

# Youth and the Mountains



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## *Student Papers on Sustainable Mountain Development*

**Volume X**

**2022/2023**



# **Youth and the Mountains**

## **Student Essays on Sustainable Mountain Development**

Youth and the Mountains Student Essays on Sustainable Mountain Development Youth and the Mountains is an academic research journal composed of student articles on sustainable mountain development in the state of Utah and globally. The journal is supported by the Department of History and Political Science, in the College of Humanities and Social Sciences at Utah Valley University (UVU). The Journal is an undergraduate publication with the aim of providing a forum for undergraduate students to share research and encourage the active pursuit of quality academic scholarship with a focus on sustainable development in mountain areas. Students who have questions about the Journal, or those wishing to contribute (IE: filling staff positions or submitting a manuscript for review), should contact the President of Utah International Mountain Forum, Stephan Atkinson by e-mail at: [Stephan.Atkinson@uvu.edu](mailto:Stephan.Atkinson@uvu.edu) with the subject line of JOURNAL SUBMISSION. If you would like to see previous issues go to: <https://www.uvu.edu/hps/youthjournal.html>

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## **Editorial Board**

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## **Editor Note**

Dear Reader,

It is with great privilege that I introduce the 2022, 2023 edition of the Youth and the Mountains Journal, showcasing the scholarly contributions of undergraduate students from Utah Valley University (UVU). Our journal's inception dates back to 2013 when a committed group of UVU students established it as part of their endeavors to advocate for Sustainable Mountain Development (SMD) during the Third Global Meeting of the Mountain Partnership held in Erzurum, Turkey. This present issue upholds those esteemed traditions by engaging students in SMD advocacy through academic research.

Within these pages lie comprehensive analyses of mountain communities, both within the State of Utah and on a global scale, underscoring the importance of SMD. These contributions are a testament to giving through student efforts a voice to communities often marginalized by the forces of globalization, rendering them susceptible to pressing challenges such as climate change, food insecurities, water stress and among many others. Consequently, these issues warrant attention in alignment with the United Nations (UN) 2030 Agenda for Sustainable Development.

The research showcased in this journal was conducted through a student-engaged learning (SEL) model at UVU, wherein students as a group, guided by faculty mentors, delved into diverse subjects, addressing real-world problems faced by mountain communities in the Rocky Mountains region and worldwide. Our editorial team, composed of dedicated students who are well-versed in SMD advocacy, collectively supported the promotion and advancement of SMD, in line with the UN's Sustainable Development Goals (SDGs), including Targets 6.6, 15.1, and 15.4, which are focused on different aspects of sustainable mountain agenda.

As customary, the initial segment of this edition, entitled "United Nations Official Documents," presents the United Nations Secretary General's report on SMD which highlights the SEL model developed at UVU and its contribution to the SMD advocacy in the State of Utah and at the UN during 2019-2022. In addition, it includes the statement about SMD advocacy during 2022 by UVU students and faculty through SEL in partnership with the Russian Academy of Natural Sciences and the Utah China Friendship Improvement Sharing Hands Development and Commerce, both non-governmental organizations (NGO) holding consultative status with the UN Economic and Social Council (ECOSOC). The statement after

submission to the UN secretariat by both NGOs, and further approval and distribution as an official UN document is included in this volume. It was prepared for presentation at the 67th Session of the Commission on the Status of Women (CSW67) in New York City in March 2023. The document highlights UVU's SEL model in advocating for SMD and calls upon UN Women to include a language about challenges for mountain women and girls in achieving sustainable development in the final CSW67 document.

The subsequent section two of this journal with focus on SMD issues in the State of Utah presents the paper which delves into the influence of the local historical background of the Intermountain Indian School in the Rocky Mountains.

The third section of this journal focuses on the implementation of United Nations Sustainable Development Goals (UN SDGs) in mountainous regions across the globe. The first paper in this section explores the crucial aspects of women's health and education in mountain regions. Following this, another paper delves into the intersection of the Winter Olympics and SMD, shedding light on the challenges and opportunities presented by hosting such events in mountainous areas. One particularly notable work in this section is an extensive undergraduate honors paper, which undertakes a comparative analysis between the State of Utah and the Kyrgyz Republic. In addition, this section features an essay that showcases Bhutan's approach to sustainable development and energy management, offering valuable lessons for other mountainous areas. Another paper within this section focuses on Sustainable Development in mountainous regions of India, with a particular emphasis on Gender Equality as a critical component. Furthermore, the next paper explores the resilience of Cuban women in the face of a blockade, shedding light on their remarkable efforts and contributions to sustainable development. Additionally, an analysis is provided on sustainable development in the context of mountain tourism and rural communities in France, highlighting the intricate dynamics and challenges involved. Diving into the cultural realm, one paper examines the life of the Kalash People in the mountains of Pakistan, offering insights into the complex interplay between religion and sustainable development in this Muslim population dominated state. Finally, the section concludes with a discussion on Peru's largest natural disaster, corruption, underscoring the importance of addressing systemic issues that hinder sustainable development efforts. Overall, this section offers a comprehensive exploration of the multifaceted issues surrounding sustainable development in mountainous regions across the world.

I extend my gratitude to the dedicated editorial team and students for their unwavering commitment to SMD advocacy and their valuable contributions to this issue. I would also like to acknowledge the

university faculty for their tireless dedication to mentoring the students' efforts in bringing this volume of the Youth and the Mountains journal to fruition.

I eagerly await the publication's dissemination to the wider public and look forward to collaborating with interested institutions in ensuring that sustainable development for mountain communities in the State of Utah, North America, and beyond remains at the forefront of the UN's 2030 Agenda for Sustainable Development.

Mr. Elmer Muniz, Editor-in-Chief

**Section I**  
**United Nations Official Documents**



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**Seventy-seventh session**  
Item 18 (k) of the provisional agenda\*  
**Sustainable development**

## **Sustainable mountain development**

### **Report of the Secretary-General**

#### *Summary*

Covering around one quarter of the Earth's surface, mountains are key ecosystems that provide humanity with essential goods and services such as water, food, biodiversity and energy. However, mountain ecosystems are severely and increasingly affected by biodiversity loss, climate change and land degradation. As of 2017, mountains were home to about 1.1 billion people. People in mountain areas are among the world's poorest: in 2017, half of rural mountain dwellers living in developing countries faced food insecurity. Access to services and infrastructure is lower in mountains than in other areas. Mountain communities are highly dependent on predominantly small-scale and family-based agriculture. In the mountains, exposure to natural hazards, lack of key services and impacts of crises and conflicts are factors contributing to the high vulnerability of populations. The coronavirus disease (COVID-19) pandemic has further disrupted life in mountains and compounded the vulnerabilities of mountain communities. The human health crisis is aggravating the unfolding and interconnected emergencies associated with climate change, biodiversity loss, land degradation and pollution in mountains. Identifying new and sustainable livelihood opportunities and adopting practices that combat land degradation and promote climate change adaptation and resilient agrifood systems are urgent requirements for achieving the Sustainable Development Goals and reducing outmigration trends. The present report includes some recommendations on actions to accelerate progress towards inclusive, resilient and sustainable mountain development.

66. An inclusive co-curricular student-engaged learning model developed at Utah Valley University in the United States of America involved students, especially non-traditional learners, in promoting sustainable mountain development in the State of Utah and at the United Nations.



**Economic and Social Council**Distr.: General  
29 November 2022

Original: English

**Commission on the Status of Women**

Sixty-seventh session

6–17 March 2023

**Follow-up to the Fourth World Conference on Women and to the twenty-third special session of the General Assembly entitled “Women 2000: gender equality, development and peace for the twenty-first century”****Statement submitted by Russian Academy of Natural Sciences, and Utah China Friendship Improvement Sharing Hands Development and Commerce, non-governmental organizations in consultative status with the Economic and Social Council\***

The Secretary-General has received the following statement, which is being circulated in accordance with paragraphs 36 and 37 of Economic and Social Council resolution 1996/31.

**Statement****Empowering Mountain Women Through An Inclusive Student-Engaged Learning Model**

We present a joint educational model which contributes to the priority theme of this session by encouraging students globally to promote gender equality and empower women, girls, and families in the mountain regions of the world.

The Secretary General’s Report on Sustainable Mountain Development [A/77/217](#) from 22 July 2022, states that people in mountain areas worldwide are among the poorest, with half facing food insecurity and limited access to services and infrastructure. Mountain communities are highly vulnerable to the negative impacts of climate change, biodiversity loss, land degradation, and pollution, to name a few. The coronavirus pandemic has further disrupted their livelihoods.

The 2030 Agenda for Sustainable Development designated Target 6.6, Target 15.1, and Target 15.4 towards sustainable development in the mountain regions. The United Nations General Assembly Resolution [A/RES/76/129](#) from 28 December 2021, proclaimed 2022 as the International Year of Sustainable Mountain Development, providing new opportunities to address challenges faced by mountain communities, women, and girls worldwide in sustaining their livelihoods.

Since 2011, we have partnered with Utah Valley University and academic institutions in the Kyrgyz Republic to create educational programs to promote sustainable development for mountain communities. We assisted Utah Valley University in developing an inclusive, co-curricular, student-engaged learning model that encourages both non-traditional and traditional students to work as a group to advocate for mountain regions with faculty serving as mentors. Non-traditional students are usually over 25 years of age, balancing their education with work and family responsibilities. Many are women and mothers who contribute experiences based on their knowledge as local representatives of mountain communities. The Utah International Mountain Forum, a coalition of student clubs at Utah Valley University, serves as an extracurricular core of this model. Foreign Affairs, Sustainable Mountain Development, Model United Nations, and Rotaract are leading clubs within the coalition. The curricular part of the model encourages students to participate in club activities and build professional connections between students and mentors.

Through the model, students contribute their own skills, experiences, initiatives/projects, and funds to implement sustainable mountain development while gaining professional skills and recognition from the Mountain Partnership under the Food and Agriculture Organization. The Mountain Partnership coordinates Sustainable Mountain Development activities globally through more than 450 members, including our two institutions and Utah Valley University.

Through the model, the following advocacy achievements were made possible:

1) From 2012 to 2022, student coalition members have advocated for adopting and implementing Target 6.6, Target 15.1, and Target 15.4 to ensure global sustainable development for mountain communities. As advocacy efforts, they have, in particular, hosted through the model at Utah Valley University: 1) Co-Chair of the Open Working Group on Sustainable Development Goals, Permanent Representative of Hungary to the United Nations, His Excellency Csaba Korösi on 2 April 2012; 2) President of the Economic and Social Council, Permanent Representative of Austria to the United Nations, His Excellency, Martin Sajdik on 12 February 2015; 3) President of the United Nations General Assembly, Permanent Representative of Fiji to the United Nations, His Excellency Peter Thomson on 7 December 2015; 4) Co-Chair of the Open Working Group on Sustainable Development Goals, Permanent Representative of Kenya to the United Nations, His Excellency, Macharia Kamau on 9 February 2017, and; 5) Under Secretary General for Global Communications, United Nations, Ms. Alison Smale on 29 March 2019. Students also advocated for mountain communities by hosting at the university Permanent Representatives to the United Nations from: 1) Romania, Her Excellency Simona Mirela Miculescu on 26 March 2012; 2) India, His Excellency Hardeep Singh Puri on 15 February 2013; 3) Macedonia, His Excellency, Pajo Avirovikj on 18 March 2013; 4) the Kyrgyz Republic, His Excellency, Talaipek Kydyrov on 22 March 2013; 5) Switzerland, His Excellency, Paul Seger on 25 March, 2013; 6) Greece, His Excellency, Michel Spinellis on 9 June 2014; 7) Romania, His Excellency, Dr. Ion Jinga on 7 October 2015; 8) Germany, His Excellency, Harald Braun on 31 October 2016; 9) Uzbekistan, His Excellency, Bakhtiyor Ibragimov on 5 February 2018; 10) Bosnia & Herzegovina, His Excellency, Milos Vukasinovic on 6 March 2018; 11) Tajikistan, His Excellency, Mahmadamin Mahmadaminov on 5 October 2018; 12) Austria, His Excellency, Jan Kickert on 19 February 2019, and; 13) Russian Federation, His Excellency, Dmitry Polyanskiy on 5 April 2019. In addition, students advocated for mountain targets by hosting at the university: 1) the Ambassador of the Kyrgyz Republic to the United States, His Excellency Muktar Djumaliev, on 3 June 2013, and; 2) Permanent Representative of Peru to the Organization of American States, His Excellency, Harold Forsyth on 3 March 2022.

2) As our major joint initiative to contribute to the sustainable mountain development agenda under the Mountain Partnership through developed educational

programs, in 2007, Utah Valley University and the International University of Kyrgyzstan organized the First International Women of the Mountains Conference as an academic forum in Orem, Utah. The Secretary General's Report on Sustainable Mountain Development [A/62/292](#) from 23 August 2007, featured the conference as a forum for improving mountain women's status globally, and the Secretary General's Report on Sustainable Mountain Development [A/64/222](#) from 3 August 2009, highlighted its role to establish a regional network on sustainable mountain development and gender issues. The Second International Women of the Mountain Conference was co-hosted by Utah Valley University faculty and 60 students and their partners from the Kyrgyz Republic, in Orem, Utah, on 8 to 9 March 2011. Sustainable Mountain Development in North America: Regional Report of the Food and Agriculture Organization of the United Nations in January 2012 highlighted the forum as strengthening the regional approach for advancing Sustainable Mountain Development and gender agendas. The model allowed Utah Valley University faculty and five students to host the Third International Women of the Mountains Conference outside the United States in Puno, Peru, in June 2012. The Secretary General's Report on Sustainable Mountain Development [A/68/307](#) on 5 August 2013, stated it was a forum gathered by academic institutions from Utah and the Kyrgyz Republic with a focus on mountain communities in the Andean region. As a highlight of the model, the Fourth International Women of the Mountain Conference was held in Orem, Utah, from 7 to 9 October 2015, with student coalition members planning and implementing it over four semesters. The Secretary General's Report on Sustainable Mountain Development [A/71/256](#) on 29 July 2016 featured the coalition as a host of the conference, which adopted the outcome document observing that Sustainable Development Goal 5 could be achieved by providing women full participation and equal leadership opportunities; implementation of Target 6.6 could be obtained by supporting women's role in the protection of the environment and water sources, and Target 15.1 could be accomplished through the critical role of women in promoting innovation and development.

