

Personal reflections on Introducing a Sustainability Management Accounting Course Unit to an Undergraduate Accounting Degree Program

Gunarathne A D N*

Department of Accounting, University of Sri Jayewardenepura, Sri Lanka

It all began in a small scale...

One day, when I was reading the new edition of Drury's (2007) Management and Cost Accounting book, I happened to come across a section on environmental cost accounting. It was an ignition to resume my love with the environment after a long period of detachment caused by my higher education. After seeing the light of the world on the World Environmental Day and being the President of the Environmental Society of the school, higher education detached me from my love for the environment for a considerable period. The chapter of Drury was indeed a pleasant eye-opener that there's a place for the environment in my field of management accounting.

The journey began...

Then I found myself busy reading materials on environmental management accounting (EMA). For an area initially thought to be new and untraversed, I came across an unexpected sea of resources on EMA. The introductory documents of Environmental Protection Agency (EPA) (1995) and International Federation of Accountants (IFAC) (2005) on EMA gave me a better initial understanding on this field. It was during this time, one of my colleagues invited me to few topics on "contemporary issues in management accounting". I introduced a topic called "harmonizing with environment- EMA" to these sessions, boldly, even without having a standard text book which can be used for teaching. Primary purpose was for me to learn EMA before I taught the students. Luckily, I came across the book "issues in management accounting" and a chapter on EMA (Soonawala, 2006). It was the base chapter for my first session on EMA.

Then came my MBA thesis at a time I was in love with EMA deeply. I soon grabbed the opportunity by opting for a topic in EMA. The thesis then allowed me to study the subject thoroughly and seriously. At this point, I started writing on EMA. Also, I

* Email: adnuwan@gmail.com

was invited to make a presentation on EMA at the CMA conference in 2012. It was during this time I became aware of the Environmental Management Accounting Network (EMAN)* and I registered myself for its news letter, keeping myself updated on its developments. Soon I saw myself attending two conferences of EMAN in Helsinki and Gold Coast. By that time I had realized the importance and the practical value of EMA. In 2011, when the Department of Accounting initiated a syllabus revision, a new subject on this field was introduced to the curriculum of the B.Sc. Accounting (Special) Degree Program.

Recognizing the importance of environmental and sustainability education for accountants, as highlighted by Tingey-Holyoak and Burritt (2012), Institute of Chartered Accountants in England & Wales (ICAEW) (2004) and Medley (1997), the Department of Accounting, University of Sri Jayewardenepura, the pioneer in academic accounting education in Sri Lanka, introduced this subject “Sustainability Management Accounting (SMA)” for the first time in an undergraduate degree program in Sri Lanka. This first volume of the Journal of Accounting Panorama is the result of the work done by the students in that course unit. The Journal of Accounting Panorama is the first publication on SMA in Sri Lanka.

Before I present details on the course unit of SMA, an overview of this emerging discipline is presented here.

Environmental/Sustainability Management Accounting

EMA lacks a definite boundary or definition. Yet, it has emerged as an interface between management accounting and environmental management (Bennett *et al.*, 2002). The definitions of United Nations Division for Sustainable Development (UNSD) (2001), Burritt *et al.* (2002 a, b) highlight that EMA is the identification, collection, analysis and use of physical information, on the use, flows and destinies of energy, water and materials (including wastes) and monetary information on environment-related costs, earnings and savings for internal decision making. Accordingly, there can be two types of EMA systems, i.e., physical EMA and monetary EMA. Physical EMA focuses on a company's impact on the natural environment expressed in terms of physical units while monetary EMA reflects the impact of corporate activities on economic systems and is expressed in monetary units.

EMA information provided by these systems may encompass three dimensions: the time frame, which is the period being addressed by different tools (past, current or

*EMAN, founded in 1997, is the global network of academics and professional experts in the area of environmental and sustainability management accounting. Please visit www.eman-eu.net for more details.

future); the length of time frame, which is the duration of the period being addressed by the tool (tools addressing the short term vs. Long term; and the routineness of information, which is the ad hoc vs. routine gathering of information. Based on the dimensions of EMA information, Burritt *et al.* (2002 a, b) have suggested a comprehensive framework for EMA (refer Figure 01). EMA is not merely an environmental management tool among others, but it is a broad set of principles and approaches that provide information for the successful implementation of environmental strategies. Hence, it includes a wide array of accounting practices such as accounting for energy, material flow cost accounting, environmental capital budgeting, life cycle analysis, etc. Day-by-day, new EMA practices are being introduced or existing practices are being adopted.

