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A Small Beautiful Example of Sustainability in the Heart of Zimbabwe

Piękny przykład wdrażania idei zrównoważonego rozwoju w sercu Zimbabwe

Abstract: Zimbabwe has diligently started pursuing the Sustainable Development Goals (SDGs) defined by the United Nations in 2015. While making progress and being aware of it, will be a shot in the arm, with success breeding more success, the journey may seem daunting at times. However, the journey – sustainable development towards the targets set - is what matters more than the final destination, as philosophers and savants often remind us. This article, while dwelling on sustainable development in this southern-African landlocked country in general, presents a beautiful example of a collaborative venture, undertaken by dedicated and determined international partners, and predicated on SDG#4 (Quality Education) and SDG#5 (Gender Equality), and harnessing the complementarities and synergies with the other SDGs, which set root during the COVID-pandemic, in Mwenezi in southern Zimbabwe. The pandemic while being a scourge, tended to have some silver linings to it, as it gave birth to many collaborations and made human beings realise that one's own happiness is dependent to a very great extent on that of others. This venture emphasizes girls' education and skills-development, which open the doors, synergistically, to sustained growth, development and progress. Education, indisputably, is a key component of the freedom necessary to live a life of value. To quote Nelson Mandela, 'It is the most powerful weapon which you can use to change the world.'

Keywords: education, health, renewable energy, sustainability, Sustainable Development Goals, water, SDG, Zimbabwe

Streszczenie: Zimbabwe zaczęło sumiennie realizować Cele Zrównoważonego Rozwoju określone przez Organizację Narodów Zjednoczonych w 2015 roku. Chociaż kolejne postępy oraz rosnąca świadomość w tym zakresie stymulują do podejmowania dalszych działań, a sukcesy rodzą kolejne sukcesy, to jednak droga do celu czasami bywa prawdziwym wyzwaniem. Jednak to właśnie ta droga – zrównoważony rozwój w kierunku wyznaczonych celów – wydaje się być ważniejsza niż ostateczny cel, jak często przypominają nam filozofowie i uczeni. Niniejszy artykuł, choć skupia się przede wszystkim na temacie realizacji idei zrównoważonego rozwoju w tym pozbawionym dostępu do morza, południowoafrykańskim kraju, przedstawia piękny przykład wspólnego przedsięwzięcia podjętego z zapalem i determinacją przez partnerów międzynarodowych w Mwenezi w południowym Zimbabwe. Zapoczątkowany jeszcze podczas pandemii COVID-19, projekt ten wpisuje się w cele SDG#4 (Dobra jakość edukacji) i SDG#5 (Równość płci) wykorzystując zarazem komplementarność i synergii pozostałych celów. Pandemia, choć niewątpliwie była dotkliwym doświadczeniem, miała też swoją jasną stronę, ponieważ zrodziła w ludziach chęć współpracy, płynącą ze świadomości, że nasze szczęście w bardzo dużym stopniu zależy od szczęścia innych. Celem opisanego

przedsięwzięcia była edukacja i rozwój umiejętności dziewcząt, co na zasadzie synergii stanowi podwaliny trwałego wzrostu, rozwoju i postępu. Edukacja jest bezdyskusyjnie kluczowym elementem wolności niezbędnej do prowadzenia wartościowego życia. Cytując Nelsona Mandelę: „To najpotężniejsza broń, której możesz użyć, by zmienić świat”.

Słowa kluczowe: edukacja, zdrowie, energia odnawialna, zrównoważony rozwój, Cele Zrównoważonego Rozwoju, woda, Zimbabwe

Introduction

In the light of all the social, economic and environmental challenges which Zimbabwe has had to overcome – with climate-change-induced natural disasters and the COVID pandemic being major challenges of late - the efforts being made by it to journey towards the SDGs set by the United Nations, for year-2030, are praiseworthy and deserving of support from other national governments and international organisations. In fact, a developing country, which starts off late on the path towards sustainable development, can take a giant leap forward, riding on the learning curve already negotiated by the frontrunners and avoiding the mistakes made by them *en route* to their goals. As gathered from UNDP (2020) (also refer Table 1), the extreme poverty rate in terms of percentage of households has dropped by over 14 percentage points over a period of 22 years (1995 to 2017). Life expectancy at birth has jumped up by a decade, and the Human Development Index has increased and crossed the 0.5 mark over the same time-span. In a short span of 6 years (2011-2017), the percentage of the population availing of decent sanitation facilities has almost doubled. Interestingly, being a laggard does not necessarily have to be an encumbrance when a firm decision is at last made to learn and seek help from the best. What is more, a motivated populace which is keen to raise its standard of living, can be easily helped. A keen pupil after all, makes a good teacher better!

