# Encouraging Fijian Universities to achieve the Sustainable Development Goals (SDGs)

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**Abstract.** The Sustainable Development Goals (SDGs) are an international initiative to tackle the most critical issues of the day, such as inequality, poverty, and environmental degradation. Fiji's universities have played a key role in achieving these objectives through research, community involvement, curricular integration, and international cooperation. This article examines how Fijian universities have been given the authority to support the SDGs, including the achievements, difficulties, and potential paths for these initiatives.

**Keywords:** curriculum, university, sustainable development, pedagogy.

## 1 An Overview of Fiji's Higher Education History

### 1.1 Universities and Climate Change

Climate change and climate variability are the primary issues confronting the global community. The complex interrelationships between the earth and socio-ecological systems comprising the global climate necessitate critical inquiries and reflexive and transformative teaching strategies. This may help address the need for a more profound overhaul of social learning focused on sustainability issues and the challenges that pedagogy and learning must overcome. Thus, a more systemic, "deeper" path of research that integrates biophysical, socioeconomic, and socio-psychological understandings is required in place of simple, silo-based instruction.

In this environment, concepts such as Education for Sustainable Development (ESD) have gained international recognition as a fundamental component of quality education and an indispensable instrument for sustainable development. ESD enables people to modify their viewpoints and approaches to build a sustainable future. This will be aided by expanding the opportunities for excellent sustainable development education. Social transformation will be promoted by changing educational pedagogies and providing people with the necessary resources to acquire the skills, beliefs, and behaviors required for sustainable development. This highlights how crucial it is to include ideas related to sustainable development, such as climate change, in education [1]. Global university activities are needed to develop innovative programs, curricula, capacity building, and interdisciplinary collaboration to facilitate a more profound comprehension of climate change [2].


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According to UNESCO [1], the curriculum in roughly 53% of countries mentions climate change. There is frequently little context for the word "climate change" in the curriculum. A superficial, disjointed, and narrow discussion of CC is usually the norm. Items from CC are often fragmented, exist under multiple subjects in fragmented forms, and are used as examples for other issues without explanation [3].

Human activities that release greenhouse gases substantially impact the rate and magnitude of climate change. As we make decisions on managing climate change, we can rely on this acknowledged evidence from the international scientific community. However, even the most critical projections need to be considered when making decisions. International cooperation is also necessary for a genuine attempt to mitigate climate change. Greenhouse gases are produced locally by power plants, automobiles, home heating, and cooking, but the problem of climate change is global in scope. Therefore, to tackle climate change, we must coordinate efforts and build relationships at all scales, including local (city and state), regional, national, and international. Universities can have a significant impact on a community's greenhouse gas emissions in addition to providing many benefits to their communities. A university's daily commute of thousands of students and staff members and the energy needed to power all its operations, heat, and cool buildings, run complex lab equipment, and light performance venues create a significant "carbon footprint."

Nevertheless, universities can make a substantial contribution to advancing laws that support the battle against climate change. As "mini cities" with mostly unrestricted autonomy over the regulations governing their immediate surroundings, universities provide an environment where novel strategies can be developed and tested and a platform to promote sustainable behavior. It is imperative that this be implemented at a scale that allows all community members—students, staff, professors, and alumni—to see how small actions may have a big impact. Since universities are home to scholars from many science and humanities domains, they may promote research, including cross-disciplinary study, that deepens our understanding of the intricate and interwoven ecological, political, and social processes affecting the climate change challenge. Furthermore, the information generated by this research can be swiftly disseminated through well-established national and international networks [4].

Universities provide an environment that encourages innovation and responsibility. In courses offered by all a university's colleges, students can study the challenges posed by climate change and the prospects for economic growth and innovation. Furthermore, teachers, staff, and university students can collaborate to create networks that provide the community with research and educational opportunities. Universities can impact public policy as a source of research, instruction, community engagement, and economic stimulation. Adopted policies and practices by a university will probably influence changes in community and individual dynamics and regional policy.