Figure 01: Comprehensive EMA Framework

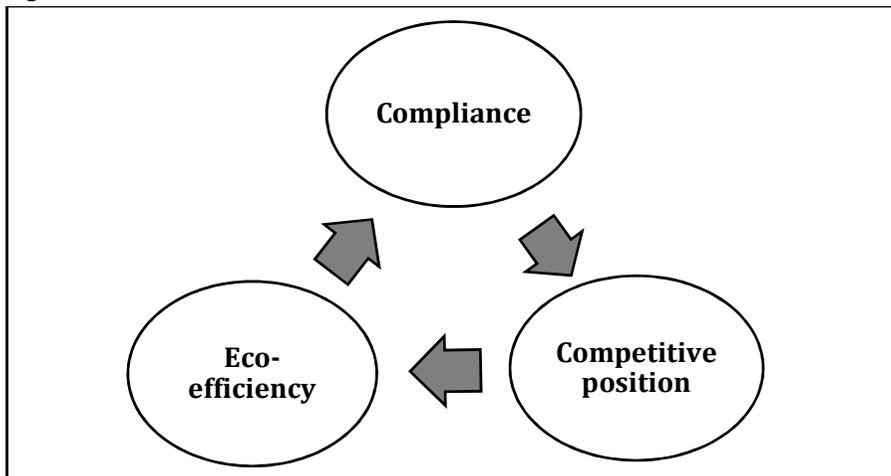
		Environmental management accounting (EMA)			
		Monetary environmental management accounting		Physical environmental management accounting	
		Short term focus	Long term focus	Short term focus	Long term focus
Past oriented	Routinely generated information	Environmental cost accounting	Environmentally induced capital expenditure and revenues	Material and energy flow accounting	Environmental capital impact accounting
	Ad hoc information	Ex post assessment of relevant environmental costing decisions	Environmental life cycle costing Post investment assessment	Ex post assessment of short term environmental impacts	Life cycle inventories Post physical environmental investment appraisal
Future oriented	Routinely generated information	Monetary environmental operational budgeting Monetary environmental capital budgeting	Environmental long term financial planning	Physical environmental budgeting	Long term physical environmental planning
	Ad hoc information	Relevant environmental costing	Monetary environmental investment appraisal Environmental life cycle budgeting	Relevant environmental impacts	Physical environmental investment appraisal Life cycle analysis

Source: Burritt *et al.* (2002)

EMA benefits

The benefits of EMA are many, but can be broadly categorized into three (Doody, 2010; IFAC, 2005). Firstly, EMA ensures compliance with environmental regulations and self-imposed environmental policies. Secondly, EMA supports eco-efficiency by the efficient use of water, material and energy while reducing the environmentally harmful impacts. Thirdly, it enables a firm to gain a competitive position by establishing and strengthening an organization as a green organization. These benefits are not mutually exclusive and there is overlap in many instances. Moreover, these benefits are interlinked as outlined in Figure 02.

Figure 02: EMA benefits

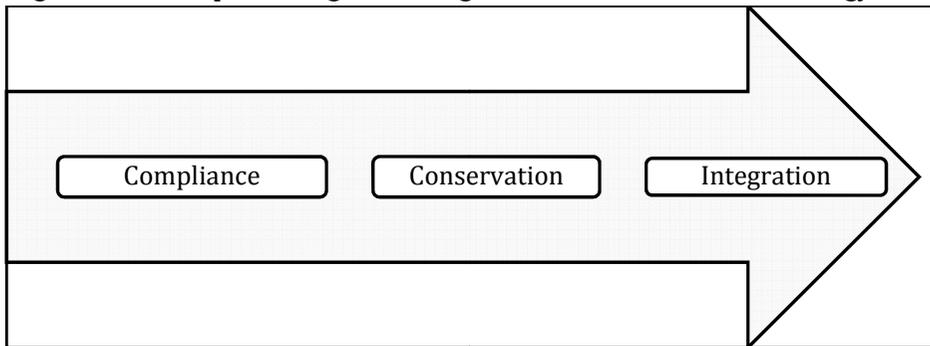


Source: Adopted from Doody (2010) and IFAC (2005)

Development of environmental strategy

As highlighted earlier as well, EMA is a decision support tool that can assist the environmental strategy of an organization. In order to derive the aforementioned benefits EMA has to be applied well in-conjunction with the environmental strategy. Yet, Bartolomeo *et al.* (2000) and Lee (2011) suggest that most of the existing EMA practices have not been systematically and comprehensively implemented internally. Thus, there is potential for the organizations to be adventurous and explorative in their EMA practices. The systematic adoption of EMA can't simply be achieved overtime. Hence, it is necessary to identify the development stages of EMA. The development stages of EMA have been suggested by Sakai (2007) and IMA (1995). Further, Gunarathne and Lee (2014) have empirically demonstrated how a Sri Lankan hotel developed its environmental strategy over time. The development stages of an organization's environmental strategy are given in Figure 03.