What follows is a brief literature review, which in turn is followed by the discussion of a beautiful example of a collaborative venture, undertaken by dedicated and determined international partners, and predicated on quality education and gender equality. It struck roots during the COVID pandemic and this makes it all the more laudable. This venture emphasizes girls' education and skills-development, which open the doors, synergistically, to sustained growth, development and progress.

1. Past to present to the desired future – a very brief literature review

In 2000, only 0.4% of Zimbabweans had access to the Internet, and on date, the figure would easily be close to 50% [in 2014, it was 40% or 5.2 million inhabitants – Kabweza (2014)]. In 2018, 20% of primary schools and 39.6% of secondary schools had access to the Internet, enabling students to avail of the learning-benefits of the Internet (UNDP 2020). When one compares the situation in Zimbabwe with countries in the western world or even in other developing countries, one at once sees the starkness of the inequalities that prevail. Reduction of such inequalities globally is one of the sustainable development goals (SDG 10). It is easily imaginable how much youngsters in Zimbabwe

will benefit courtesy access to the Internet for knowledge and communication with the outside world, and thereby contribute to the country's (and thereby the region's) progress.

Availing of solar energy for electricity production *in-situ*, wherever possible, is something which Zimbabwe which still relies a bit on coal-sourced electricity (about 30% as in 2013), will wish to capitalise on as it strives to march towards the sustainable development goals set for 2030. With an electrification rate of only 41%, as in 2019, efforts made, with the support of NGOs, to generate one's own electricity from renewable sources, without passing the buck onto the administrators of a creaking power-infrastructure, is what the country needs (Energypedia.info 2022). As noted by Makonese (2016), a very small percentage (just 1%) of the potential for renewable energy from solar PV (electricity) and solar water heaters, has thus far been harnessed in Zimbabwe. Chiroodza et al (2021) have concurred, while observing that solar energy if properly harvested, stored and transmitted to all the points-of-use in Zimbabwe, can power over half of the country's primary power needs. Prices of solar panels have decreased over time, and this means that Zimbabwe need not grapple with 'difficult economics' which others had to contend with, while making investment decisions in solar energy. Solar cookers are being touted as options in kitchens in African rural homes, which will go a long way to improve health and well-being (SDG 3), when they replace the stoves being fuelled by charcoal and wood. That makes one think of a Zimbabwe powered totally by hydropower and solar energy, sometime in the distant future, while availing of bio-wastes to fulfil a significant part of the demand for heat energy (Siwale et al., 2022).

Water crisis – both qualitative and quantitative - that has engulfed several parts of southern Africa in the last few years, worsening during the pandemic and leading to diarrhoea outbreaks (the link between SDG#6 and SDG#3 – Venkatesh 2022). This water-stress is predicted to get worse by 2025 (Mabhaudi et al. 2016), a challenge towards the attainment of SDG#6. As reported in The Guardian in October 2020 (Chingono 2020), 'This water crisis is affecting women and the girl child. There are reports of abuse at boreholes, with some taking advantage of their desperation by charging \$1 per bucket.' UNDP (2020) notes that in 2019, over 20% of Zimbabwean households had to rely on unimproved (and therefore unhygienic and unsafe) sources of drinking water, and over 30% of households did not have access to sanitation facilities (also refer Table 1).

As reported by Cormier (2019), due to inadequate resources, most parents prefer to send boys to school while girls are forced into early marriages so that they receive some income in form of dowry. While more girls compared to boys, complete primary school, the former drop out of secondary school more often than the latter do (UNDP 2020). Poverty is not the only reason, as observed by Buckler et al (2022) who cite many other publications, which point to school location, absent parents, religious beliefs, inadequate resources and teenage pregnancies as detrimental factors. Buckler et al

(2022) have clearly shown, through interactions with adolescent out-of-school girls in Zimbabwe that they aspire to go to school and get a formal education, and are aware of the value it would have for their futures. Indeed, they are inspired by the fact that on date, with the perceptible improvement in gender parity, over half of provincial ministers, close to one-third of cabinet ministers, one-fifth of ambassadors, more than half of permanent secretaries in public service, and one-third of senior and middle-level managers in the corporate sector, are women (UNDP 2020), and thanks to the policies Zimbabwe has in place to promote gender equality in health, education and political leadership, girls today who attend school, can pursue their dreams with hope, and look forward to a better tomorrow for themselves. Some will be able to break the glass ceilings in corporate leadership, which their parents were unable to. Table 1 presents some indicators of development over time, which augur well as the country looks forward to year-2030.