3) Since 2016, we have involved Utah Valley University students through the model at different forums of the Economic and Social Council on Sustainable Development. Through participation in sessions of the Commission on the Status of Women, they both advocated for mountain women, and reported on the results of the hosted four International Women of the Mountain conferences. We co-sponsored students' participation at the 62nd Session of the Commission on the Status of Women in March 2018, when they co-hosted a side and a parallel event. Our written statement [E/CN.6/2018/NGO/37/Rev.1](#) on 20 February 2018 highlighted how the model encourages students to advocate for gender equality and empower women and girls in mountain areas. Utah International Mountain Forum's advocacy campaign for mountain women at the 62nd session was highlighted in the Secretary General's Report on Sustainable Mountain Development [A/74/209](#) on 22 July 2019. We co-sponsored an oral presentation of students from Utah with advocacy for mountain targets' implementation at the High-Level Political Forum on Sustainable Development on 19 July 2018. In the written statement [E/2018/NGO/17](#) on 30 May 2018, one of us featured the inclusiveness of the model, allowing both traditional and non-traditional students to advocate for mountain targets implementation. In March 2019, we co-sponsored Utah International Mountain Forum members, including one from Rotaract, participation at the 63rd session of the Commission on the Status of Women, when they again hosted a parallel event. In our written statement [E/CN.6/2019/NGO/64](#) on 30 November 2019, we highlighted the model's encouragement of students to empower mountain women and girls through improving public services, social protections, and infrastructure. When we co-sponsored Utah Valley University students' participation at the 64th session of the Commission on the Status of Women in 2020, they planned to host a parallel event. Although the session was canceled due to the COVID-19 pandemic, our written statement [E/CN.6/2020/NGO/91](#) on 30 November 2019 highlighted the student encouragement by

the model to advocate for assessing the implementation of the Beijing Declaration for attaining gender equality in mountain regions. In March 2021, we co-sponsored the participation of members from the Utah International Mountain Forum, including five from Rotaract, at the 65th session of the Commission on the Status of Women, when they hosted a virtual parallel event. Our written statement [E/CN.6/2021/NGO/125](#) on 13 December 2020, highlighted the model as an educational initiative allowing students to advocate for equal participation of mountain women and girls in decision-making. In March 2022, we co-sponsored the joint participation of Utah International Mountain Forum members, including seven from Rotaract, and students from Utah Snow College and Osh Technological University from the Kyrgyz Republic at the 66th session of the Commission on the Status of Women, when they hosted a virtual parallel event. Using Internet technologies, students from different mountainous regions around the world effectively participated in United Nations activities, utilizing limited resources. Our written statement [E/CN.6/2022/NGO/141](#) on 13 December 2021 highlighted the critical role of the model in encouraging students from various mountain regions to advocate for gender equality of mountain regions in the context of climate change, environmental and disaster risk reduction policies and programs. The inclusive, co-curricular student-engaged learning model developed at Utah Valley University, and the role of non-traditional students in its implementation were highlighted in the Secretary General's Report on Sustainable Mountain Development [A/77/217](#) on 22 July 2022.

The inclusive student-engaged learning model implemented at Utah Valley University, through our support, has empowered all learners to successfully advocate for sustainable mountain development and gender equality in Utah, the Kyrgyz Republic, and globally. It has created a solid foundation to establish similar initiatives for students in the Russian Federation and the People's Republic of China and for them all to jointly advocate for sustainable development in their own mountain regions and globally.

The model implements Sustainable Development Goal 5 on gender equality in interaction with Target 4.7, Target 6.6, Target 15.1, and Target 15.4 by ensuring that all learners acquire the knowledge and skills required to promote sustainable mountain development through education. It can be implemented by academic institutions worldwide, especially in mountain regions.

## **Section II**

# **Sustainable Mountain Development Issues in Utah**

## Historical Background of the Intermountain Indian School in the Rocky Mountains

By Hendrix Bailey

*Hendrix Bailey was born in American Fork Utah, and was raised in Texas, Puerto Rico, and graduated from highschool in the Republic of the Marshall Islands. He developed a love of politics and Native American history from a young age, and spent much of his childhood reading through his fathers collection of historical texts and contemporary political papers. He will be graduating with his bachelor's degree in political science in August 2023, and plans on pursuing a career in the federal government.*

The Intermountain Indian school is an interesting piece of Utah history that rarely gets the attention that it deserves. The school was the largest Native American boarding school in the United States, and at its peak it housed students from twenty-six different tribal nations. This boarding school is an important piece of American and Utahn history that can provide us with genuine insight into the time period. The school also overlaps multiple time periods of Native American History. It was open through the reorganization period from 1934-1952, the termination period from 1953-1970, and the self-determination period from 1970-1994. Because of the large overlap with different time periods, the ways the school changed during these time frames could shed light on how the treatment and education of the students changed and why as well.

Intermountain Indian School was first opened in 1948 to a class of 500 Navajo students. Originally called Bushnell Hospital, the grounds and buildings used by the school were originally medical centers to treat soldiers injured in combat and consisted of 140 buildings on 300 acres of property. After the end of the second world war, there was a rise in demand for native boarding schools, and so the government (not wanting to lose out on the hefty investment it took to build the hospital) decided to convert it into a school. Students who attended would be transported to the school from their home reservation at the beginning of the school year and they would stay until the following summer, returning to the reservations for the break. (Some 300 or so students tended to stay during the summers as well however.)The schools mission statement claimed that the school was created to teach Native children English, various vocational skills, and entry level education so that the students could more easily assimilate into mainstream American culture. This

however did not entirely work, and critics of the school would argue that the focus on vocational jobs and entry level education did help native students, but it also kept them in abject poverty because of a lack of emphasis on higher wage jobs or higher education.

However, according to the Department of the Interior reports on the intermountain Indian school, by 1953 there were 2,300 students attending the boarding school even though there was only space for 2,100 to live there. This sort of behavior seems to be glorified by the BIA, who in their report claimed the school was a wild success because of the overpopulation, without acknowledging the fact that the over population showed there was a desperate need for better education in native communities. The school's paper, called "smoke signals", also helps illuminate life inside of the school. In volume 2 issue #1 from oct 14th 1952, student Harold DeJolie says this about the school "Mr. Eagleplume spoke to us today about borrowing. He said that everybody borrows different things from each other. Like how we borrow education from the white man." This quote from Mr. Eagleplume shows that while the school's purpose is to educate native communities, the way he talks about educating them shows his own bias towards the people he is supposed to be helping. He sees himself as gifting education to lesser people, and he emphasizes that they should be grateful for the fact white men are allowing them education through his use of the word "borrowing" instead of "giving" education to the community. The school also followed an uncommon curriculum program. Instead of k-12 education, the school focused more on slightly older students who have not received an education yet. Normally, students would sign up for a 5-year program where they would get an expedited education up to the 6th-8th grade level, depending on the students' age. Many older students would only graduate with an elementary level education and some low level vocational experience.

In order to give an accurate picture of life inside of the school during its first decade of operation, I will be pulling answers from the BIA's frequently asked questions booklet about the school. This report was written in 1953 and gives an interesting insight into the school and how the Bureau of Indian affairs viewed the school it was operating. In the report, one of the questions was how children get new clothing during the school year. The BIA author then talks about how young children who could not afford to bring or buy their own clothing would be required to work to pay back the cost of the clothing. They would receive 50 cents per hour for the work they provided, even though the federal minimum wage in 1953 was .75 cents an hour. While this is a

small detail, it shows that even the BIA did not believe that native American children were worthy of receiving the bare minimum compensation for their work, and the BIA was unwilling to foot the bill to provide under-privileged children with something as basic as clothing. Another odd focus was the focus on teen pregnancy. The BIA reported that incidents of intoxication / pregnancy were rare, and that serious behavioral problems are so rare that only a few come to the attention of the superintendent every year. This struck me as unlikely, considering many of the students were teenagers and hadn't had any sex education or even normal education for that matter.

Another thing interesting about the school is that most students who arrived did not speak English; and none of the teachers spoke Navajo. The school instead hired Navajo people with a high school education as instructional aids to translate for the new students. The children were encouraged to only speak English and abandon their native language. This is another subtle way that the US federal government attempted to "Americanize" the native community. The BIA is quoted in their manual as stating that "The task of Intermountain is to change language, change diet, housing, social customs, and civic responsibilities." And responding to a question asking if the students still followed their native traditions, they said the following: "some of the geniuses still follow primitive practices, because that's all they've been exposed too, and have had no opportunity to learn modern skills." Effectively, the BIAs main goal of this school was to bring in Native American children and send out American adults with manual labor skills that somewhat benefitted the students, but mostly benefitted their future employers.

However, not everything about the Intermountain Indian School is negative; and in some ways it was better than other schools operating at the time. The faculty had a more progressive ideology that permitted some knowledge of their culture and peoples art. The students were allowed to create Murals in the halls in the native style and were permitted to wear ceremonial Navajo attire on special occasions. While this is not much, it was more than was allowed at more notorious boarding schools in other states.

As the 1960s dragged on, the school ran into a problem. While they had dealt with a lack of space for students in the past, by the mid-60s there was a crisis of attendance. Because of this, they began opening the school to tribes other than the Navajo by the late 60s. At this same time, a

Navajo tribal council conducted a report on conditions at the school in 1968 and were very upset about what they found.

The tribal council found a startling lack of discipline at the school for students, poor attendance across all classes, drinking, glue sniffing, and peyote use. The tribal council believed the school was unable to control the situation, as they had put the student council in charge of disciplining the other students instead of the faculty. Students would steal glue from the vocational classrooms and would sniff it to get high. This was seen at all ages and grades at school. As well, you can legally only consume peyote if you are a member of the native American church, which students were not. Instead, how they got the peyote is that older student's parents would come to visit them at the school, bringing peyote for their kids and their friends. And unlike the BIAs version of events, drinking was incredibly common. There was a small town nearby that students could walk to, and with some of the older students being upwards of 25 years old they were able to purchase alcohol and bring it back to the school without fear of punishment. The council also found that while students were allowed to wear traditional clothing for special events, many of the older students would destroy the tribal clothing with no repercussions. They also said that the vocational training students received was subpar and focused mostly on menial labor without any economic mobility or long-term benefits to the students. They also found a lack of discipline and structure with how students were housed. They found students as young as 13 were being housed with students who were 20 plus years old, causing concern about the safety of younger students who had to sleep near and live with significantly older students. While this council found many issues at Intermountain, nothing substantial really changed about how the school was operated by faculty or the BIA.

The tribal council were not the only ones who noticed a problem either. In 1972, journalist Jerome Carlson wrote about a reoccurring suicide problem at the school, where 2 students had killed themselves in a single semester with no reason for the suicides being provided and no plan for preventing them being announced.

As well, in 1971 a lawsuit was filed by the intermountain school's chapter of the National Indian Youth Council against the school. The lawsuit claimed that the school had violated the treaty of 1868 between the United States and the Navajo tribe by forcing students to travel so far

away from their families for education. They alleged that the main reason that the school was put all the way out in Brigham city instead of directly on the reservation is because the government did not want to have to write off the military hospital as a loss and did not want to spend the time and effort to build a new school closer to their home. They also claimed that the school was racially segregated, and that the education they received was purposefully inferior so that they could not properly compete with white people for jobs. They also mentioned the previously brought up housing issue of keeping older and younger students together, and that all their packages and letters were opened and examined by the student council and staff. The most frightening claim that was brought forward by this lawsuit was regarding Thorazine. The students alleged that if anyone was caught drinking at the school, they were taken to building 35. In this building they would be injected with Thorazine to make them throw up, and sometimes teachers would physically assault students / make them fight them. They also alleged that some students would have their heads shaved when they were caught as well.

Despite the evidence of crimes and abuse occurring, judge Aldon J. Anderson dismissed the case because he believed that the students had not fully exhausted their administrative remedies for the problem through the BIA, not because the claims were inherently false.

This marked the beginning of the end for the school. In 1975 there was a “riot” where students from different tribes fought each other. During the riot 3 police officers were injured and multiple cars were broken or destroyed. However, according to former students and teachers, this was less of a “riot” and more of a scuffle between tribal members that had animosity towards each other. The teachers said that it was blown out of proportion by the white residents of the neighboring town, who were not there when the incident occurred.

By 1984, the school had to be shut down due to a lack of funding and a steep drop in enrollment. Some students who had benefited from the school organized a 24-mile fun run from Brigham city to the federal building to plead their case to state delegates, however the delegates did not show up and the school was officially closed.

In conclusion, the Intermountain Indian School is an important and overlooked piece of Utah history. While not as inherently negative as many other boarding schools during this time, the school was still a product of the politics and ideologies of the time. It did give some

opportunities to native children who otherwise would have had nothing, but at the same time it didn't do its job of properly preparing the students for adult life and eventual careers. Many parents saw the school as the better of two bad options, between allowing their children to stay on the reservations with no opportunities for the future or sending them to a boarding school with a lack of discipline with the hope that it could give them enough skills to move upwards in life. By studying intermountain Indian School as well as other native American boarding schools, we can begin to paint a more accurate picture of life for our native communities in the 20th century.

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## **Section III**

# **Sustainable Mountain Development Issues Worldwide**

## Women's Health and Education in Mountain Regions

By Alexandria Lamb

*Alexandria Lamb is currently a student at Utah Valley University majoring in Political Science, with an emphasis in Public Administration. Alexandria is passionate about education of all forms, but specifically that of women's health. Growing up, both of Alexandria's parents were educators, which fostered a deep love of learning. From a young age she realized the importance of education in all of its varieties. While studying under UVU President, Astrid Tuminez, she found a large disconnect between women and health education. Alexandria found that this lack of education didn't just impact the woman, but the community as a whole. Alexandria hopes to bridge this lack of understanding through working with nonprofits to provide essential health education to women throughout the world. In her free time, she enjoys quilting with her friends, watching political thriller movies, and experimenting with popcorn flavors.*

Research Question: What can be done/is being done for women's health in mountain regions?

How can new climate change initiatives help rather than hinder the lives of women? How is education and women's health associated in mountain regions?