Figure 03: Development stages of an organization's environmental strategy



Source: Developed by the author based on Sakai (2007) and IMA (1995)

Organizations in stage 1 will develop environmental management programs (or a strategy) in response to both external pressures and internal awareness (IMA, 1995). As there are many regulations covering the environmental issues, every organization will be in some degree of compliance stage as a response to an external pressure. However, absence of regulations may sometimes call for internal management setting environmental standards. During this stage, an organization should; ensure the top management commitment/support; develop an environmental policy; prepare an action plan to achieve the goals set in the environmental policy and create an environmental management system. Organizations in this stage will;

- Focus mainly on few items in its environmental policy (such as waste, energy, etc.)
- Develop few EMA practices (accounting for waste or energy accounting with the main focus on physical EMA)
- Mainly obtain support of few key stakeholders (such as employees or suppliers) to implement these strategies

Then, the organizations will soon realize the conservation potential of the environmental initiatives being adopted. This is where organizations are propelled to move onto the second stage of development, i.e. conservation stage.

During the conservation stage, organizations realize that the adoption of these practices give them a real cost saving potential. Therefore, organizations will design products or processes taking environmental impacts into account and develop a strategy for external environmental reporting. According to Sakai (2007), during this stage, organizations will take actions with a sense of mission as an earth citizen to reduce environmental impact. Organizations in this stage;

- Gradually expand the focus of its environmental policy to larger range of items

- Develop more EMA practices
- Attempt to obtain the support of other stakeholders

When these attempts are successful organizations will move to the third level of development, i.e. environmental integration stage.

During the environmental integrations stage, organizations fully integrate environmental considerations into its business operations. In other words, environmental considerations are integrated into the long term sustainable strategy of an organization (IMA, 1995). The environmental issues, irrespective of the magnitude, are part of everyone's day-to-day decision-making process. During this stage, organizations will develop environmental impact-integrated performance evaluation system and green products while deriving the full potential/benefit of environmental management strategies. Organizations in this stage will;

- Integrate all the items contained in the environmental policy (comprehensive coverage)
- Have well developed EMA practices
- Obtain the support of all stakeholders

The arrow given in the Figure 03 represents the further potential for EMA development even beyond the integration stage.

EMA to SMA

When social dimensions are integrated into the existing EMA systems, i.e. when environmental and social accounting systems are adopted, there will be SMA. However, as Jasch and Stasiškienė (2005) highlight, for many years sustainability has been seen more in an environmental perspective and the social side of sustainability has developed the least. Moreover, accounting for the social dimension of sustainability proves to be a challenge for corporate practitioners, due to its intangible, qualitative nature and lack of consensus on relevant criteria (Geibler *et al.*, 2005). Due to this reason, the course unit introduced has a greater emphasis on environmental dimension of sustainability. The next section will describe the novel, unconventional course unit introduced by the Department of Accounting, with the objective of disseminating the knowledge on SMA.

SMA first course unit – modus operandi

SMA was introduced as an elective course unit and it was an extension to the already existing management accounting cell of the Department of Accounting (refer Table 01).

Table 01: Subjects in the management accounting cell, Department of Accounting

Year	Semester	Subject offered
4 th year	2 nd semester	Strategic Management Accounting Contemporary Issues in Management Accounting (E)
	1 st semester	Sustainable Management Accounting (E)
3 rd year	2 nd semester	
	1 st semester	Advanced Management Accounting
2 nd year	2 nd semester	Cost and Management Accounting
	1 st semester	

(E) Elective course units

Source: Prospectus of University of Sri Jayewardenepura (USJ) - Faculty of Management Studies of Commerce (FMSC), (2012)

The main objective of the course unit was to improve the understanding on this area as it will help students to incorporate environmental and social considerations into business decisions, which will ultimately facilitate in the development of corporate sustainability strategy as emphasized by Das, *et al.* (2008). The course unit was designed to give students a practical orientation. In this regard, the following actions were taken.