Table 1: The story of slow-but-sure change along the path to sustainability – selected indicators (UNDP 2020)

Indicator/Metric	1995	2001	2011	2017
Extreme poverty (% households)	35.7	32.2	16.2	21.9
Life expectancy at birth (years)	50.5	44.6	50.6	60.8
Mean years of schooling (average in years)	5.5	6.5	7.5	8.3
Human Development Index	0.472	0.452	0.543	0.553
Percentage women in the National Assembly	-----	-----	16	32.6
Percentage availing of safe drinking water	-----	-----	76.7	78.3
Percentage availing of sanitation facilities	-----	-----	37.3	67.8
Value added per worker in the industry (in 2010 USD)	-----	-----	5496	6976
GDP per person employed (in 2011 PPP \$)	-----	-----	4768	5676
National Gini coefficient	0.626	0.489	0.423	0.435
Corruption Perceptions Index (CPI) ranking by Transparency International	-----	65/91	154/182	157/180

When there is a will, there can, must and will be a way out, and the discussion of a collaborative venture – one of several around the world, which are contributing to ‘growth, development and eventually progress’, which follows this section, confirms that. The author, while being personally connected to this program of girls’ education in Zimbabwe through a fund set up under the aegis of a global NGO headquartered in the USA, in honour and memory of his departed wife, would ideally like to present this example as a bellwether of positive development in the developing countries around the world, aided and supported by the developed world, which has now realised that its own progress and the happiness of its citizens, depends incontrovertibly on the well-being of the denizens of the so-called Third World.



Figure 1: Some of the students at the school supported by Plan USA’s girls’ education venture in Mwenezi, in southern Zimbabwe. Photography shared by Plan USA.

2. Discussion

Let us begin with the Sustainable Development Goals (SDG) as a premise (Venkatesh, 2021). Refer Figure 2, while reading the remainder of this section. As UNDP (2020) has noted, Zimbabwe has decided to emphasize on SDGs 1-9, 13 and 17.

Take **SDG#1 – No Poverty**, and imagine that as a medium-term national goal which can be attained through a set of other goals. The Zimbabwean Government has set for itself the target of making the country an ‘Upper-Middle-Income’ economy by 2030; and this would necessitate lifting everyone above the Poverty Line, within 8 years from the time this article is being written, by emphasizing inclusive economic growth (UNDP 2020). This would automatically facilitate the **second SDG – Zero Hunger**, as the very first problem that eradication of poverty would solve for households is their difficulty to have two-three square meals a day. With planned improvements in agricultural productivity on the horizon – spending on agriculture increasing by 4.8 percentage points over a year (12.7% of GDP in 2019, to 17.5% in 2020), as reported by UNDP (2020) - Zimbabwe may very well achieve self-sufficiency in feeding its citizens, with ‘availability, accessibility and affordability’ being guaranteed. There is perfect complementarity between the first two SDGs. With poverty and hunger eradicated, and the lower ring of Maslow’s hierarchy of needs satisfied, education starts being perceived as a precious investment. The Home-Grown School Feeding Program with 100% coverage of primary-school pupils, will soon encompass secondary schools too. Indeed, there is a mutually-reinforcing relationship (a positive feedback loop, if we may say so) here between ‘No Poverty’ and ‘Zero Hunger’ on the one hand, and ‘Quality Education’ on the other

Now, take the 3rd, 4th and 5th together as a ‘package deal’, so to say. **SDG#3 is Good Health and Well-Being, SDG#4 is Quality Education and SDG#5 is Gender Equality**. This package deal is provided to girls who are thereby able to acquire ‘STEM’ education – science, technology, engineering and mathematics, advice and assistance when it comes to their menstrual health, and confidence to be able to study and thereafter work, on an equal footing with boys. This education hopefully enables them to find employment, earn an income, and contribute to the economic development of their village or town, and thereby, district, state and country. This helps the journey towards **SDG#8 – Decent Work and Economic Growth**. Now, consider that the STEM education referred to also equips the girls with practical skills to set up a water recycling system adjacent to the dormitory in which they reside, while studying (**SDG#6 – Clean Water and Sanitation**). This needs to be seen in the context of the water crises and periodic climate-change-induced droughts [referred to earlier, citing Chingono (2020)] which Zimbabweans have experienced, and the importance of unconventional irrigation practices like the usage of recycled wastewater.