Picture this, Amahle, a native of Lubumbashi, Africa, turns twelve. Amahle has heard of periods, but isn't quite familiar with all the intricacies associated with it. She hears about the horrors of menstruation, but hasn't had to deal with it yet. Then, one day she notices blood in her undergarments. The next week of her life is spent in a wooden hut near the back of her family's home where she will stay until the end of her period. During this time, she misses crucial time to socialize, exercise, make friends, go to school, do homework, help around the home, gain a job, etc. And once her cycle finishes, her life continues. Right up until three weeks later when she starts her next menstrual cycle. Fast forward eight years and Amahle is now in love and has a steady boyfriend. Without having much sex education, she has unprotected sex, and realizes a few weeks later that she is pregnant. She goes nine months without prenatal vitamins (due to low accessibility in her village) and eventually gives birth at home. After her home birth, she is left without postnatal care and deals with postpartum depression. Due to the father's absence, she is all alone. At this point, she is not only concerned with her own health, but the health of her child as well. Fast forward twenty years, she has two more children, and is married. Due to her husband needing to work more inland, she is a single parent for six out of seven days of the week. For a majority of

the year, she is the primary caregiver for her family. Nearing her early fifties, she notices changes to her body. Irregular periods, mood changes, hot/cold flashes, etc. But due to lack of available information in her community, she is left without guiding information. And while we understand this to be menopause, she is left guessing. Her only source of information is other women in the village. And while they provide sage wisdom, it isn't always medically accurate. At this stage in life, she is now approaching grand motherhood and is attempting to mentor her own children in child rearing; only with the limited knowledge that she has from her own experiences. Amahle and her family are ensnared in a web of health misinformation, struggling to break free from its harmful transgenerational effects. So, what's the point? Health education, given to women from a young age, has the potential to drastically change the overall quality of their lives, and their posterity for the better. Gandhi once said, "It is health that is real wealth, not gold and silver." Sadly though, many people do not understand the advantage that health education provides. "Empowering women as educators, caregivers, holders of knowledge, and agents of social change can improve mitigation and adaptation policy interventions." (1) It is our responsibility as advantaged citizens to provide mountain communities with information that has helped us and our communities lead full and prosperous lives. Did you know that over 24% of the world is made up of mountains? Over 12% of the world's population lives in mountainous regions and chances are that their communities rank very low on the socioeconomic level. One need that is imperative within mountain communities is health care (and in many varieties). Even more specifically, women's healthcare and their access to it, and health information. Women's knowledge of health, and availability of health care is essential not only to themselves, but their families and societies as a whole. From a young age, women encounter significant health situations which can either be a success, or a disaster. These include anywhere from nutrition, to menstrual care, to reproductive health, perinatal health, menopausal health and more. Most of which happens within the first forty years of their lives. Finding solutions to women's health problems, specifically in mountainous environments, is essential not only to women, but to people everywhere.

An aspect that I found to be most important in regards to women's health, was reproductive and sexual health. Perhaps one might underestimate the importance of this knowledge, but the depth of understanding is essential to ensuring the healthy continuity of a global society. In the end reproductive and sexual health affects all of us, male and female, irregardless of age. In regards to reproductive health in mountain communities, researcher Rishi Bastakoti, said it best: "Women

were having more children than they wanted... thanks to poor access to health services, which undermined maternal and child health and led to rapid population growth, lower education levels, and ultimately more degraded ecosystems.” (2) Sex education can be an advantageous tool in this arena but as Bastakoti said, poor access to health services also most likely means poor access to health education. Sex education across the world suffers to some extent, but particularly in the mountain areas. Lack of access to information is of chief concern. It also is important to recognize that if we choose not to educate individuals, and specifically women about health education, then we must create a society that can sustain the increased population that will subsequently appear.

Education is key in any type of health care system. A study in Nepal found that, “Particularly in interventions directed towards women, better education may enhance the ability of households to put interventions into practice, thus improving wealth, hygiene, and child diet and growth indices.” (3) By promoting and giving access to health education, we’re providing avenues for individuals to willingly and knowingly promote their situation. It creates an opportunity for accountability for the individual and the family. We can provide health education to women in mountain areas by providing information to community leaders first, and assisting them in creating and executing community driven initiatives with the focus on helping women learn more about health and wellness.

We must also be aware of the needs of our own communities. In my native state of Utah, a bill (HB162) was just passed providing the opportunity for public schools to allow access to free period products in restrooms (4). In my adolescent years, (and even sometimes now) the loss of, or forgotten menstrual products occasionally prohibited me from attending school, working, and fully participating in society. This bill will pave the way for the future of female access to education in Utah. This was a remarkable, and landmark action made by the Utah government, nevertheless, it took time, public education, and community support to fully come into fruition. In lower socioeconomic areas, the requirements for change are the same. Time, education, and support. We must provide that to the women of the world early on in their lives so that they can have the best possible chances of success whether it be in education, health, or economic opportunities.

Menstrual health can often be a charged topic for many. Sometimes it can have positive experiences tied to it, but for many women worldwide, regardless of demographics, menstrual

cycles are not celebrated but dreaded. Why is this the case if women have been experiencing menstrual cycles since quite possibly the beginning of time? It could be cultural issues, misunderstanding or lack of understanding of female anatomy, or lack of period supplies such as tampons, pads, menstrual cups, etc. In my research I've found that misunderstanding or false information is most damaging to young women.

In certain cultures using menstrual products can mean damaging one's purity, or desirability. "During their menstrual period, women are generally considered impure in Nepal; in the rural areas of the western part of the country, they are even banished to stay in sheds (called chhaupadi) during this time, which increases their vulnerability to a variety of health consequences". It then transitions from a question of healthcare, to a question of human rights in regards to free participation. When women start their menstrual cycles and are restricted of basic human rights, then it becomes overwhelmingly obvious that change is imperative and essential. A research university in London began a qualitative set of studies known as "Dignity without Danger". In 2019 they began a research project centered in Nepal and focused on menstruation attitudes and current education (5).

"Stigma around menstruation and menstrual hygiene in Nepal is a violation of several human rights. In particular it violates the right to human dignity, but also the right to non-discrimination, equality, bodily integrity, health, privacy and the right to freedom from inhumane and degrading treatment from abuse and violence. In Nepal a lack of adequate protection and inadequate washing facilities may increase susceptibility to infection with 83% of menstruating girls relying on cloth/old rags." (6)

This is unacceptable and we as an international community have the capability and responsibility to do better. The article author further provides this point:

"The study shows that many menstruating girls and women are still restricted in a number of diverse ways, from not offering prayers, entering or worshiping in temples, touching holy books, and participating in religious rituals. In some areas, more extreme practices persist which discriminate against women when menstruating. Our research highlights that education and an interdisciplinary, multi sector approach are required if menstrual discrimination is to be addressed. Finally, this paper emphasizes the necessity for providing correct knowledge about menstruation

to the entire community including elders, males and religious leaders as well as adolescents and young girls. Such knowledge will help them practice safe and hygienic menstrual practices, challenge and reduce their traditional beliefs, misconceptions and restrictions regarding menstruation that are essential to achieving menstrual dignity” (6).

In more developed countries, this myth of menstrual health and ones purity/desirability has been somewhat debunked to due further understanding and information; thus empowering girls in those countries to use whatever menstrual products help them the most. This shift in mindset can be attributed to increased information availability- thereby giving the individual the choice on how to live through their cycles.

Maternal health refers to pregnancy, childbirth, and post pregnancy. This can define for some, twenty plus years of their life depending on how frequently they give birth. Women need to receive more information, and they need to receive it sooner. One piece of common knowledge is that maternal health often has a strong impact on pediatric health. It sounds straightforward, right? The health of the mother directly affects the child which further affects the population. Yet there still needs to be a higher spread of readily accessible healthcare information within mountain communities. “This relationship [maternal health] is very important because it is very closely related with pediatric health, and therefore overall population outcomes. Whilst pregnancy makes women physically vulnerable, immune system changes due to hormonal alterations are also sensitive to changes in temperatures... Birth outcomes and infant health are also affected due to the impact of climate change on maternal health, resulting in higher health care needs.” (7) Once we improve the health of the woman, we further improve the health of her children, which further impacts the local community and the global population at large.

As covered previously, maternal health encompasses large amounts of time and large amounts of changes within a woman's life. This phase of any woman's life can be a difficult and challenging time. External factors such as quality of medical treatment or outside support can be vital in helping women survive the ebb and flow that occurs when giving birth. One study done in Kenya. In an attempt to increase life expectancy of both the mother and the child, a study was created with regards to mortality rates surrounding perinatal care. In the study they created opportunities for women in Busia County to attend their rural healthcare facilities prior to giving

birth. As well as those visits, there were group education sessions where medical professionals would present information pertaining to their birth plans, and then answer remaining questions. Then, 48 hrs after the birth, the women were given the opportunity to meet with another health care professional. The study's results showed a significant increase in mortality rates in both mother and child. They found that women were “five times as likely as controls to deliver in a health facility... participants experienced a lower proportion of stillbirths, miscarriages, infant deaths, and maternal deaths...” (8). This interventionist method of health care education has the potential to be revolutionary in regards to women's healthcare in general, but especially for women who wouldn't have access to it anyways, such as those within mountain communities. Access to this education has the capability to not only improve quality of life for mothers and children, but longevity as well.

Access to healthcare education is also of concern in Myanmar. (9) To observe the extent to what a woman will endure to pursue healthcare, a study was conducted. In the study they asked married women how empowered they felt to gain access to healthcare. The study found that the more empowered the woman was, the more likely she was to work towards access to healthcare. Factors like location of healthcare facilities or cost of care had a significantly less impact than if the woman was empowered at home. The more empowered the woman was, the more access she had to healthcare, and the better her quality of life. This study is an answer to the question that many face, specifically men; “What can I do?”. Empowerment in the home and within the community has the power not to only impact the woman, but the generations after her. Once that empowerment comes, one can almost guarantee to see a trend towards initiative with regards to personal health, the health of the family, and the health of the world at large. When individuals feel empowered themselves, they often find the power to lift the community as well. Communities can further empower women by providing accessible healthcare educational opportunities, finding ways to provide free menstrual products so girls can still attend school, and having an open dialogue about women's health.

Over time, a clear and distinct tie can be made between women's health and climate change. Within the topic of menstrual health and hygiene, a conversation has developed in regards to how climate change is impacted. To identify the linkage, a study investigated how menstrual health and hygiene understanding contributes to climate change with regards to “education,

gender, health (sexual and reproductive health; psychosocial wellbeing), and water, sanitation and hygiene...”. The study acknowledges that the issue of climate change is a complex problem, providing women the opportunity to more fully contribute (providing ways for women to menstruate and still function) will provide opportunities to them to find and create opportunities to counteract the effects of climate change. (10)

Women's health can be a difficult topic to discuss. Where does one start? How can one help women in mountain communities lead healthier and longer lives? The answer lies in education. By providing ourselves and others with education and educational resources in regards to women's health, we are opening the gates to not only an empowered woman but a more healthy global population. Womens health education can look different for everyone, but for women in rural/mountain communities, it needs to start with access to information. Empowering women and their access to healthcare is also not something that can be fixed with money, or a superficial and temporary law. In order to help these women, it must be the community's goal as a whole to improve the health of women. Communities must analyze and question traditional standards and reasoning and either find validity, or eradicate cultural norms that harm and prevent women from succeeding.. Communities must make an allied effort to increase the circulation of accurate, and current health information. They must also create initiatives to provide women and girls with menstruation products, perinatal care, and menopause support.

The answer for providing women with the tools to succeed, must begin in our own community. In our own circles. In our own homes. Empowering women, empowers the future.

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# The Winter Olympics and Sustainable Mountain Development

By William Clark

*William Clark is a senior studying global politics at Utah Valley University. As a member of the Global Student Leadership Council, William works to promote the United Nations' Sustainable Development Goals on campus and assists in planning and preparing for the visits of foreign dignitaries to Utah Valley University. As a native of Utah, William recognizes the importance of advocating for sustainable mountain development on a global level and believes that Utah can serve as a model for other mountain communities. In his free time, William enjoys running, skiing, and visiting Utah's national parks. Upon graduation, William hopes to attend law school.*

The recent Beijing Winter Olympics turned the world's attention to the mountains as the best athletes on earth competed on snow and ice throughout China. The Beijing games highlighted the power the Olympic movement has to bring awareness to mountain communities. In the case of China, which is not normally considered a winter sports haven, the Olympics showed what the mountain communities surrounding Beijing have to offer. The Winter Olympics also serve as a platform to underscore the effects of climate change on mountain communities. This is illustrated by the fact that these Winter Olympics were the first ever to be completed almost entirely on man-made snow. The games can provide much needed infrastructure improvements, access to communication networks and technology, and increased tourism. They also put mountain communities in the world's spotlight featuring both their benefits and challenges. If organizing committees utilize a sustainable development approach as outlined by the International Olympic Committee Executive Board's Olympic Agenda, 2020+5, the benefits the games bring to mountain communities will increase. This paper will analyze the long-term and short-term effects the Olympic Games have on mountain communities in areas such as tourism, infrastructure, and environmental concerns. It will also provide recommendations to ensure that mountain communities benefit from the games.

In understanding the benefit the Olympics bring to mountain communities, it is important to note the cultural and social value of the games. Few other events in the world bring together such a large and diverse group of individuals. The games represent resilience and the power of sport to unite the world while also promoting the values of peace and cooperation. According to

Scandizzo and Pierleoni, “Some studies have suggested that the Olympics help spread values such as respect, tolerance, fair play, balance between body and mind and the pursuit of excellence” (2018, p. 655). They can also help foster patriotism and a sense of belonging. The games provide the host nation with an opportunity to showcase their culture, values, and history. The opening and closing ceremonies of the Olympics also explicitly provide such an opportunity, allowing the host country to showcase itself to the world while highlighting important national issues via the performance. In the most recent opening ceremonies, Director Zang Yimou focused on key traditions within Chinese culture such as the coming of spring, Chinese New Year, and China’s rich and diverse cultural heritage. Before the national flag was raised, it was passed to representatives from 56 ethnic groups across China (International Olympic Committee, 2022). This is one way that the needs, beliefs, values, and culture of mountain peoples can be highlighted and celebrated. The ideas presented in these ceremonies can be a source for change, and, if capitalized on, can provide a stimulus that may improve the quality of life for local mountain communities. Scandizzo and Pierleoni describe the games as “a local public good” (2018, p. 652). A successful games requires the support of an entire population while also serving as a source of identity, distinguishing the region from others. The legacy of the games can be a source of identity and continual pride for the local population, putting the region “on the map.”

The 2002 Salt Lake Winter Olympics provide such an example. When Salt Lakes was announced as the host city for the 2002 games in 1995, few people had even heard of Salt Lake City or the state of Utah. However, at the conclusion of the games that had changed. As Sarah Francom states, “By the games’ closing ceremony, Utah had officially staked its claim as the country’s premier winter sports destination—a reputation that would only grow stronger as more and more tourists and athletes would venture to the state to test the Greatest Snow on Earth” (2017, p. 66). Venues have been maintained and opened to the public, providing both summer and winter activities for the local community and tourists to enjoy. The legacy of the Olympics and Utah’s continued commitment to honor that legacy have provided mountain youth with opportunities to get involved in winter sporting events that may not have been possible had Utah not hosted the games. These examples highlight the cultural and social benefits of the games for the local population and mountain communities beyond the economic impact of such an event.

However, in order to fully understand the implication of the Olympic games for mountain communities, other factors should also be assessed. In analyzing the economic impact of the games a number of indicators are available. As addressed by Scandizzo and Pierleoni, the International Olympic Committee does contribute economically to cover the cost of the games. While other sources of revenue will need to be found to finance what can be considered an extremely costly event, the IOC investment has the potential to stimulate additional investments in both the private and public sector throughout the region (2018, p. 654). In mountain regions, these investments can stimulate the economy, increasing the number of locally available jobs and reducing problems associated with “brain drain.” The organizing committee can employ a large number of locals in diverse sectors and, while these jobs are temporary, they can provide individuals with valuable and marketable skills. The Olympics can also stimulate more permanent job creation in industries such as tourism, retail services, and construction. In the greater Barcelona region, the unemployment dropped from 18.4% to 9.6% between October 1986 and July 1992, during which the region hosted the 1992 Olympics (Brunet, 1995). The Salt Lake games contributed to the creation of 35,000 new jobs while also reviving the local technology sector and bringing outdoor recreation brands such as Rossignol to Utah (Francom, 2017).