- Design of course content based on practice with theoretical underpinnings
- Adoption of action oriented learning
- Giving practical exposure to students through site visits, guest lectures, etc
- Assignment to develop case studies on real-life companies

In designing the course, the learning objectives attempted to achieve were a) to discuss the developments in management accounting to embrace the sustainability movement/revolution, b) to discuss the three pillars of Triple Bottom Line (TBL) discussed in sustainability i.e. economic, social and environmental dimensions, c) to evaluate the possibility of integrating the various facets of sustainability into a coherent business management model and the role of accountant in that context, d) to appraise the various frameworks available for reporting sustainability in an organization and e) to discuss the SMA status quo in Sri Lanka in the global context. Please refer Table 02 for the summarized themes of the course outline.

Table 02: Summarized course outline of SMA course unit

Area	Coverage
New developments in management accounting towards sustainability	Need for sustainability management accounting Corporate sustainability, Sustainable business TBL movement, Sustainability Triangle
Environmental Management Accounting (EMA)	Scope, applications, drivers, benefits techniques and roadblocks Cleaner Production (CP) (Methodology, Support from EMA for CP)

Accounting for the social dimension in sustainability	Social Accounting (SA) and Social Management Accounting Social audit, Socially Responsible Investing (SRI) Social Return on Investment (SROI)
Integration of three pillars of sustainability	Sustainability Balanced Scorecard (SBSC) Addressing the economic bottom line The role of an accountant
Frameworks available for reporting sustainability	ISO 14000, 19011, 22000, 26000, 50001 standards Sustainability reporting based on Global Reporting Initiative Guidelines AA1000 stakeholder engagement standard, SA 8000 standard Sustainability Reporting and Integrated Reporting <IR>
SMA Theory	Importance of having theoretical frameworks Institutional theory, Stakeholder theory, Legitimacy theory
SMA: A Sri Lankan perspective in the global setting	The global scene Sri Lankan status

Source: Department leaflets

There were fifty one students who opted for the subject. The reason for this overwhelming response for the subject was its novelty. To confirm this, one student mentioned;

“I have learned enough accounting... I want to learn something different. That is why I selected this course.”

Another student had a similar idea.

“I wanted to learn something new, something not even taught in professional accounting courses... I have felt the importance of sustainability due to the internship training I received so far.”

Developing the case study was a novel experience for the students. Following the case study design approach of Yin (2009) the students were enlightened on developing case studies. In order to improve the students’ commitment thirty percent of the marks were allocated for this assessment. The students had to develop a case study on EMA or SMA aspects of a selected organization. Due to the high academic quality maintained in these studies, eventually they were upgraded to journal articles which you will find in this First Issue of Journal of Accounting Panorama.

As a means of enhancing the student’s involvement, I started maintaining a Facebook Group for the subject. Almost every student joined the group. It has been proven very effective in maintaining continuous communications with students even after the course unit was over. Some students shared interesting reading

material, images, videos, etc relevant to sustainability by posting those on the group.

As the pioneer in academic accounting education in Sri Lanka, the Department of Accounting triggered a difference in accounting education in Sri Lanka once again, through this course unit, I believe. It is expected that these various measures taken in the course would pave the way forward for the future graduates of the Department of Accounting to be conversant with the concept of sustainability.

Conclusions and future challenges

According to Tingey-Holyoak and Burritt (2012), at present, the majority of sustainability accounting skills and knowledge comes from external and internal training only and no skills and knowledge are being provided by universities. Yet, their research indicate that managers prefer sustainability accounting education to be received from universities, signifying the important role the universities will have to play in the future in this respect. Thus, I believe that Sri Lankan universities too should be proactive and incorporate sustainability accounting into their curricula. But, as highlighted by Tingey-Holyoak and Burritt there should also be a wider set of skill development initiatives in the areas of environment, engineering, science and other disciplines. This calls for trans-disciplinary approach for sustainability accounting education. In the future, the course unit we introduced will have to incorporate some vital aspects in engineering, architecture, physical sciences, etc to impart trans-disciplinary knowledge on SMA.

As highlighted by ICAEW (2004), sustainability presents a new focus for the accounting profession as the importance attached to environmental conservation and social responsibility increases. Further, it has been stressed as an opportunity for the accounting profession to demonstrate that it is on top of contemporary issues (Medley, 1997). However, sustainability accounting or education will not immediately result in solutions to the complex sustainable development issues, but will create much needed awareness and encouragement for sustainable business activities (Tingey-Holyoak and Burritt, 2012). The evidence suggests that accountants may be the very people who will embrace trans-disciplinary responses to calls for corporate sustainability. Then, as accountants, we can turn around in the future and say “we have made a difference to the world we live in” (Medley, 1997).

Like a spring, the beginnings of many things are small...

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