Further, it must also be remembered that providing drinking water and sanitation facilities is vital to ensure that girls stay in school and complete their education; and good school infrastructure in general, enhances pedagogy (UNDP 2020). This recycled water, and organic manure help the girls to cultivate some vegetables in the garden close to the dormitory. These can partly be consumed by the girls themselves, and partly sold in the village marketplace to earn a little money for themselves (of course, this would be different from the subsistence agriculture which rural women in Zimbabwe usually practise). A case of **responsible production and consumption (SDG#12)**, which also contributes directly to **SDG#2 (Zero Hunger)**, and grooms the girls for entrepreneurship in the future (**SDG#8, SDG#10 – Reduced Inequalities**).

This practice of agriculture within the precincts of the school, as an innovative idea, is motivated by the food insecurity which millions of rural Zimbabweans experience from time to time (UNDP 2020). While the girls, by virtue of being educated, may well qualify for work in the industrial and service sectors of the economy – and consequently, avoid precarious and vulnerable employment in the informal sector - tiny-scale horticulture learnt during their school days, will equip them with a means of livelihood or even a second stream of income in the future. Here, the role of corporates like Zimplats (from the mining sector) in encouraging and supporting woman entrepreneurs through their Local Enterprises Development programme, must be mentioned.

Use of recycled water to combat the water stress, contributes indirectly to **SDG#14 – Life Under Water**, as an attempt is made not to deplete the hydrosphere (rivers, lakes etc.) and disturb the ecosystems thereof. Recall a study conducted in New Zealand (Desrochers et al. 2019) which concluded that girls and women, when educated, tend to be environment-friendlier than men and have

a lower greenhouse gas (GHG) footprint vis-à-vis the males of the species, owing to traits of kindness, conscientiousness, honesty, and emotionality. As part of the planning for **SDGs 13, 14 and 15**, the National Child-Friendly Climate Policy in the country (UNDP, 2020) intends to educate school-children about the environment and the dependence of the anthroposphere on it, teach them the importance of protecting forests and wetlands and equip them with the knowledge to and skills to adapt to the repercussions of climate change which seems inevitable now.

Now picture a case where power grid blackouts (and brownouts) affect Internet Connectivity and hinder the girls' studies (which happen online, with the aid of tablets provided to them). As gathered from UNDP (2020), in 2017-18, the access to computers in primary schools had increased from 25% to 53%, while in secondary schools, it had risen from 52% to 72%. Then think of solar panels on the dormitory roofs as messiahs which restore the said connectivity. That is **affordable and clean energy (SDG#7)** which combats **climate change (SDG#13)**, while bolstering the power supply infrastructure of the rural areas (**SDG#9 – Industry, Innovation and Infrastructure**). Here, it must be pointed out that the (Zimbabwean) National Renewable Energy Policy aims to achieve an installed renewable energy capacity (excluding hydropower which accounts for a sizable fraction of the electricity mix) of 2.1 GW by 2030, when the share of investment in renewable energy would have risen to 27%. Many businesses have already started investing in solar energy, and solar powered vehicles, solar home systems and batteries have been granted subsidies. Farmers have started using solar-powered boreholes for the purpose of irrigating their fields, while LED lamps, solar street lights and energy-saving bulbs have become increasingly affordable.