Infrastructure improvement may be one of the largest impacts of hosting the Olympic Games, especially when it comes to rural mountain communities. Thousands of athletes compete at each Olympics, bringing with them coaches, staff, trainers, judges, officials, interpreters, and broadcasters. When conditions permit, millions of fans can also descend on the region, requiring additional hotels, transportation, and amenities. While this may stress the fragile mountain ecosystems that host many of the Winter Games most popular events, the work done to accommodate attendees can have long lasting benefits. In order to increase access to the Taizicheng mountain venue, the Chinese government invested almost \$10 billion in a new high-speed train, making the 110 mile journey to Taizicheng in just 50 minutes. The train can reach speeds of up to 217 mph (Buckley, 2022). Beijing also invested in an expressway from Beijing to Yanqing, which hosted alpine skiing and sledding events, worth \$2 billion dollars. To increase access to the Taizicheng Valley, the government extended the expressway, costing an additional \$3.6 billion dollars (Bradsher, 2022). In preparation for the Vancouver 2010 Winter Olympic Games, a rail line connecting the airport with downtown was added, making the journey in about 25 minutes and substantially reducing travel costs. Improvements were also made to the Sea to

Sky highway, connecting Vancouver to Whistler Ski Resort, making the road both safer and wider while also cutting travel times between the city and the resort by almost a half hour (Mannion, 2010). These new transportation routes provide convenient mountain access to residents and serve to further connect local mountain communities to the national economy. Additional improvement can improve the quality of life of mountain communities and, in many cases, are long overdue. In analyzing the economic impacts of the 2018 Winter Olympics in South Korea through the use of input-output modeling, Wood and Meng state, “Our IO modeling results clearly show that the investment can generate a 3–10 times multiplier effect from the infrastructural construction stage, let alone the long-run return of the infrastructure” (2021, p. 1313). While these infrastructure investments will not generate immediate short-term benefits, they do help to stimulate the regional and national economy as funds are spread across different sectors of the economy. To specifically support the mountain communities hosting the events, materials should be sourced locally if possible, and particular emphasis should be placed on hiring local workers as part of associated construction projects.

However, if infrastructure investment is to provide long term benefits to mountain communities, a sustainable development approach must be utilized. A number of past Winter Olympic games may serve as an example. In researching the impact of mega-events, Teigland found that 40% of the full-service hotels in Lillehammer went bankrupt after the 1994 Winter Olympics (as cited in Groothuis and Rotthoff, 2016, p. 23). The Sochi 2014 Winter Olympics serve to highlight infrastructure investment that was ill-conceived or the victim of poor management. A rail and road link between the mountain venue cluster and the coastal venue cluster built for the Olympics, with the capacity to handle 200,000 passengers per hour, was barely in operation just a year after the games. Other improvements to the Sochi region included by-pass roads to alleviate traffic, biking and walking lanes, and new urban planning standards that focused on providing full accessibility to disabled members of the community were characterized by mismanagement and poor construction, meaning high maintenance costs in the future. Unlike the facilities built for the Salt Lake 2002 Winter Olympics, Sochi has struggled to find a use for venues built for the games and most either stand empty or are no longer used for their original purpose. Over-construction of hotels also led to a drop in revenue (Muller, 2015). While these findings are sobering, they serve to illustrate that Olympic infrastructure can be a benefit to a community if properly managed and effectively planned. When planning infrastructure investments in

preparation for the games, organizers must utilize a sustainable development approach and recognize the long-term impacts of proposed projects. While investments will often benefit mountain communities, focus should be placed on effectively meeting the needs of the region instead of financing projects that have initial appeal but prove to be unsustainable or simply unnecessary.

When conditions permit, tourism is another important by-product of the Olympics. Pyeongchang saw an increase in about 321,411 tourists, when tourist numbers from December 2017 and January 2018 were compared with figures from February 2018, when the games took place, and March 2018. In Wood and Meng's analysis, they estimate that the foreign tourist revenue during the games amounted to \$587,687.96 in total (2021). They state, "The spending of tourists attracted by the Winter Olympic Games is estimated to generate ₩2 trillion of output, ₩324 billion of income, ₩744 billion of added value and created 19,097 jobs. Compared with the operational cost of ₩1.7 trillion, the effect of increased tourism demand alone can generate net economic benefits, even without including revenue from broadcasting" (2021, p. 1319). Tourism stimulates a number of economic sectors including trade, transportation, restaurant services, hotels, and entertainment. It can also be beneficial to industries not normally associated with tourism such as manufacturing. Therefore, the effect tourism can have on mountain communities as a result of the games is widespread and as indicated by the quote above can increase the overall number of jobs in the region. If the games are organized in a sustainable fashion, facilities maintained, and tourism further promoted, the economic stimulus tourists bring to mountain communities can be long-lasting.

The Vancouver 2010 Winter Olympics resulted in an increase in tourism. In a CBC News interview, a local indigenous tour operator named Candace Camp is quoted as saying "The promotion of our Indigenous communities for the Olympics was really strong and as a small tour company it really did benefit us" (as quoted by CBC News, 2020, para. 2020). The president and CEO of the Indigenous Tourism Association of Canada, described the games as "truly life-changing," with many of the association members still benefiting from the spotlight the Vancouver games shone on the British Columbia region (as quoted by CBC News, 2020, para. 7). According to a report published by the International Olympic Committee, tourism in the Vancouver area increased by 7.2% immediately following the Olympics and up to 2018, Vancouver had

experienced growth in its tourism industry for six consecutive years, attracting tourists and hosting events in both the summer and winter months (International Olympic Committee [IOC], 2020a).

The legacy of the Turin 2006 Winter Olympics shows the effect tourism can have on mountain communities. Before the Turin games 40% of the Via Lattea ski region's customers were from abroad. By 2017, foreign tourists accounted for 85% of visitors. The area received international recognition during the games when San Sicario Fraitve, a state-of-the-art resort in the region, hosted three women's alpine skiing events (IOC, 2020b). While individuals may not have the capacity or the means to travel to an Olympic host country either during or after the games, if effectively promoted, the Winter Olympics may encourage citizens to visit and enjoy local mountain communities.

The Winter Olympics can also draw attention to environmental crises that impact mountain areas. While artificial snow was first used at the 1980 Lake Placid Winter Olympics, its use has been steadily increasing. About 80% of the snow used in the Sochi Olympics was artificial, while in Pyeongchang 98% of the snow was artificial. This however pales in comparison to the fact that Beijing relied on 100% artificial snow during the games (De Guzman, 2022). Such staggering statistics call attention to the negative effects of climate change on global mountain communities. While climate change is often discussed and debated internationally, images of the Beijing games in which athletes competed in venues surrounded by barren hills and mountains are hard to dispute. A study published in 2019 found that if no action is taken to reduce carbon emissions only eight of the previous twenty-one Olympic Winter Games host cities would be able to host the games again in the 2080s (Scott et al., 2019). While extremely troubling, the Olympics provide a platform for demonstrating the need for efforts to combat climate change. The games are extremely popular globally and watched by a large and diverse audience, providing the opportunity for a call to action for addressing environmental issues. Sustainable actions taken by organizers can also promote the need for change and prove that such measures are possible. For example, while there are concerns about the amount of water needed for the artificial snow at the Beijing games, organizers stated that all venues utilize renewable energy including wind and solar thereby minimizing their carbon-footprint. Ice rinks at the games utilized a natural carbon-dioxide refrigeration system and organizers planted thousands of trees to offset carbon emissions as result of the games (De Guzman, 2022).

The Olympics have almost a thirty-year history of promoting environmental and sustainable causes with the Lillehammer 1994 Winter Olympics being the first to put in place such measures. According to the IOC, “More than 20 sustainability projects were implemented for the 1994 Games, including the relocation of the speed skating arena in Hamar to protect a sanctuary for rare birds, and the construction of the ice hockey venue – the Gjovik Cavern Hall – in a mountain hall to reduce the use of energy by ensuring a stable year-round temperature” (2019, para. 3). During the games, emphasis was placed on wildlife protection, waste management, hygiene protection and water and air quality. Even the medals awarded during the games provide an example of sustainability, utilizing locally sourced granite, while the torches were made with glass-cement, a material that combines recycled glass with concrete. In addition, multiple venues used for the games were certified with a Norwegian standard Eco-Lighthouse, an environmental certificate widely used in Norway and recognized by the European Union (IOC, 2019).

As indicated above, more recent games have continued to build off this legacy. In upgrading the convention center for the 2010 Vancouver games, the new building was constructed to Leadership in Energy and Environmental Design gold standard and built to be carbon neutral by the end of 2010. The 2.5-hectare roof features 400,000 indigenous plants and grasses and because 40% of the building is over the harbor, its foundations feature built in marine habitats (Mannion, 2010). As environmental targets are continually placed as a focus of the games, we can ensure that the needs of mountain communities are met while also preserving the natural resources and ecosystems that they provide. Few other organizations have continually prompted the need for environmentally conscious practices when it comes to mountain areas and such dedication should be recognized.

The International Olympic Committee has also championed sustainability and in 2017 published the IOC Sustainability Strategy. This strategy is centered around five focus areas that are vital for communities around the globe as well as for the success of the Olympic Games. The focus areas include: infrastructure and natural sites, sourcing and resource management, mobility, workforce, and climate. These focus groups served as a basis for eighteen sustainability goals to be achieved between 2017-2020. In the IOC Sustainability Report 2021, a status report on these objects is provided. While it is beyond the scope of this paper to document the progress of each objective, the objectives that impact mountain communities in particular should be noted.

Objective 4: “Achieve a measurable reduction in waste quantities,” has been achieved. Efforts in this area have focused on plastic, food, and electronic waste, as well as waste from events and publications. Single-use plastics have also been eliminated across facilities, replaced with reusable or biodegradable materials (IOC, 2021, p. 10). In relation to mountain communities, the IOC’s emphasis on waste reduction can have a meaningful impact on the preservation of mountain ecosystems. The accomplishment of this goal will most notably impact the city of Lausanne, where the IOC’s headquarters are located. With an emphasis on waste reduction, the city and surrounding mountain regions can benefit more from the presence of an international organization in the region without the potentially harmful ecological side effects such a large group could have. Applying in particular to hosting the Olympic Games, Objective 10: “Reinforce sustainability commitments in the Host City Contract so that bidding for and hosting an Olympic Games edition can act as a catalyst for sustainable development within the host city and region,” has been marked as completed for the 2017-2020 period in question (IOC, 2021, p. 15).

As noted above, the games can provide a wide range of social and economic benefits if planned and held effectively and sustainably. The Sochi games are an example of what can occur when sustainability is not at the center of the organization's plan for the games. By emphasizing sustainability early in the process of preparing to host an Olympics, the IOC and the local organizing committee ensures that local communities will benefit from the games. With a focus on sustainability, long term benefits can be achieved as a result of the games. Finally, throughout 2017-2020, Objective 14: “Provide mechanisms to ensure exchange of information and best practices between Olympic Movement stakeholders,” was achieved (IOC, 2021, p.17). This objective is particularly important as it relates to the mountain communities in which the games occur. Through collaboration and exchange of best practices each Olympic Games can be improved on, ensuring that local communities actually benefit. In this area, the IOC has also created a sustainability website and a number of guides to ensure widespread access to this data.

Despite the substantial progress in achieving sustainability, the IOC recognizes that this is an ongoing process. In light of that, and in building off the recommendations presented in Olympic Agenda 2020+5, the IOC strategic plan through 2025, new sustainability objectives for 2021-2024 have been created. These new objectives are specifically linked to the United Nations’ Agenda 2030 and the Sustainable Development Goals (SDGs). Linked to SDG 11: Sustainable Cities and

Communities, SDG 14: Life Below Water, and SDG 15: Life on Land, IOC Sustainability Object 6 for 2021-2024 states: “Require that no permanent Olympic construction occurs in statutory nature and cultural protected areas and UNESCO World Heritage Sites and that the IOC, OCOGs and IFs work together to protect and enhance biodiversity within the host city/ region and/or Games venues” (IOC, 2021, p. 27). Ensuring that venue construction will not damage precious mountain ecosystems, the IOC ensures that mountain communities will indeed benefit from hosting the games without harming surrounding mountain regions that are often major sources of natural resources. This target also means that local mountain cultures will be respected and preserved while planning, preparing, and hosting the Olympics. In Objective 9 the IOC specifically addresses the need for collaboration to promote sustainable tourism and responsible consumption (IOC, 2021, p. 27). With sustainable tourism in mind, planning for the Olympics also means understanding how venues will be used after the games conclude. Sustainable tourism efforts will also allow mountain communities to benefit from the games years or even decades after they conclude. Encompassing what has been discussed above, Objective 16 states, “Work with and assist the Olympic Movement to leverage the information, best practices, guidelines and human capacity to implement sustainable actions through sport” (IOC, 2021, p. 30). Linked to a number of SDGs including SDG 17: Partnership for the Goal, this objective will be essential to ensuring that mountain communities do indeed benefit from welcoming the world into their communities.

In order to more fully address the needs of mountain communities the IOC should also work with the Mountain Partnership, a United Nations voluntary alliance that is specifically dedicated to improving the lives of mountain peoples and protecting mountain ecosystems. Founded in 2002, the Mountain Partnership is made up of more than 400 governments, intergovernmental organizations, civil society groups, and non-governmental organizations (Mountain Partnership, n.d.). The Mountain Partnership can help to coordinate the actions of the IOC and other advocates of mountain communities to ensure that their efforts are recognized and do indeed benefit mountain peoples. The IOC’s prestige internationally can also help bring the work of the Mountain Partnership to the attention of additional organizations and governments, ensuring that the needs of mountain communities are more fully met. In working with members of the Mountain Partnership, the IOC can also help to promote the benefits sports can bring to mountain communities and youth.

Sport is a powerful tool for changes and, as highlighted above, the Olympics can provide mountain communities with a number of social and economic benefits. In addition, the IOC's focus on sustainability puts the organization on the front line in addressing the pressing issues that face mountain communities around the world. As the 2021-2024 objectives are accomplished, in addition to cooperating with the Mountain Partnership, we can further ensure that the Olympic games are held sustainably and do indeed benefit mountain communities for years to come.

