the schools via the school principals, and was supported by his home university in Indonesia, Universitas Gajah Mada. Participants were provided with Information Sheets and gave signed, informed consent to their participation in this research.
13. See <https://jpicofmindonesia.com/2017/11/novena-alam-ciptaan-menjelang-natal/>.
14. According to government regulation, 30 per cent of Jakarta's area should be "green space," but until now less than half of that target has been achieved, namely 12 per cent (Febrianti, Pasaribu, and Sulma 2015).
15. Nevertheless, as Wilson shows, the Ahok incident was not a simple case of inter-class interests lining up with religious and ethnic groupings (2017).

Disclosure statement

No potential conflict of interest was reported by the authors.

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