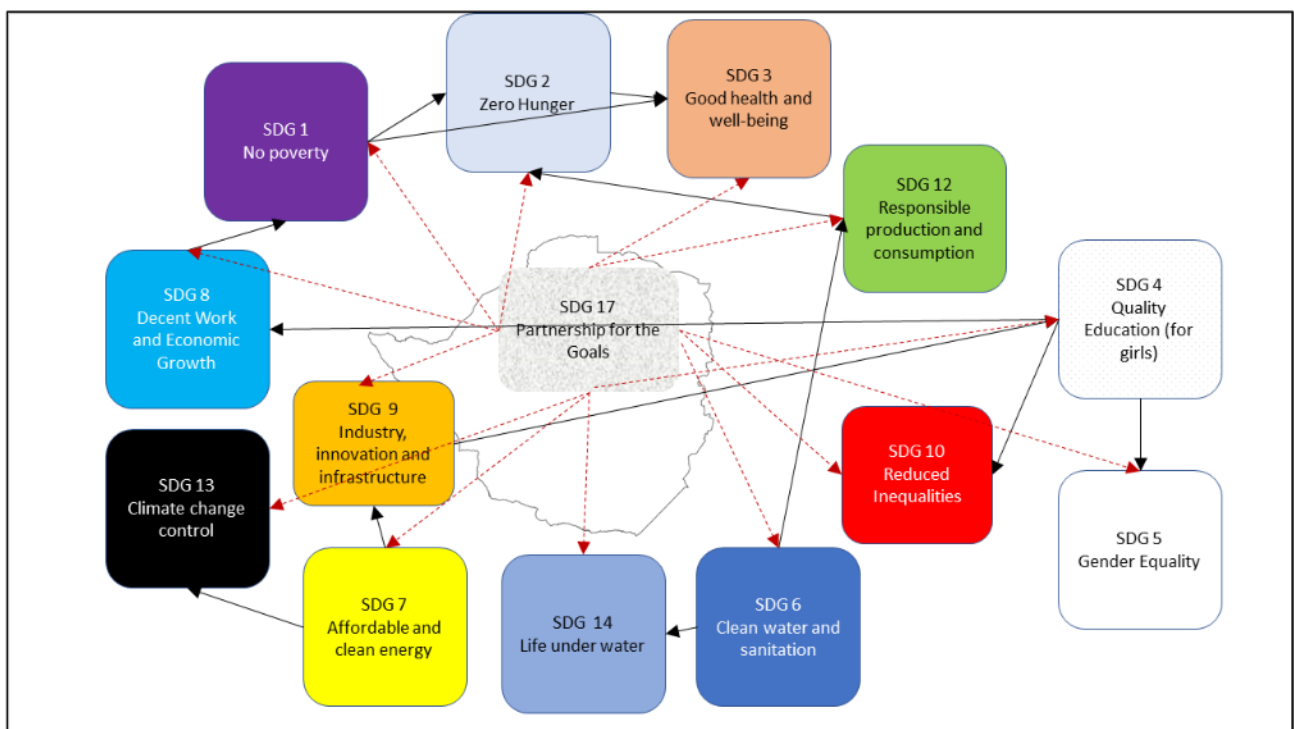


Figure 2. The synergistic effects of sustainable development, courtesy SDG#17

All this cannot be possible without **SDG#17 – Partnership for the Goals**. The partners in question are, *inter alia*, donors and philanthropists (many of whom are probably from the Zimbabwean diaspora, eager to help their brethren back home) from around the world, a prominent American University and an American NGO (Plan USA, Rhode Island, which has been active in developmental work since 1937).

This is a simple illustration of the complementarities and synergies which can be harnessed, thanks to prioritising girls' education. Ensuring gender equality and facilitating women empowerment are vital ingredients to ending poverty and commencing the 'development cascade'. As this programme in Mwenezi in southern Zimbabwe, sustains itself and blossoms forth, it will serve as one of many such examples which are 'lighting the lamp instead of damning the dark', so to say, around the world. The developmental potential of the education of girls will speak for itself, as it is realised. An Africa developing sustainably in the decades to come, will benefit not just the inhabitants of the continent but also the rest of the world.

Conclusion – *Quo vadis Zimbabwe*

Change is necessary and possible, though difficult. As Barack Obama, former President of the USA, said earlier on in the 21st century, "Change will not come if we wait for some other person or if we wait for some other time. We are the ones we are waiting for, and we are the change that we seek." As Mahatma Gandhi said in the first half of the 20th century, "Be the change you wish to see in the world." Change, here, is of the people, by the people, and for the people, quite like Abraham Lincoln defined democracy in the 19th century. Change, further, is the only constant, as written by the Greek philosopher Heraclitus, in his book *Fragments*. The direction of this change though has to be oriented towards sustainability, and models like this one in Zimbabwe, provide hope and inspiration for emulation – one cluster at a time, globally.

The Global SDGs Index and Dashboards Report of 2019, ranks Zimbabwe 121st (out of a total of 195 countries), in terms of progress towards the implementation of SDGs. That was four years after the SDGs were unveiled by the UN. At the time of writing, it has been three more years of strife in the direction of sustainability. While an underperforming macroeconomy, lack of adequate infrastructure rapid urbanisation, deindustrialisation, natural disasters and the COVID pandemic, make the journey seem daunting, the progress made deserves appreciation for the same reason. This progress in terms of targets and indicators may seem mixed for sure, and all the SDG targets set by Zimbabwe for itself, for 2030 may perhaps not be attainable. But then, if one aims for the moon, one lands on the stars, for sure. That would be better than not launching at all!

The spirit of SDG# 17 – reflected in the collaborative, philanthropic venture discussed in brief in the earlier section - prompts us to learn from examples like these, where the benefactors and beneficiaries meet half-way, shake hands with trust and embark relentlessly, on the never-ending journey towards sustainability, trusting in the power of persistent endeavour, and the infinite benevolence of the Universe.

Investments made to improve the quality and outreach of pre-primary, primary, secondary, tertiary and vocational education have been shown to have a strong inequality-reducing effect in many countries, by improving productivity and socio-economic mobility (UNDP, 2020).

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