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## **The rail link between the State of Utah and the Kyrgyz Republic**

**By Stephan M. Atkinson**

*Stephan Atkinson was adopted by Linda Roden and the late Stephan L. Atkinson, grew up in Wyoming and actively participated in programs like Boy Scouts, achieving the prestigious rank of Eagle Scout. He pursued a professional career in Cross Country Skiing and cycling, even training with the USA Olympic Cycling team. Additionally, he worked as an engineer in the oil field, gaining insights into energy and supply-demand dynamics. As an adult, Stephan developed a passion for working on vehicles, and becoming a film connoisseur. Currently, he is pursuing a honors bachelor's degree in political science, aiming to join the state department and become an ambassador. Stephan's infectious energy and determination make him beloved by friends, family, and colleagues, and his deep knowledge of politics, history, and geology drives his passion for the nation's welfare.*

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## Forward

It is my special pleasure to introduce a thesis, written by Stephan Atkinson, which explores the interconnectedness of history, globalization, and sustainable development. Stephan researches how the ancient Silk Road, and the transcontinental railroad in the United States, could be linked and intertwined with the Belt and Road Initiative of China, and provide sustainable developments in the mountainous Kyrgyz Republic as it took place in Utah's history. Through meticulous examination, he uncovers the significance of these interconnected events as catalysts for cross-cultural exchange and sustainable growth. This excellent thesis offers valuable insights and inspiration for a future characterized by prosperity, equity, and sustainability for communities, which were destined to lag behind due to their isolation, remoteness and harsh natural conditions.

Stephan's exploration of the Kyrgyz Republic's strategic position along the railroad network, connecting China and Europe through Central Asia, opens up opportunities for both political reforms and sustainable development. Drawing inspiration from Utah's successful economic development initiatives, he presents compelling ideas on how the mountainous Kyrgyz Republic can embrace and foster its own economic growth by leveraging the railroad network as Utah did since 1869 transcontinental railroad construction. Stephan's thesis could provide a blueprint for the Kyrgyz Republic's pursuit of becoming a democratic society ensuring cross-cultural exchange and sustainable development in the heart of Eurasia. I have no doubt that Stephan's work will serve as a guiding light for policymakers, scholars, and individuals seeking a deeper understanding of the complex dynamics that shape both Eurasian continent and modern world and the pathways towards a more sustainable and interconnected future.

Baktybek Abdrisaev, Ph.D.,

Former Ambassador of the Kyrgyz Republic to the United States and Canada

Lecturer, History and Political Science, Utah Valley University

Focal Point, United Nations Mountain Partnership

## **Introduction**

The ancient Silk Road, the transcontinental railroad, the history of Kyrgyz Republic, the Belt and Road Initiative, and Utah since the Promontory Point Historical Moment are all significant historical events that are deeply interconnected. By examining these topics together, we can gain a more comprehensive understanding of the complex, interwoven nature of global history and the impact that cross-cultural exchange and economic development have had on shaping our world.

Moreover, this exploration can provide valuable insights into the potential for sustainable development in both the Kyrgyz Republic and Utah. By utilizing the railroad network, which connects the Kyrgyz Republic to China and other Central Asian countries, the Kyrgyz Republic has the opportunity to become a democratic gold standard in open-market growth while achieving sustainable development goals. Similarly, Utah has made strides towards promoting sustainable development and could serve as an example for the Kyrgyz Republic.

In this thesis, I aim to explore these connections and show how the Kyrgyz Republic can learn from Utah's successes and utilize sustainable goals via the railroad network to promote economic growth and environmental sustainability. Through a close examination of each topic and their interactions, I will demonstrate how they represent key moments in the history of globalization, cross-cultural exchange, and sustainable development; and how they can inform the Kyrgyz Republic's path towards becoming a democratic gold standard for democracy in the region.

### **A history of the Silk Road**

Studying the history of the Silk Road provides valuable insight into the cultural and economic connections that existed between different regions throughout history, and can help us better understand the contemporary relationship between Utah and the Kyrgyz Republic—both of which have been influenced by the legacy of this ancient trade route.

The name of the Silk Road originated from the Greek word “series” "Sérres" (Σέρραι) for China, which means the land of silk. The etymology of “Silk Road” is difficult to establish, but many accounts describe it as a route between the Greeks (specifically, Sérres) and the Chinese. Starting at the old capital cities of Luoyang and Shianne, the Silk Road routed across the Yellow

River at Lanzhou then followed the Gansu (or Hexi) corridor—the area West of the Yellow River—into Xinjiang and Du Huang. The route then split three ways. The northernmost branch crosses north around the Tianshan Mountains and the other two cross North and South of the Taklamakan Desert or Tarim Basin. The Silk Road routes across northern China were believed to have been significant not only to China's history but to the whole world's history, as well as the formation of the modern-day Belt and Silk Road initiative of China.

The Silk Road's beginnings date back to the 5th century BCE when Darius I built a 2,000-mile Persian Royal Road from the Tigris River to the Asian Sea. The regular relay points along the road allowed goods and messages to be transported with only a tenth of the amount of time for a single traveler. The invasion of Persia by Alexander the Great and his expansion into Central Asia, both by conquering cities like Samarkand (located in southeastern Uzbekistan) and settling new ones like Alexandria, gave rise to the idea of a bridge connecting China and Europe. The spread of culture and commerce between the Greek, Egyptian, Persian, and Indian peoples to and from central China also stimulated the formation of the Silk Road.

During the Shang Dynasty, between 1400 and 1046 BCE, jade was a precious item from an area of Shenzhen. Besides jade, silk started to be favored by the first millennium BCE and was transported to Siberia through the Gansu corridor over the northern branch of the Silk Road. Evidence of silk being found in a tomb in Egypt that dated to 1070 BCE and the Egyptian find, supported the idea of silk trading across Eurasia into North Africa. By around 600 BCE, gold, jade, and silk became popular items among merchants in Europe and western Asia. With the advanced states of the Qin Dynasty around 300 BCE, civilizations active along the Silk Road included ancient Greece, Persia, Rome, and the Qin state that had control over the eastern parts of the Gansu corridor.

The Han Empire was considered to be one of the essential factors that stimulated the development of the Silk Road into what we know today. At first, the silk trade was conducted within the Han Empire from the interior to the western borders, until the attacks of some small nomadic tribes of Central Asia on the trade caravans hindered it. To protect their internal trade routes in 138 BCE, General Zhengjian was sent as an envoy to what the Chinese called the Western region territory and to try to form an alliance with the Western Chinese people. Zhengjian's journey

started from the capital of the Western half dynasty at Chang'an today. Zhengjian passed the vast western regions and reached three small kingdoms named Lulan on the northeastern edge of the Lamb Desert, in the present Couch County of Oxu Prefecture and Yushan.

After the trip, Zhengjian returned to the Han Emperor with stories of flourishing civilized societies, commercial exchange, and a wide diversity of novel products over western borders. Soon silk and jade were brought to exchange for horses and cotton by diplomats and tradespeople from China, marking the beginning of the Silk Road trade.

Trading flourished across the trade routes, bringing silk and ceramics to other parts of the world. At the end of the Han Empire in 220 ADE, the region was split into three warring states—Cao Wei, Shu Han and Eastern Wu—marking the beginning of the Three Kingdoms. Around that same time, the increase of barbarian attacks on the Roman Empire further impeded trade with Europe. Western states of the Roman Empire were also subjected to attacks by the Huns, leading to the decline in trade and Central Asia. The fall of the Roman Empire around 400 ADE, along with other geopolitical factors, contributed to the decrease of trading activities through the Gansu corridor to the West until the rise of the Tang Empire.

### **The explosion of trading activities during the Tang Dynasty, 618 to 917**

During the early years of the Tang dynasty, the Silk Road route at Xinjiang was under the control of Turkic tribes until the Tang dynasty conquered them and took over the silk trade routes. The trade route was then reopened, followed by the explosion of trading activities with the West. The development of the Silk Road trade during this time also flourished thanks to the famous monk Xuanzang. During his trip from Chang'an to the Gansu corridor, Hami and Turpan, and then further westward to India, he reported receiving unexpectedly warm welcome along the way, contributing to the improved relations between the Tang government and these tribes and kingdoms. Unfortunately, the Tang dynasty lost its control of the Western region by 760 AD, resulting in the halt of trade activities along the Silk Road.

After the fall of the Tang Empire in 760 ADE, followed by decades of civil wars, a new dynasty called the Song Empire was established. Despite its strength and known power, the Song empire had no control over the Gansu corridor, but it was the western Shia Kingdom in the

northwest that controlled the access to the strategic Gansu corridor. The Song then attempted to reopen the Silk Road trade by taking back the land of the western Shia, but they failed. Two centuries later, the Song court was forced South of the Yangtze River, leaving the remaining Southern Song empire even further from the Silk Road route.

The Silk Road routes also gave adventurers the chance to gain a better understanding of the culture and geography of the Far East. One of the famous explorations conducted via the Silk Road routes was the journey to China by Marco Polo, a Venetian explorer. They followed the overland routes using camels and arrived at the magnificent summer palace, Shangdu (Xanadu) of the Mongolian emperor Kublai Khan in 1275. Later, Marco Polo spent 24 years in total working as a tax collector for Kublai Khan's courts before coming back to Venice, Italy in 1295 via the Silk Road routes due to the decline of the Mongolian Empire. He then published a book called the Travels of Marco Polo, which was based on his journey across the Silk Road—helping to broaden the knowledge of the West about the culture and trading in Asia.

### **The First Transcontinental Railroad**

The laying of the first transcontinental railroad was a monumental achievement in American history that transformed Utah and the wider United States. Its study is crucial to understanding the complex interplay between global trade, economic development, and political power that underpins the topics explored in this thesis overall. The lessons of the first transcontinental railroad are relevant beyond the United States, particularly for the Kyrgyz Republic. By examining the significance of the first transcontinental railroad for Utah and its broader implications for global trade, economic development, and political power, this chapter aims to contribute to a deeper understanding of the complex and interconnected nature of our world. The lessons of the first transcontinental railroad can be applied to the Kyrgyz Republic's development and integration into the global economy, with a particular focus on promoting sustainable development goals through transportation infrastructure development.

May 10, 1869, near the small town of Promontory Utah. It was here that the United States as a country was finally united. A final golden spike was driven into the earth. Not just a physical final piece, but a symbol of something so much more. Two vast oceans and everything that labor

between them was now connected by a railway that built the United States. It was, of course, the first transcontinental railroad completed anywhere in industrialized society.

The United States is a vast country. At 3,796,742 square miles, it is the third largest country in the world. In 2023, by airplane, it will take 5 1/2 hours to travel from San Francisco to New York. The United States was still fragmented like a jigsaw puzzle before the completion of this famed railroad. Much of the east was now well populated and there were rail connections between most of the major cities; but as someone moved West, things were vastly different. Though California was booming after the discovery of gold, much of what lay between the West Coast and the frontier states of Iowa and Missouri remained sparsely populated. Though the railroad physically linked to the United States, its construction took place when the United States tore itself apart through a civil war. It is somewhat poetic to say that this line of steel and wooden timbers was what really brought the United States back together again.

The idea of the railroad emerged in the 1830s and 1840s but came to prominence when Mr. Whitney in 1845 and Dr. Hartwell Carter in 1846 set forth detailed proposals for a railroad to which Congress agreed. Between 1853 and 1855, railroad surveys were conducted to ascertain the feasibility of the project. In 1860 and 1861, bills to advance the railroad arose in the Senate, with Southern Senators opposing a more northerly route. This opposition became moot after the Southern states seceded from the Union and the bill passed on May 6, 1862.

With the prospect of covering such a mammoth distance, it only made sense that two projects would be initiated on opposing sides of the country before they would meet in the middle. The Central Pacific Railroad would begin from Sacramento, California, while the Union Pacific Railroad would begin at Omaha, Nebraska and connect easternly at Council Bluffs, Iowa. Congress had not designated a meeting place between the two railroads. Instead, they dangled financial incentives in front of the two companies with a per-mile rate. Each would be paid \$16,000 per mile on a level grade, and up to \$48,00 per mile on unlevel grades. Both companies also received land rights that worked out to around 6,400 acres per mile laid. Stretching for ten miles on either side of the track, this meant that the total land grants handed over to the two companies were larger than the state of Texas. This was done to provide the companies with extra capital that they could raise through selling the land on. In total, land granted by the federal

government came to around 130 million acres, while various state government land grants totaled 50 million acres.

Construction began on the Central Pacific section on the January 8, 1863. As most of the machinery needed was in the east, it faced a long and arduous route to the starting point in California. Instead, they were loaded onto ships in eastern ports bound for Panama, unloaded and transported by land across the country to the Pacific Coast, then again loaded onto ships and transported up the coast and construction began in July 1865. With many of the able-bodied men pressed into service as the bloody civil war continued to rage to the eastern United States, much of the labor was done by a migrant workforce. It's thought that about 15,000 Chinese workers were employed on the Central Pacific Railroad and received about a dollar a day for their troubles. This is around \$26 a day in 2021 USD, and they were working 12-hour shifts, six days a week on the Union Pacific side.

As spring approached in 1869, both railroads began to be near each other. President Ulysses S Grant finally designated a meeting point. The town of Promontory in Utah was chosen as this historic spot. On May 10, 1869 history was made. The two companies, along with dignitaries from around the country, converged at Promontory Point in Utah. The Union Pacific line had completed 1,087 miles while the Central Pacific team had laid 690 miles of track. It's thought that this could have been the world's first live media event as the hammer and spikes could have been wired via the telegraphic line so the historic sounds could be broadcast around the country. It didn't work out so well, with the strikes being missed and then sent out separately. Stanford drove the all important last spike into the ground to finish the mammoth project. A simple telegram message was sent out to both coasts.

Only a small part of this first transcontinental railroad remains in use today with the California Zephyr and Amtrak service, which connects Emeryville and California and Chicago, until it reaches Central Nevada. Yet this first transcontinental railroad unquestionably built the United States as we understand it today. It couldn't possibly have developed in the way it did without a rapid way to cross the country. The West, in particular, saw a population boom. Combined with the completion of the Suez Canal in Egypt six months later, the dream of circumnavigating the world at speed had finally become a reality. By 1880, the railroad was

transporting \$50 million of freight a year. As international trade reached astonishing heights, the first transcontinental railroad connected and fostered new communities while transforming the way Americans viewed their country and how they did business.

The construction had devastated western forests, while the open line expedited the near annihilation of the buffalo herds along with much of the Native American population. It can also be attributed to an increase in racial tensions, especially in California with the completion of the railroad, as many white workers were either of American or European descent who made their way to the promised land on the West Coast. This put a huge strain on the blossoming labor market, with tensions and xenophobia rising quickly.