## 1.2 The University's Function and Influence

Because of their objectives and important social roles, universities play a significant role in local and global climate action and sustainable development. However, many universities have mainly focused on compartmentalized methods rather than embracing

holistic ones. Because of their carbon emissions and other repercussions, universities can contribute to the problem and its solution. Organizations that effectively promote sustainable development have deliberate leadership and governance frameworks that support meaningful engagement and offer the best conditions for creating, evaluating, and implementing innovative strategies. However, Promoting sustainable practices could be difficult for institutional leaders because they could contradict other goals (such as expanding the student body).

### 1.3 Growth of Fiji's Universities

Fiji's higher education system has developed to reflect the country's dedication to fostering intellectual capital and tackling socioeconomic issues. One of the world's first regional universities, the University of the South Pacific (USP), was founded in 1968 and currently serves 12 member countries, including Fiji. The necessity for higher education suited to the distinct cultural, environmental, and economic circumstances of the Pacific islands led to its establishment.

The 2010 founding of Fiji National University (FNU) and the 2004 founding of the University of Fiji contributed to the country's increased higher education sector. The goals of these establishments were to address the various requirements of the people of Fiji by offering high-quality, easily accessible education.

### 1.4 The Transition to Sustainability

Traditional fields, including public administration, agriculture, and education, were the early emphasis of Fijian colleges. However, as environmental concerns and sustainable development gained popularity worldwide, so did the need to incorporate these ideas into higher education. Due to the growing effects of climate change on the Pacific region, the necessity to address sustainable development within higher education became more apparent by the early 2000s. The Pacific Centre for Environment and Sustainable Development (PaCE-SD), which the University of the South Pacific founded in 2001, pioneered the region's research and education on sustainability concerns.

## 2 SDGs Incorporated into Academic Curriculum

### 2.1 Innovations in Curricula

Universities in Fiji have done a great job incorporating the SDGs into their courses, giving students the information and abilities they need to tackle global issues. Leading this movement, the University of the South Pacific has integrated sustainability into all its academic programs. Students are intended to learn about the intricacies of environmental concerns and the significance of sustainable development through programs like the Master of Science in Climate Change and the Bachelor of Environmental Science. These programs prepare students to contribute to SDGs 13 (Climate Action) and 14

(Life Below Water) by emphasizing practical applications and theoretical understanding.

Programs like the Bachelor of Science in Environmental Health at Fiji National University, which prepares students in subjects like public health, waste management, and water quality—all essential for reaching SDG 3 (Good Health and Well-Being) and SDG 6 (Clean Water and Sanitation)—clearly incorporate SDG-related content.

## 2.2 Case Studies

One noteworthy instance of innovative curricula is the USP course on climate change. Students majoring in environmental science are required to take this course, which covers the science of climate change, how it affects the Pacific, and mitigation and adaptation techniques. Through practical projects and community involvement, students get a profound comprehension of how disadvantaged communities in Fiji and the wider Pacific area are impacted by climate change.

Similarly, the School of Science and Technology at the University of Fiji has launched a course on Sustainable Energy that delves into renewable energy technologies and how they contribute to the achievement of SDG 7 (Affordable and Clean Energy). Students work on projects that include the planning, building, and operating of small-scale wind and solar energy systems, offering helpful answers to energy-related problems.

The South Pacific University (USP), located in Fiji
As part of its 1999 strategic plan, the University of the South Pacific (USP) developed the Pacific Centre for Environment and Sustainable Development (PACESD). The necessity for additional environmental research in the area led to the establishment of this institution. The intention was to provide Pacific communities with the information they needed to pursue sustainable development and adapt to the effects of climate change. The centre collaborates closely with national, regional, and worldwide development partners and university stakeholders in non-governmental organizations (NGOs) and civil society organizations (CSOs). In addition, the institute provides consultancy services to local governments, integrating sustainable development and climate change into their operations. Participating in numerous international "Multilateral Environmental Agreements," the Pacific region and individual island states have demonstrated their strong commitment to global efforts to avert irreversible environmental damage and promote sustainable development. The Pacific Center for Environment and Sustainable Development (PACESD) is a collaborator in achieving this goal.

