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Low-carbon transition through a duty to divest: Back to the future, ahead to the past

1. Exploring divestment as a strategy for change

We have read with great interest the article "Mobilizing private finance for low-carbon innovation – A systematic review of barriers and solutions. Renewable and Sustainable Energy Reviews, Volume 77, September 2017, Pages 525–535" authored by Friedemann Polzin [1]. The title of that article promises much useful information, since the author studied the barriers and solutions to low-carbon transitioning, asserting that policymakers need to take a systemic approach to enable the redirection of diverse financial sources. Amongst these, it is clear that higher education institutions (HEIs) can play a constructive role both in generating and acting upon the knowledge needed to shift investments from mainstream high-carbon markets to niche markets that use low-carbon technology.

HEIs, and universities in particular, have continuously striven to adapt to changing times and the basic needs of society, in order to improve living conditions [2,3]. In fact, the long-term goal of HEIs is not to advance science simply for science's sake. Rather, "advancing science, serving society"[1] is the ultimate goal, as HEIs seek to improve all aspects of life, which necessarily entails paying attention to the principal needs of society [4]. Reflecting this tradition, universities that have in recent years been involved in sustainable development are entering into a new era in which the functions of "higher education for sustainable development"[2] could be interpreted as the seeds of a newly emerging mission for universities [5]. As universities have proved to be leaders in, amongst other things, the space race and the war on cancer, they can potentially play a critical leadership role in this new era.

In pursuing a more sustainable world through this new mission, universities have encountered climate change as one of the most significant challenges affecting the world today, and it is expected that they will play a key practical role in helping to solve the problems it will engender. However, there is no unanimous consensus among scholars, scientists and university leaders about how universities should respond to this global challenge. In this regard, since 2012 there have been calls for universities to divest their financial interests in the fossil fuel industry [6]. As a consequence of this pressure, which has emerged through social movement campaigns, many HEIs worldwide have committed to divest from fossil fuels or to otherwise revise their investment strategies, while others have rejected the idea [7]. As such divestment decisions are not without conflict [8,9], we wish to present several compelling reasons why universities should divest.

2. The movement - at a glance

Fossil fuel divestment began in 2010 among HEIs with small endowments and low enrolments [10]. The first campaigns in favor of divestment were initiated by groups of students. A few months after the first activists began their activities, other HEIs started to join the coal divestment movements. These student campaigns attracted the attention of national and international activist groups, leading to the launch of 350.org, which further expanded the scope of divestment [11]. In this period, the movement extended its focus to the 200 largest fossil fuel companies, based on the carbon content of reported reserves (CU200). Although some HEIs did divest after the first rounds of protests and resolutions, other campaigns faced strong administrative resistance.

Among the 81 HEIs that officially committed to divestment, around half of them — 25 private and 15 public — are in the United States [12], indicating the key role of this country in the movement. The rest of the institutions are in the United Kingdom, Australia, New Zealand, Sweden, Denmark, Canada and the Marshall Islands. Fig. 1 shows the fossil fuel divestment commitments of HEIs in the United States. Hampshire College and Unity College are the two schools that divested during the first two years of the movement [13]. Following this, eight and nine schools divested in 2013 and 2014, respectively. The year 2015 stands out, with eighteen HEIs — including high profile schools — committing to divest. In 2016, Boston University, University of Maryland and Yale University committed to divest their billion-dollar endowments.

Noel Healy & Jessica Debski [12] recently categorized the different divestment strategies employed by HEIs into three major groups: "inclusive", "selective" and "targeted". They identify inclusive divestment as the most comprehensive method to accomplish divestment goals, although they found selective divestment to be the standard plan for "full divestment", based on divesting from the CU200 – the top 100 coal and top 100 oil and gas companies, ranked by potential emissions contents. They also state that targeted divestment has the narrowest scope, involving divestment from one or more specific industries. As can be seen in Fig. 1, seventeen HEIs have pursued inclusive divestment (divesting from all coal, oil, and gas companies), fourteen HEIs selective divestment (using the CU200 list as a guide), and nine HEIs targeted divestment (divesting from specific carbon-emitting sectors). Among these, HEIs that have followed targeted divestment, such as Stanford University, are still under pressure from activists to commit to more extensive divestment.

3. Fossil fuel divestment: start small, think big

HEIs are drawing on scientific evidence that demonstrates, among other things, how some types of enterprises are known to lead to CO_2 emissions and thereby damage the environment [14]. A recent

[1] The motto of the American Association for the Advancement of Science (AAAS).
[2] Higher education for social, environmental and economic well-being.