Just ten years after the completion of the railroad, in which the Chinese had played such an enormous role in, Congress passed the Chinese Exclusion Act of 1882—barring new Chinese immigrants from entering the country. Sadly, the first transcontinental railroad did not stand the test of time. It was eventually replaced by a young upstart, the automobile. The Federal Aid Highway Act of 1956 authorized 41,000 miles of highways to be constructed and proved to be a damaging blow for the US railroads, one that it never recovered from. Despite its demise, the transcontinental railroad will always be remembered as one of the most significant transportation projects the world has ever seen.

### **History of the Kyrgyz Republic**

The Kyrgyz Republic, a landlocked country in Central Asia, has a rich history and culture that spans millennia. From the ancient Silk Road to the modern Belt and Road Initiative, the Kyrgyz Republic has played a key role in connecting East and West and facilitating trade and cultural exchange. Today, the Kyrgyz Republic is at a critical juncture in its development, as it seeks to navigate the challenges and opportunities of regional integration, economic development, and political stability.

This chapter will explore the history, culture, and contemporary challenges and opportunities of the Kyrgyz Republic. Specifically, we will examine how the Kyrgyz Republic can leverage its strategic location and unique cultural heritage to promote sustainable development and economic growth. Moreover, we will explore how transportation infrastructure development can

play a key role in achieving these goals, drawing upon the lessons of the Transcontinental Railroad and Utah's experience in promoting sustainable development goals through transportation infrastructure development. By examining the Kyrgyz Republic's history, culture, and contemporary challenges and opportunities through the lens of sustainable development and transportation infrastructure development, this chapter aims to contribute to a deeper understanding of the complex and interconnected nature of our world.

Nestled in the midst of the Tian Shan Mountains of Central Asia, the Kyrgyz state reached its greatest expansion after defeating the Uyghur Khaganate in 840 AD. From the tenth century the Kyrgyz migrated as far as the Tian Shan range in Western China and maintained their dominance over this territory for about 200 years. The Kyrgyz Republic has a slightly smaller area than the US State of South Dakota, and a population roughly equal to the US State of Wisconsin (around 5.5 million people). The Tien Shan range dominates the landscape, making the country almost entirely mountainous. Perhaps the most important aspect of understanding the Kyrgyz Republic is its mountains. The mountains are known in Chinese as the "Celestial Mountains" and have been prized by larger empires to build a wall against their rivals. They are a major barrier to agriculture and the development of large cities. Therefore, they have not provided significant military protection for the locals who have lived under foreign rule for most of the last two centuries.

The country is divided by the mountains, which makes it difficult to transport and communicate between its northern and southern territories. This has created a sense of insularity between the northern and southern tribes, which has resulted in political tensions and increased competition in modern the Kyrgyz Republic. While the mountains present many challenges, they also play an important role in the Kyrgyz Republic 's development. They provide eco-tourism opportunities and hydroelectric production, as well as mineral wealth (including gold and uranium deposits). The Kyrgyz Republic retains a predominantly rural and agricultural economy, which fuel their major exports of tobacco and cotton—which are grown using the large water resources that are, in part, provided by the mountains. However, subsistence agriculture is based on herding. The Soviet-era policies that colonized the north (especially Bishkek) with large numbers of ethnic Russians redrew the borders of the south to include significant Uzbek minorities and exacerbated the division between the northern and southern territories of the Kyrgyz Republic. Today, ethnic

tensions between the colonial populations and the Uzbeks are one of the Kyrgyz Republic 's most pressing domestic issues. The Kyrgyz Republic has two official languages: Russian and Kyrgyz. The former is the state language, while the latter is the "official language of the state". It is also a lingua franca and a dominant mode for communication in Bishkek, which serves as the capital of the Kyrgyz Republic.

The Kyrgyz Republic's history is often described as an epic poem among most Kyrgyz people and is a long standing tradition. The four major chapters of the epic poem could be the Russian occupation, early civilizations, Soviet era and post-independence. Dynasties, empires and tribes vie for the region's cool mountain tops and fertile valleys. They also compete for geo-strategic locations along the Great Silk Road.

The Scythians were first to be recorded as residents of the area. They lived in the region from the 6th Century BC until the 5th Century AD. Their Empire extended to the Black Sea. They were well-known for their military prowess, horsemanship and ability to create intricate artifacts out of gold. Several Turkic-speaking tribes followed them, which roamed the Altai and Xinjiang mountain ranges. These nomadic groups took up herding and created the Kyrgyz ancestral clans. The Turkic Karakhanids, also known as the Yenisei Kyrgyz, were later arrivals. Although there are some historical disputes about their legacy, historians agree that the Kyrgyz occupied modern the Kyrgyz Republic for many centuries.

While the Kyrgyz remained in their nomadic lifestyles and shamanistic beliefs, they continued to worship elements like the sky, earth and sun well into the 19th century. Many who converted to Islam chose the Sufi sect, whose propagators allowed them to continue their shamanistic practices.

In the second half of the 19th century, the Russians arrived. They defeated the Kokhand Khanate at the request of the Kyrgyz. The Russians made the region a Russian protectorate. However, the Russians tried to "civilize" and settle the Kyrgyz, which led to their rebellion. This threatened their cultural and nomadic traditions. The revolt was unsuccessful, and the Soviet Union replaced the Russian Empire in 1917. The new communist system quickly embraced the Kyrgyz people.

The Soviets set the borders of the Kyrgyz Republic under a larger Soviet plan to grid Central Asia and maximize the extraction of its natural resources. In the beginning, Kyrgyz lands belonged to a larger autonomous Soviet Republic called Turkestan. In 1924, Turkestan split. Later, the Kyrgyz-Kazakh regions were divided. The current-day boundaries were established in 1946. The territory was named "Kirgizia" or "The Kyrgyz Soviet Socialist Republic." Kirgizia, which was an ethnic Turkic name for the country, was renamed the Kyrgyz Republic after the fall of the Soviet Union in 1991. The Kyrgyz Republic became the first Central Asian republic in independence.

After its independence, the Kyrgyz Republic had a difficult time being prosperous. Central Asia was faced with two fundamental (and huge) challenges: developing independent economies (which were once completely dependent on Soviet trade), and establishing an effective government under a new national identity. Both of these tasks had previously been tied to the USSR. It was difficult to develop effective regional relations, especially in light of new competition for resources and political instability, as well as rising nationalism in each of these countries.

In 20 years of existence, the Kyrgyz Republic has seen seven presidents, two revolutions, and one interim president. Askar Akayev was the Kyrgyz Republic's first elected president in the post-Soviet era. After serving three terms, protestors cited corruption and abuse of power and forced him to resign in the 2005 Tulip Revolution. In the same year, Kurmanbek Bakiyev was elected as his replacement. He was, at that time, a hero for the opposition. He was also soon accused of corruption and abuse of power and was forced to resign in mass protests in 2010. Roza Otunbayeva, the interim president of the Kyrgyz Republic, was, for a time, its first female leader. Otunbayeva decided not to run in the 2011 elections to ensure that the Kyrgyz Republic saw its first peaceful transfer of power. Almazbek Atambayev was elected president in the 2011 election cycle.

Almazbek Sharshen Atambayev is a Kyrgyz politician who served as the President of the Kyrgyz Republic from December 2011 to November 2017. In August 2019, Atambayev was imprisoned, facing charges of corruption and manslaughter. In October 2020, election protests freed him from prison. After a failed assassination attempt, however, he was imprisoned again on October 10th. Sooronbay Sharip Jeenbekov is a Kyrgyz politician who served as the 5th President

of the Kyrgyz Republic from 2017 until his resignation in 2020, following a week of protests. Due to the vacancy of the Presidency, the speaker of the council became head of state of the Kyrgyz Republic. Sadyr Japarov is the 6th and current President of the Kyrgyz Republic after assuming office on January 28, 2021.

The Kyrgyz Republic's current political situation is volatile. Revolution is not far away with the recent political turmoil. This is exacerbated by the Kyrgyz Republic's fragmented geography and regional politics, as well as its wide variety of political parties and ideologies. Many political parties and movements are governed by wealthy and powerful individuals who often use their resources to finance protestors from rural areas. Many political scientists believe that it will only take a few years before a new political paradigm shift occurs.

### **The Belt and Road**

China's Belt and Road initiative doesn't compare to other infrastructure projects because, quite simply, it stands alone and nothing like it has ever been attempted before. The Chinese Government calls it a bid to enhance regional connectivity and embrace a brighter future. Others see it as the fast track to world domination by a rising Chinese superpower. The Belt and Road initiative is so vast and incorporates so many countries that it would be impossible to cover the entirety of the initiative. China's Belt and Road initiative is a series of global networks focusing primarily on trade that originates and or ends in China and incorporates roads, railway lines, shopping routes, and ports. The estimated cost of the entire project is thought to be in the amount of a trillion US dollars. To put that figure into perspective, only 16 countries around the world have a GDP above a trillion dollars.

Debt repayments, land leases, and financial irregularities are just a few of the charges that have been leveled against the project. However, one needs to look at this for what it could be—, a dramatic power shift. Much of the criticism of the Belt and Road initiative has come from countries that primarily controlled global trade. Chinese President Xi Jinping first unveiled plans for the initiative during visits to Kazakhstan and Indonesia in October 2013. It was promoted by Chinese dignitaries over the next few years in Asia and Europe.

China's way of integrating and unifying global markets is a way of allowing trade to flow freely and easily around the world, as well as cultural exchanges that would benefit all countries who were involved in the initiative. Of course, everybody wants new sparkling infrastructure—but how will they pay for it? Most of the criticism of the initiative falls on this subject. Many of the countries included in the projects are developing nations understandably eager to join the initiative. They do not have the means to pay for such infrastructure themselves, so they have relied on Chinese loans. The initiative now includes cooperation signatures from 138 countries, 65% of the world's population, and 40% of the global GDP as of 2017. But this is really about two separate initiatives. One of them is over-land, and one of them is maritime. We will be purely focused on the land aspect of the initiative as it is the most pertinent. *pertainable*.

While the new route doesn't exactly follow the ancient way, its start and end points are roughly the same as the ancient Silk Road. Forming the belt now incorporates countries that stretch from China to Europe, but even this can be subdivided into three corridors which are soon expected to account for as much as 40% of the world's overland trade. The new Eurasian land bridge runs from China's Xinjiang Autonomous Region and includes Kazakhstan, Russia, Belarus, Poland, Germany, and The Netherlands. According to Chinese media, this route connects the Chinese city of Lianyungang to Rotterdam in Holland, a distance of 11,870 kilometers.

How much has been spent so far? Well, this is another gray area. It was estimated that by 2017, around \$210 billion had been invested by China in the project, the majority in Asia. But this doesn't really tell the whole story. Chinese companies have been awarded over \$340 billion for contracts along the Belt and Road initiative, whether to build railways, roads, logistical hubs or to expand ports. The obvious problem that comes with Chinese companies often bringing with them Chinese workers dominating projects along the routes, is that it comes at a significant cost to local contractors. This has led some to question whether the entire initiative isn't really about trade, but rather as a way of boosting China's economy; the country has set itself enormous growth targets ever since the 1980s. Another complicated and hugely controversial aspect of the Belt and Road initiative is interest payments. Now, the conditions of most of the loans given out by the Chinese Government have not been fully disclosed. While one often has a rough idea of the numbers, no solid theories have been established to estimate the don't know the ramifications should countries fail to repay their debts.

## **Utah since Promontory Point Historical Moment**

Historians agreed that driving of the golden stake marked the completion of the transcontinental railroad at Promontory Summit Utah on May 10, 1869. This moment in history was a significant event in American history as well as Utah's history. ForIn Utah's history, 1869 is considered a landmark year. It marks the end of the pioneer era via the traditional Mormon Trail and the arrival of the railroad. Brigham Young was a community leader and president of The Church of Jesus Christ of Latter-day Saints (hereafter referred to as "the Church"). He wanted the transcontinental railroad line to go through Salt Lake City. He understood the importance of a railroad in connecting a region to the outside world and tying communities together. Brigham Young met representatives from both the Union Pacific and Central Pacific to discuss the difficulties and additional cost of a route through Salt Lake City. He accepted the decision and assisted wherever possible to speed up the project's completion, including by arranging for local contractors for construction of the tracks across the Utah Deseret territory.

The local population felt a greater impact from the construction of a railroad connecting south to Salt Lake City and eventually into most of the state's other parts than the joining of the rails at Promontory. Before the first transcontinental railroad was completed, Latter-day Saint church leaders of the Church started to plan a connection railroad connection between Ogden, Utah, and Salt Lake City in early 1869. This line ultimately connected Salt Lake City with the national rail system in January 1870. The railroad provided a low-cost means of transport that allowed the CLatter-day Saint church to bring large numbers of members to the new Zion, how they named their lands. This was one of the many benefits.

New members of the Church arrived from as far as Europe via the ports of call on the East and Gulf coasts. Union Pacific was the first major railroad company to build within the territory of Deseret's borders of the Utah territory, followed by. It connected with the Central Pacific after the "Golden Spike Moment". tracks at Promontory, in 1869. Twenty-five years later, Union Pacific was the largest railroad company in this territory. Utah's railroad network grew from the completion of the Utah Central line, (which ran between Ogden and (Salt Lake City) in January 1870, to the construction of the Utah Southern line south of Salt Lake City in May 1871. Brigham Young saw the completion of these railroads as more a benefit for the communities they served

than a profit-making enterprise. They were referred to as "Mormon Roads" by historians. They radiate like spokes from Salt Lake City and Ogden. They eased the movement of goods within the territory and included the Utah Central, Utah Southern and the Utah Western lines. The Utah Western line was west of Salt Lake City, while the Utah Northern line was north of Brigham City. Later, it was later connected with Ogden.

### **Economic Impact**

Railroads played a critical role in the economic development of Utah, particularly in the late 19th and early 20th centuries. The advent of rail transportation in the state had a significant impact on the state's gross domestic product (GDP), which increased rapidly as a result of increased economic activity facilitated by the railroads.

The first railroad in Utah, the Utah Central Railroad, was completed in 1870, connecting Ogden and Salt Lake City. This railroad provided a critical link between the agricultural and mining communities in northern Utah and markets in the east. As a result, Utah's economy began to grow, with agriculture and mining becoming major drivers of economic growth. The railroads also made it easier for businesses to transport goods, and, as a result, manufacturing industries began to emerge in the state.

One of the most significant impacts of the railroads on Utah's economy was the opening up of new markets for Utah's products. Prior to the railroads, long-haul transportation of goods was difficult and expensive, which limited the ability of Utah's businesses to sell their products outside of the state. However, with the advent of rail transportation, Utah's goods could be transported quickly and inexpensively to markets outside the state—, leading to increased sales and revenue for businesses.

The railroads also played a crucial role in the development of Utah's mining industry. Mining had been a significant part of Utah's economy since the mid-19th century, but transportation of ore was difficult and expensive. With the construction of railroads, however, mining companies were able to transport their ore to smelters and refineries outside the state, significantly reducing transportation costs and making mining more profitable.