A Master of Science in Climate Change, a PhD in Climate Change, and a Post Graduate Diploma in Climate Change are among these programs. Students should select one or more emphasis areas when selecting one of these programs. The following are some examples of climate change adaptation strategies: (a) climatological analysis and interpretation of observations or model-generated data sets; (b) scientific analysis of the impacts of climate change on society or specific sectors; (c) developing scientific or technical aspects of a community adaptation project; (d) assessing the efficacy of a particular community adaptation project; (e) social or economic analysis of an adapta-

tion project or policy; (f) analysis of governance or social issues influencing vulnerability to, or measures to adapt with, climate change; (i) Assessing how climate change affects plants and animals; (j) Analyzing adaptation and mitigation strategies to build adaptive capability within a specific community or industry [5].

### 2.3 Fiji National University

The word of the day regarding environmental issues is climate change. The harsh effects are out in front of us, affecting everyone from small island states' inhabitants to Antarctica's glaciers. Nature warns us about extreme weather patterns, and their impacts are felt worldwide. As the issue spreads across the globe, people and decision-makers are talking about it and calling for swift action to save the environment. In the fight against climate change, Fiji has taken the lead.

The Fiji National University (FNU) has created a new program titled Interdisciplinary Studies in Climate Change Resilience and Mitigation in response to the gravity of the problem and the absence of local expertise in the field.

### 2.4 The University of Fiji

The Center for Climate Change, Energy, Environment, and Sustainable Development aims to support professional development, research and publishing, policy-oriented project management, consultancies, and the University's Department of Science. This center was established to increase research capability and use it for planning, policy-making, and sustainable development in science, technology, energy, environment, and climate change. The Center collaborates with the School of Science and Technology to provide programs and courses pertinent to Fiji's and the Pacific region's sustainable development.

CCCEESD has also established a sub-center called the Centre for Renewable Energy (CORE) to address urgent concerns about renewable and sustainable energy. The university offers climate change-related courses such as:

1. MASTER OF SCIENCE IN CLIMATE CHANGE
2. MASTER OF SCIENCE IN RENEWABLE ENERGY

### 2.5 Possibilities and Difficulties

Even though there has been a lot of progress, there are still difficulties in incorporating the SDGs into university courses. Among these are the scarcity of resources, the requirement for faculty development, and the challenge of updating course material considering the continuously changing subject of sustainable development. However, there are also chances for creativity because of these difficulties. For instance, Fijian universities are investigating using digital platforms to provide online sustainability courses to expand their reach and promote regional cooperation.

## 2.6 Areas of Focus for Research

Universities in Fiji have developed into centres of sustainable development research, concentrating on topics especially pertinent to the Pacific region. Among the main areas where Fijian universities contribute significantly are climate change adaptation, catastrophe risk reduction, and sustainable agriculture.

Notable research is conducted at USP's Pacific Centre for Environment and Sustainable Development (PaCE-SD). The institute has worked on several initiatives to better understand and lessen climate change's effects in the Pacific. To ensure that study findings are both socially and scientifically relevant, these initiatives frequently involve interdisciplinary teams of scientists, social scientists, and local community members.

FNU's College of Agriculture, Fisheries, and Forestry has vigorously pursued research to advance sustainable agriculture practices. The development of crops resistant to climate change, sustainable fisheries management, and organic farming methods are some initiatives being undertaken to meet SDG 2 (Zero Hunger) and SDG 12 (Responsible Consumption and Production).

## 2.7 Centers and Initiatives for Research

Creating specialized research centers has been essential to achieving the SDGs in Fijian institutions. For example, USP's PaCE-SD has generated innovative research and functioned as a training ground for upcoming sustainability leaders. The center's research results have influenced national and regional policy, helping to shape methods for climate adaptation that are currently being implemented around the Pacific. Another example of how institutions support the SDGs is the Centre for Renewable Energy at the University of Fiji. The center's primary focus is developing renewable energy technology that can be implemented in Fiji's rural and remote locations. This innovation can potentially revolutionize energy availability in marginalized populations and directly supports Sustainable Development Goal 7 (Affordable and Clean Energy).