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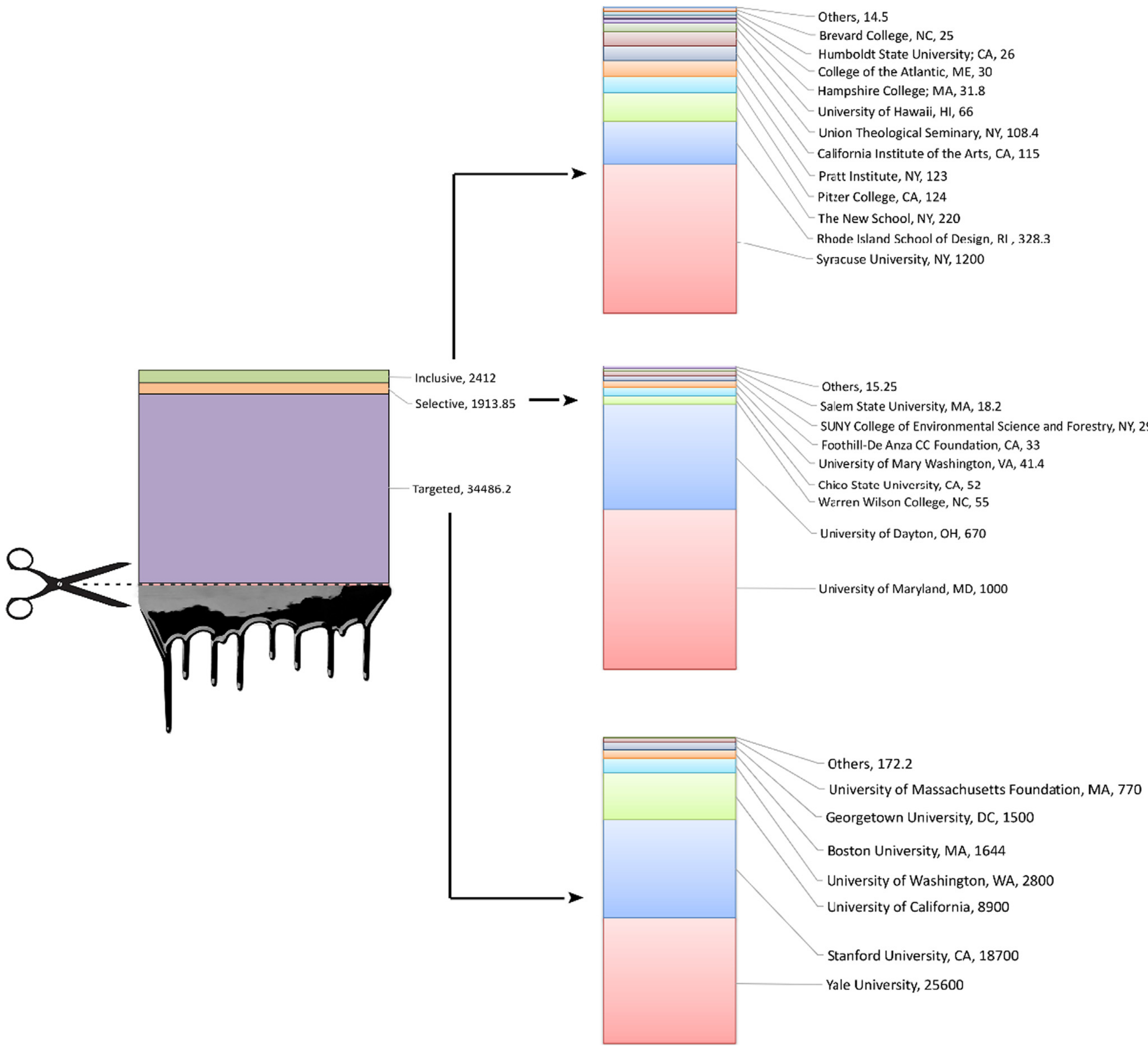

Fig. 1. Fossil fuel divestment commitments of 40 HEIs in the United States. (Unit: millions of dollars). Other universities that have chosen an inclusive divestment strategy are Goddard College, VT, and Unity College, ME, with 1 and 13.5 million dollars respectively. The rest of the universities categorized as proceeding with selective divestment are Sterling University, VT — 1, Green Mountain College, VT — 3.4, Naropa University, CO — 6.25, and Prescott College, AZ — 4.6. Other universities that have divested based on a targeted approach are San Francisco State University Foundation, CA — 51.2, and University of Maine System, ME — 121.

investigative report on how to make sustainable development a reality for the future is an example of this [15]. The recent global movement towards divestment from fossil fuels is pressuring HEIs to limit or avoid investment in fossil fuel companies. Pressured HEIs and increasing faculty involvement have provided the basis for the formulation of climate change mitigation strategies [16]. The involvement of the campaign with national energy use has the ultimate aim of helping to meet the targets and agendas set at the 2015 United Nations Framework Convention on Climate Change Conference of the Parties (UNFCCC COP21) in Paris, adding a unique perspective to help make sustainability a reality [17].

Significant arguments provide evidence for the tangible advantages brought about by the involvement of HEIs in scaling up climate action toward effective sustainability [18,19]. Some iconic universities, such as Harvard, recently signed the United Nations-backed code of responsible investment [20]. The University of Massachusetts, Cambridge University, University of London, Glasgow University, and the University of Sydney, among others, are examples of major universities that have chosen to divest from fossil fuels, as all of them have realized that divestment is the rational path to a sustainable future.

Stanford University recently took one further step forward in addressing the challenge posed by climate change, and called for divestment from all fossil-fuel energy companies [21]. Boston University was also urged to dump fossil fuels from its investment portfolio. The University of California is following a similar path towards a better understanding of divestment, which has required engagement between alumni, climate scientists, students and representatives of the fossil fuel industry [22]. Yale University recently considered the opportunity to demonstrate their divestment from coal-powered energy through a platform that shares and acts upon current climate change initiatives. In the UK, certain universities have emerged as divestment leaders, which has encouraged more than fifty campuses across the country to take action against fossil fuel investment [23]. Some Canadian universities, such as the University of Toronto, are also looking to divest from fossil-