In addition to facilitating the growth of agriculture and mining, the railroads also led to the development of new industries in Utah—, particularly manufacturing. With improved transportation, it became easier for businesses to acquire raw materials and transport finished goods, leading to the establishment of factories and other manufacturing facilities throughout the state. These industries provided new job opportunities for Utah residents and contributed to the overall growth of the state's economy. The impact of the railroads on Utah's GDP growth can be seen in the statistics. According to the U.S. Bureau of Economic Analysis, Utah's GDP grew from \$55.7 million in 1880 to \$7.7 billion in 1950, a nearly 14,000% increase. While the railroads were not the only contributing factor contributing to this growth, they played a significant role in facilitating economic activity and promoting growth.

The railroads in Utah played a significant impact on its Utah's GDP growth in the late 19th and early 20th centuries. They facilitated economic activity, opened up new markets for Utah's products, and led to the development of new industries in the state. The railroads were instrumental in the growth of Utah's economy and played a critical role in the state's development.

### **Agriculture**

The completion of the railroad was a significant development for the agricultural industry of Utah, as out-of-state exports could only be sent via wagon up until that point. Without needing to account for long-term travel expenses associated with wagon maintenance (i.e., food for the driver, supplements for the horses), local farmers could now access out-of-state markets at a fraction of the cost and time they were accustomed to. The railroad created a direct link between the East and the West, and this was a significant development for the agriculture industry in Utah. Prior to the arrival of the railroad, Utah's agricultural products were transported by wagon, which was slow and expensive. With the railroad, farmers were able to transport their goods to the East Coast in a fraction of the time it took by wagon, and at a lower cost.

The railroad also allowed farmers to access new markets. Prior to the railroad, most of Utah's agricultural products were consumed locally or within neighboring territories and states. However, with the arrival of the railroad, farmers were able to transport their products to markets in other parts of the country. This opened up new opportunities for farmers to sell their goods and increased demand for Utah's agricultural products.

One of the most significant impacts of the railroad on the agriculture industry in Utah was the growth of the sugar beet industry. Sugar beets were introduced to Utah in the late 1800s, and the industry quickly took off. The railroad played a crucial role in the growth of the sugar beet industry by providing a reliable and efficient means of transporting the beets to processing plants. This allowed the industry to expand rapidly, and by the early 1900s, Utah was one of the leading producers of sugar beets in the United States.

The railroad also facilitated the growth of other agricultural industries in Utah. For example, the railroad allowed farmers to transport their livestock to markets in other parts of the country, which helped to develop the state's cattle industry. The railroad also allowed farmers to import new varieties of crops and livestock, which helped to diversify the state's agricultural sector.

In addition to facilitating the growth of the agriculture industry, the railroad also created new jobs and opportunities for Utah's residents. The construction of the railroad created thousands of jobs, and the arrival of the railroad led to the development of new towns and cities along its route. These new communities provided opportunities for people to start businesses and engage in new economic activities.

The railroads in Utah had a significant impact on the agriculture industry in Utah. It allowed farmers to transport their products more quickly and efficiently, opened up new markets, and facilitated the growth of new agricultural industries. The railroad also created new jobs and opportunities for Utah's residents, and helped to spur the state's overall economic growth. Today, the legacy of the railroad can still be seen in Utah's thriving agriculture industry.

## **Mining**

Utah's mining industry has a rich and storied history, with the first recorded discovery of silver ore occurring in the territory in the late 1860s. The mining boom that followed resulted in the rapid development of towns, cities, and infrastructure—, including the construction of railroads. Railroad transportationThe advent of railroads in Utah played a crucial role in the growth of the mining industry, as it provided a reliable means of moving and transporting bulk shipments of ore, equipment, and supplies in steep and rugged terrain. This section will further explore the

influence of railroads on the mining industry in Utah and how it contributed to the state's economic development.

Railroads played a vital role in the development of the mining industry in Utah. Before railroads were built in the territory, mining companies relied on mule teams, wagons, and pack animals to transport ore, equipment, and supplies. This method of transportation was slow, inefficient, and costly, and often resulted in delays, damage to equipment and supplies, and loss of life due to accidents and harsh weather conditions.

The construction of railroads in Utah provided a faster, safer, and more efficient means of transporting goods and people. Railroads allowed mining companies to transport large quantities of ore and equipment over long distances, reducing transportation costs and increasing production. Moreover, railroads provided access to new markets, making it easier for mining companies to sell their products and expand their businesses.

The construction of railroads in Utah had a significant impact on the state's economy. Railroads further provided a vital link between Utah's mining industry and the rest of the country, allowing Utah to become a major supplier of silver, copper, and other metals, thus establishing. The mining industry quickly became the backbone of Utah's economy, by providing jobs and attracting thousands of people to the territory. The growth of the mining industry created a positive feedback loop for the local agricultural and manufacturing industries by increasing demand and revenue, and the development of towns and other industries by extension. As the mining industry grew, railroads also played a critical role in the development of other industries, such as agriculture and manufacturing. The railroads provided a reliable means of transportation for agricultural products and manufactured goods, allowing farmers and businesses to expand their markets and increase their profits. This led to the growth of towns and cities throughout Utah, as well as the creation of new businesses and industries.

The construction of railroads in Utah also had a significant impact on the state's transportation infrastructure. Railroads provided a more efficient means of transportation than other forms of transportation, such as wagons and stagecoaches. As a result, many of Utah's early highways and roads were built to connect mining towns and cities to the railroads. The railroads

also played a crucial role in the development of Utah's modern transportation infrastructure, as many of the state's major highways and interstates were built along the routes of the old rail lines.

The railroads had a profound impact on the mining industry in Utah, providing a reliable means of transportation that allowed mining companies to increase production, reduce costs, and expand their markets. Railroads also played a critical role in the development of other industries, as well as the growth of towns and cities throughout Utah. Today, the railroads continue to play an important role in Utah's economy and transportation infrastructure, connecting the state's mining industry to markets around the world.

### **21st century growth**

The railroads in Utah have been a vital part of the state's economy since the late 19th century. In recent years, Utah's railroads have undergone significant changes to modernize their infrastructure, technology, and services. With these advancements, the railroads in Utah have the potential to contribute significantly to the state's GDP growth in the 21st century. One of the primary ways that railroads contribute to the economy is by providing transportation for goods and commodities. Utah's railroads transport a variety of freight and products, including coal, agricultural products, and manufactured goods. By transporting these goods more efficiently and at a lower cost than other transportation modes, (such as trucks or planes), railroads can help reduce the cost of production and increase profitability for Utah businesses. This, in turn, can lead to increased economic growth and job creation.

Another way that railroads contribute to the economy is by providing access to markets that may be otherwise difficult to reach. For example, Utah's railroads connect the state to major ports on the West Coast, such as the Port of Los Angeles and the Port of Long Beach. This access to international markets can provide Utah businesses with opportunities to sell their products overseas, increasing their customer base and potential for growth.

Railroads can play a significant role in reducing congestion on highways and reducing the environmental impact of transportation. As more businesses rely on rail transportation, fewer trucks are needed to transport goods,; thus reducing congestion on Utah's highways. Rail

transportation also has a lower carbon footprint than other transportation modes, helping to reduce greenhouse gas emissions and improve air quality.

In recent years, Utah's railroads have made significant investments in their infrastructure and technology. For example, the Union Pacific Railroad, one of the largest railroads in the state, has invested over \$500 million in its Utah operations since 2011. These investments have helped to modernize the railroads, making them more efficient and able to handle larger volumes of freight. This increased efficiency can lead to cost savings for businesses and increased profitability, further contributing to GDP growth.

### **Utah's Inland Port**

The proposed inland port in Utah has the potential to make a significant contribution to the state's GDP growth. However, the exact impact that the inland port will have on Utah's economy is difficult to predict due to various factors that can affect economic growth. To start, it is important to understand what an inland port is and how it functions. An inland port is a transportation hub located away from the coast that allows goods to be transferred from one mode of transportation to another, such as from trucks to trains or ships to trucks. In the case of the proposed Utah inland port, the focus is on facilitating the transfer of goods between trucks and trains.

The main argument in favor of the Utah inland port's potential contribution to GDP growth is that it will make the transportation of goods more efficient and cost-effective. Currently, most goods shipped to or from Utah must be transported by slow and expensive truck transit, which can be slow and expensive. By facilitating the transfer of goods from trucks to trains at the inland port, as opposed to ports of entry further from the state, the transportation process will become faster and cheaper. This improved efficiency in transportation will have a ripple effect throughout the economy. Companies will be able to receive and send goods more quickly and at a lower cost, which will make them more competitive in their respective markets. This increased competitiveness can lead to increased production, job growth, and ultimately, increased GDP.

Another factor that could contribute to the inland port's impact on Utah's GDP is the potential for new businesses to be attracted to the area. If the inland port proves to be successful,

it may encourage companies to set up operations in Utah, knowing that they will have easy access to transportation for their goods.

However, there are also potential drawbacks to the inland port that could limit its contribution to Utah's GDP growth. One concern is the environmental impact of increased transportation. More trucks and trains moving through the state could lead to increased air pollution and noise pollution. Additionally, there may be concerns about the impact of the inland port on nearby communities and wildlife habitats.

While the inland port in Utah has the potential to contribute to the state's GDP growth, the exact impact is difficult to predict. If successful, the inland port could make the transportation of goods more efficient and cost-effective—, leading to increased competitiveness, job growth, and potentially attracting new businesses to the area. However, there are also potential concerns regarding the environmental impact and impact on nearby communities and habitats. Overall, the inland port in Utah represents a significant opportunity for economic growth, but careful planning and consideration of potential drawbacks will be essential to maximizing its potential benefits.

## **The links between the Kyrgyz Republic and Utah**

### **Geography**

Utah and the Kyrgyz Republic are two regions that are geographically similar in several ways. Although they are located in different parts of the world, they share some common features that make them comparable. This essay will provide a detailed analysis of the geographic similarities between Utah and the Kyrgyz Republic.

Utah and the Kyrgyz Republic are mountainous regions. Utah is located in the western region of the United States and is known for its rugged mountains and stunning landscapes. The Rocky Mountains, which are part of the mountain range that runs through western North America, traverse Utah and form the backbone of the state. These mountains are characterized by high peaks, deep canyons, and rugged terrain. The Kyrgyz Republic, on the other hand, is a landlocked country located in Central Asia. It is dominated by the Tien Shan mountain range, which extends from the northwest to the southeast of the country. Like the Rocky Mountains, the Tien Shan Mountains are known for their high peaks and rugged terrain, similar to the Rocky Mountains in Utah.

Utah and the Kyrgyz Republic are located in arid regions. Utah is part of the Great Basin, which is characterized by dry desert conditions and a lack of surface water. The state receives less than 12 inches of rainfall annually, and much of its water supply comes from snowmelt and underground aquifers. The Kyrgyz Republic, on the other hand, is located in the heart of Central Asia, which is a vast, arid region characterized by hot summers and cold winters. The country receives an average of 8 inches of rainfall annually, and much of its water supply comes from the melting of glaciers in the Tien Shan Mountains.

Utah and the Kyrgyz Republic are home to several natural wonders. Utah is famous for its National Parks, which include Zion National Park, Bryce Canyon National Park, and Arches National Park. These parks are known for their stunning landscapes, towering cliffs, and unique rock formations. The Kyrgyz Republic, on the other hand, is home to several natural wonders, including Lake Issyk-Kul, which is (one of the largest alpine lakes in the world), and the Ala-Archa National Park, (which is known for its glaciers, valleys, and high peaks).

Utah and the Kyrgyz Republic have a rich history and culture. Utah is home to several Native American tribes, including the Navajo, Ute, and Paiute. These tribes have a rich cultural heritage and are known for their traditional crafts, music, and dance. The cultural heritage of the Kyrgyz Republic, on the other hand, has a rich history that dates back to the 1st century BC., given that the region was a hub of trade and commerce along the Silk Road, which connected China with Europe. The country has a diverse ethnic population, which includes Kyrgyz, Uzbeks, Russians, and other Central Asian groups. The region is further known for its nomadic traditions, hospitality, and cuisine.

Utah and the Kyrgyz Republic share several geographic similarities, including their mountainous terrain, arid climate, natural wonders, and rich history and culture. Although they are located in different parts of the world, these similarities make them comparable in many ways. Whether it's exploring the stunning landscapes of Utah's national parks or experiencing the hospitality and nomadic traditions of the Kyrgyz Republic, both regions offer a unique and unforgettable experience.

## **Economy**

Utah and the Kyrgyz Republic are two very different places in terms of geography, culture, and history. However, when it comes to their economies, there are some similarities between the two that are worth exploring. One of the most significant similarities between Utah and the Kyrgyz Republic is their reliance on natural resources. Utah is known for its abundant reserves of coal, natural gas, and oil, while the Kyrgyz Republic is rich in minerals such as gold, uranium, and copper. In both cases, these resources have been a major driver of the local economy, with companies and industries in these sectors providing jobs and income for thousands of people. However, this reliance on natural resources can also make the economy vulnerable to fluctuations in global commodity prices, which can have a negative impact on both Utah and the Kyrgyz Republic.

Another economic similarity between Utah and the Kyrgyz Republic is their focus on agriculture. Utah has a long history of farming, with the state being a major producer of livestock, dairy products, and crops such as wheat, barley, and alfalfa. Similarly, the Kyrgyz Republic is known for its fertile soil and favorable climate, which makes it ideal for agriculture. In fact, agriculture accounts for a significant portion of the country's GDP, with crops such as cotton, wheat, and tobacco being major exports. Both Utah and the Kyrgyz Republic have also faced challenges in this sector, such as droughts and other natural disasters, which can have a significant impact on the local economy.

Tourism is another area where Utah and the Kyrgyz Republic have some similarities. Utah is known for its national parks, ski resorts, and other outdoor recreational opportunities, which attract millions of visitors every year. Similarly, the Kyrgyz Republic is a popular destination for adventure tourism, with opportunities for hiking, skiing, and horseback riding in the country's beautiful mountains and valleys. Both Utah and the Kyrgyz Republic have worked to promote tourism as a way to boost their local economies, although challenges such as infrastructure development and cultural barriers can make it difficult to fully realize the potential of this sector.

Utah and the Kyrgyz Republic have small but growing technology sectors. Utah has emerged as a hub for tech startups and innovation, with companies such as Adobe, eBay, and Qualtrics establishing a presence in the state. The Kyrgyz Republic, on the other hand, has a growing IT sector, with companies such as Saima Systems and IT-Attractor providing services to

clients around the world. While the technology sector is still relatively small in both Utah and the Kyrgyz Republic, it has the potential to be a major driver of economic growth in the future.

While Utah and the Kyrgyz Republic may seem like vastly different places, there are some important economic similarities between the two. Both rely on natural resources, have a strong agricultural sector, promote tourism, and have small but growing technology sectors. By understanding these similarities, policymakers and business leaders in both places can work together to learn from each other's experiences and find new opportunities for economic growth and development.