## 2.8 Joint Research Initiatives

For research projects in Fiji to be successful, cooperation is essential. Fijian universities regularly collaborate with foreign establishments, non-governmental organizations, and governmental agencies to conduct research that tackles worldwide issues while maintaining local relevance. For instance, USP and the Australian National University are working together on a study that evaluates how vulnerable Pacific islands are to climate change. To ensure that Pacific community perspectives are heard in international climate negotiations, the project's findings have played a crucial role in formulating regional climate policy.

Similarly, FNU and the Food and Agriculture Organization (FAO) are working together to research Fiji's sustainable fisheries management. New management techniques developed because of this partnership are being embraced by the nearby fishing

communities, which helps preserve marine biodiversity and the means of subsistence for people who depend on it.

### 2.9 Community-University Partnerships

Fijian universities understand community engagement is critical to achieving the Sustainable Development Goals (SDGs). They collaborate closely with communities to adopt sustainable practices and enhance livelihoods through various outreach initiatives. These collaborations are especially crucial in rural areas, as these communities are frequently vulnerable to economic and environmental problems.

In the Yasawa Islands, for example, USP's PaCE-SD has been a part of a project to support climate-resilient agriculture. As part of this project, local farmers will be partnered to introduce drought-resistant crops and sustainable farming practices. The project helps communities preserve their cultural legacy while assisting them to adapt to changing climate circumstances by fusing scientific knowledge with traditional practices.

Additionally, FNU's College of Medicine, Nursing, and Health Sciences is involved in community outreach, especially in public health. The college's outreach efforts are centered on delivering healthcare services in underprivileged areas and educating communities about health and hygiene standards. These initiatives support SDG 3 (Good Health and Well-Being) and significantly improve rural Fiji's health outcomes.

### 2.10 Strengthening Indigenous Wisdom

Universities in Fiji have worked hard to incorporate Indigenous knowledge systems into their environmental projects. Through the validation and preservation of traditional knowledge, this method guarantees that development practices are culturally suitable and empower communities [6].

For instance, the University of Fiji has created a curriculum that blends traditional land management techniques with contemporary environmental science. Students who complete this program will learn how to adapt traditional knowledge to modern environmental issues, including deforestation and soil erosion. It contributes to preserving Fiji's distinctive ecosystems' biodiversity and advances SDG 15 (Life on Land).

## 3 Conclusion

Fiji's universities have become key players in the fight for the Sustainable Development Goals (SDGs), using their unique position to take on regional and global issues. By incorporating Sustainable Development Goals (SDGs) into their academic programs, these universities have given their students the knowledge and abilities to promote sustainable development. In addition to creating alliances that increase their effect, their dedication to research and invention has resulted in the development of workable solutions that directly address essential concerns, including public health, renewable energy, and climate change.

Furthermore, empowering those most impacted by environmental and socioeconomic issues has been made possible by institutions' active engagement with local communities. Fijian universities contribute to preserving cultural heritage and advancing sustainability by accepting traditional knowledge and integrating it with contemporary scientific methods. Their involvement in policy advocacy serves as additional evidence of their impact, as they help to shape regional and national approaches to reaching the SDGs.

Notwithstanding the obstacles—such as scarce resources and the ongoing need for capacity building—the advancements made by Fijian institutions show that they can act as agents of long-lasting transformation. These institutions will be vital in ensuring that Fiji and the Pacific region can meet the challenging goals outlined by the SDGs as they continue to increase their efforts and effect.

In conclusion, it is a local or regional issue and a worldwide need for Fijian universities to be empowered to accomplish the SDGs. Their achievements and lessons gained provide insightful examples of how higher education may catalyze the development of a sustainable future for everybody, not just for other tiny island developing states but also for larger states.

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