## **Culture**

Utah and the Kyrgyz Republic may seem like two vastly different places, located on opposite sides of the world, but they share a number of similarities culturally. Both Utah and the Kyrgyz Republic have unique cultures that have been shaped by their history, geography, and the values and traditions of their people. Paper will now explore some of the key cultural similarities between Utah and the Kyrgyz Republic.

One of the most striking similarities between Utah and the Kyrgyz Republic is the importance of religion in their respective cultures. In Utah, the predominant religion is The Church of Jesus Christ of Latter-day Saints (dubbed “Mormons” for their use of the Book of Mormon in religious observances), which has deeply influenced the social and cultural norms of the state on account of their predominant presence as pioneers in the 1800s. In the Kyrgyz Republic, Islam is the dominant organized religion practiced in the Kyrgyz Republic, and it too plays a central role in shaping the country's culture. Both religions place a strong emphasis on family values, community, and morality, and these values are reflected in the social and cultural practices of both Utah and the Kyrgyz Republic.

Another cultural similarity between Utah and the Kyrgyz Republic is their shared love of outdoor activities. Utah is known for its spectacular natural scenery—, including its numerous national parks—, while the Kyrgyz Republic boasts towering mountains and stunning alpine lakes. Both places offer ample opportunities for hiking, camping, skiing, and other outdoor pursuits, and

their residents often take advantage of these activities to enjoy the beauty of their surroundings and connect with nature.

Utah and the Kyrgyz Republic share a strong sense of community and hospitality. In Utah, the concept of "neighborliness" is highly valued, and people often go out of their way to help their neighbors and community members. As part of Islamic teachings on hospitality, In the Kyrgyz Republic, hospitality is deeply ingrained in the culture, with guests in the Kyrgyz Republic being treated with great respect and generosity. Both places value social connections and prioritize the well-being of their communities.

Although Utah and the Kyrgyz Republic may seem like very different places on the surface, they share a number of cultural similarities. Both communities place a strong emphasis on religion, family values, and community, and both offer ample opportunities for outdoor recreation and the enjoyment of natural beauty. Additionally, both Utah and the Kyrgyz Republic have unique culinary and musical traditions that reflect their history and geography. These cultural similarities illustrate that, despite differences, there are many shared human experiences that unite us across borders and cultures.

### **Utah's policies that promoted the growth of the Railroad industry**

The development of the railroad industry was crucial to the economic growth of the United States in the 19th century. The state of Utah played an important role in this process, as it served as a major crossroads for transcontinental rail lines. To promote the growth of the railroad industry in the state, Utah implemented several policies aimed at attracting railroad companies and encouraging the construction of rail lines. This section will discuss some of the specific policies that Utah put into place to promote the growth of the railroad industry.

One of the key policies that Utah implemented was the granting of land subsidies to railroad companies. Under the federal government's land grant program, Utah was allotted a certain amount of land for each mile of rail constructed within its borders. Utah, in turn, granted these lands to railroad companies in exchange for their agreement to build rail lines within the state. This policy was particularly effective in attracting railroad companies to Utah, as it provided them with a valuable incentive to invest in the state.

In addition to land subsidies, Utah also offered tax incentives to railroad companies. One of the most significant of these incentives was the exemption of railroad property from property taxation. This policy was particularly attractive to railroad companies, as it allowed them to operate in Utah without incurring the high tax burdens that were present in other states. This, in turn, encouraged the construction of additional rail lines and spurred the growth of the railroad industry within the state.

Utah also took steps to ensure that rail lines were constructed in a timely and efficient manner. To this end, the state passed laws that allowed for the rapid acquisition of rights-of-way and other necessary land. Additionally, Utah established a system of grading and construction standards that ensured that rail lines were built to a high level of quality. These policies helped to minimize delays and keep construction costs down, making it more attractive for railroad companies to invest in Utah.

Another important policy that Utah implemented was the creation of a regulatory framework that was supportive of the railroad industry. The state established a Railroad Commission to oversee the industry and ensure that it was operating in a safe and efficient manner. The commission was responsible for setting standards for the construction and operation of rail lines, as well as for enforcing safety regulations. By creating a supportive regulatory environment, Utah was able to attract additional railroad companies and promote the growth of the industry within the state.

### **Details on Land Subsidies**

During the 19th century, railroads were crucial in the development of the United States, as they provided a fast, reliable, and safe means of transportation for goods and people. To promote the growth of the railroad industry, the federal government and many state governments offered land subsidies to railroad companies. Utah was one of the states that implemented such policies, providing land subsidies to railroad companies to encourage their expansion in the state.

In 1864, the federal government passed the Pacific Railroad Act, which provided land grants to railroad companies to build a transcontinental railroad. The act granted 10 alternate sections of land per mile of track to the Union Pacific Railroad and Central Pacific Railroad, which

were building the railroad from the east and west coasts, respectively. In addition to the federal land subsidies, Utah also implemented its own policies to encourage railroad growth. In 1870, the Utah Legislature passed the Utah Northern Railroad Land Grant Act, which granted 10 sections of land per mile of track to the Utah Northern Railroad developing, which was building a line from Ogden to Franklin, Idaho. The land was granted in a checkerboard pattern, with the railroad company receiving every other square mile of land along its route.

In 1872, the Utah Legislature passed the Utah Southern Railroad Land Grant Act in 1872,, which also granted 10 sections of land per mile of track to the Utah Southern Railroad developing , which was building a line from Salt Lake City to the Utah-Arizona border. The land was also granted in a checkerboard pattern, with the railroad company receiving every other square mile of land along its route. These land subsidy policies had a significant impact on the development of the railroad industry in Utah. They provided a powerful incentive for railroad companies to build new lines in the state, as they could profit from the sale of the land grants. The policies also helped to spur economic growth and development in Utah, as the railroads provided a means for people and goods to travel quickly and efficiently throughout the state. However, the land subsidy policies were not without controversy. Some people criticized the policies as giving away valuable public land to private companies, and argued that the subsidies were unnecessary given that, as the railroads would have been built anyway. Others argued that the policies favored certain railroad companies over others, leading to a lack of competition and higher prices for consumers.

The land subsidy policies implemented by Utah to promote the growth of the railroad industry had a significant impact on the development of the state. While the policies were controversial, they helped to spur economic growth and development, and provided a means for people and goods to travel quickly and efficiently throughout the state.

### **Tax Incentives**

Rail transportation is still an essential part of Utah's economy, and the state has put in place several tax incentives policies to promote the growth of the railroad industry in the state.

One of the primary tax incentives policies that Utah has implemented to promote the growth of the railroad industry is the Rail Line Rehabilitation Tax Credit. This tax credit provides

a 50% tax credit for the costs incurred in rehabilitating or improving a rail line. The credit is available for a period of five years, and it can be used to offset Utah corporate income tax liability. To qualify for the Rail Line Rehabilitation Tax Credit, the rail line must be at least one mile long and must be located in Utah. The credit is also available to businesses that lease or operate rail lines in the state. The goal of this tax credit is to encourage businesses to invest in the rehabilitation and improvement of rail lines, which can help to improve the safety and efficiency of rail transportation in the state.

Another tax incentives policy that Utah has put in place to promote the growth of the railroad industry is the Rail Access Tax Credit. This tax credit provides a 100% tax credit for the costs incurred in constructing new rail spurs or sidings that connect to a main rail line. The credit is available for a period of five years, and it can be used to offset Utah corporate income tax liability. To qualify for the Rail Access Tax Credit, the rail spur or siding must be at least 1,000 feet long and must be located in Utah. The credit is also available to businesses that lease or operate rail spurs or sidings in the state. The goal of this tax credit is to encourage businesses to invest in new rail spurs or sidings, which can help to improve the efficiency of rail transportation and make it easier for businesses to access rail transportation.

Furthermore, Utah has also put in place the Rail Relocation Assistance Program, which provides financial assistance to businesses that need to relocate their operations to accommodate new rail lines or rail line improvements. The program can provide up to 50% of the costs associated with relocating a business, including costs associated with land acquisition, site preparation, and construction of new facilities.

Utah has also implemented the Railroad Crossing Safety Tax Credit, which provides a tax credit for businesses that invest in safety improvements at railroad crossings, covering up to. The credit is equal to 50% of the costs incurred in making safety improvements, and it can further be used to offset Utah corporate income tax liability. Utah has put in place several tax incentives policies to promote the growth of the railroad industry in the state.

Each of these policies are designed to encourage businesses to invest in the rehabilitation and improvement of rail lines, the construction of new rail spurs or sidings, and safety improvements at railroad crossings. By providing financial assistance and tax credits, Utah is

making it easier for businesses to access rail transportation, which can help to improve the efficiency of the state's economy and create new job opportunities.

### **Construction Standards**

In the late 1800s, the state implemented a series of construction standard policies to promote the growth of the railroad in Utah. The first policy was the establishment of the Railroad Commission of Utah in 1888. The commission was tasked with regulating railroad rates and ensuring that the industry operated in a fair and competitive manner. It was also responsible for ensuring that railroads were built and maintained to certain safety and construction standards unique to mountainous areas, which need to account for events such as excess snowfall and seismic activity. This policy helped to create a stable environment for the railroad industry to operate in Utah.

Another policy implemented by Utah was the Railroad Right-of-Way Act of 1909. This legislation allowed railroads to acquire land for the construction of rail lines without having to go through the traditional legal channels. The act streamlined the process of land acquisition and made it easier for railroads to build their infrastructure. This policy was particularly important in Utah, where rugged terrain and a lack of infrastructure made it difficult to build rail lines.

In addition, the state of Utah provided financial incentives to railroads to encourage them to build in- the state. One such incentive was the issuance of bonds to finance railroad construction. The state would issue bonds to railroads, which could be used to build new infrastructure. The bonds were backed by the state, which helped to reduce the risk for investors and make it easier for railroads to secure funding for construction. And as mentioned, Utah also provided tax breaks to railroads operating in the state. The state legislature passed several laws that exempted railroads from paying certain taxes, such as property taxes. These tax breaks made it more attractive for railroads to do business in Utah, which helped to increase investment and spur growth in the industry.

Finally, Utah implemented policies to ensure that its railroads were integrated with the national rail network. The state worked closely with the federal government to ensure that rail lines in Utah connected with those in neighboring territories (which eventually became states). This

helped to create a seamless transportation network that was essential for the growth of the railroad industry. Utah implemented a series of construction standard policies to promote the growth of the railroad industry in the state. These policies included the establishment of the Railroad Commission of Utah, the Railroad Right-of-Way Act of 1909, financial incentives for railroads, tax breaks, and integration with the national rail network. These policies helped to create a favorable environment for the railroad industry to operate in Utah, which spurred growth and development in the state.

### **Railroad Right-of-Way Act of 1909**

The Railroad Right-of-Way Act of 1909 was a significant piece of legislation put into place by the state of Utah in the early 20th century to promote the growth and development of the railroad industry within the state. This act, which was signed into law on March 6, 1909, provided for the acquisition of land by the state for the construction of railroad rights-of-way, and represented a significant step forward in the state's efforts to support the expansion of its transportation infrastructure.

The passage of this act was driven by a number of factors, including the recognition of the importance of railroads to the state's economy, the need to encourage investment in the industry, and the desire to facilitate the movement of goods and people across the state. In the years leading up to the passage of the act, Utah had experienced significant growth in both its population and economy. As such, and the need for reliable, efficient transportation options had become increasingly clear. Under the terms of the Railroad Right-of-Way Act, the state was authorized to acquire land for the construction of new rail lines, and to establish rights-of-way on existing lines. This allowed for the expansion of the state's rail network, and helped to ensure that railroads had the resources they needed to build and maintain their infrastructure. One of the key provisions of the act was the requirement that railroads pay a fair market value for the use of the land acquired by the state. This ensured that the state was able to recoup its costs, while also providing a source of revenue for ongoing investments in the state's transportation infrastructure. The act also established procedures for resolving disputes between railroads and landowners, and provided for the establishment of a commission to oversee the implementation of the law. This helped to ensure

that the act was implemented fairly and effectively, and that all parties involved were able to have their voices heard.

The Railroad Right-of-Way Act of 1909 represented a major milestone in the history of transportation in Utah. By providing for the acquisition of land for the construction of railroads, the state was able to support the growth and development of the industry, and to ensure that the people of Utah had access to reliable, efficient transportation options. Today, the legacy of this legislation can be seen today in the state's extensive rail network, which continues to play a vital role in the state's economy and infrastructure.

### **What Could the Kyrgyz Republic learn from Utah's Railroad Policies**

The development of railway systems is a crucial aspect of any country's economic growth. Railways not only offer an efficient means of transportation, but they also have the potential to generate employment opportunities and facilitate the movement of goods and services. Utah, a state in the western United States, has implemented several railroad policies that have been beneficial for its economic growth.

Utah's railroad policies have been instrumental in the state's economic growth. One of the most significant policies that the Kyrgyz Republic could learn from is the emphasis on public-private partnerships. In Utah, the state government has partnered with private entities to finance and operate railway infrastructure. This has allowed for more efficient and cost-effective development of the railway system. The Kyrgyz Republic could adopt this model to encourage private sector participation in the development of its railway infrastructure.

Another policy that the Kyrgyz Republic could adopt from Utah is the use of technology to improve railway operations. Utah has implemented a Positive Train Control (PTC) system, which uses communication technology and GPS to enhance railway safety and efficiency. The Kyrgyz Republic could adopt a similar technology-based system to improve the safety and efficiency of its railway system. Utah has also implemented policies to encourage the use of railways for freight transportation, which the Kyrgyz Republic could learn from this and to promote the use of railways as a means of transportation for goods. This would not only reduce

the strain on the country's road infrastructure, but also reduce transportation costs and increase efficiency.

Another policy that the Kyrgyz Republic could implement is further expansion of a railway network that connects the country with neighboring countries. Utah's railway network connects the state with neighboring states and Canada, which has facilitated the movement of goods and services across borders. The Kyrgyz Republic could expand its existing railway network by connecting China directly with Uzbekistan. This would not only increase trade between the countries but also facilitate the movement of goods across borders.

Finally, the Kyrgyz Republic could learn from Utah's emphasis on sustainable development. Utah has implemented policies to reduce the environmental impact of its railway system. For example, the state has encouraged the use of electric locomotives to reduce emissions. The Kyrgyz Republic could adopt similar policies to ensure that its railway system is environmentally sustainable.

The implementation of Utah's railway policies could be beneficial for the Kyrgyz Republic's economic growth. The Kyrgyz Republic could learn from Utah's public-private partnerships, technology-based systems, promotion of freight transportation, development of a railway network that connects neighboring countries, and emphasis on sustainable development. The implementation of these policies would not only improve the efficiency and safety of the railway system but also generate employment opportunities and facilitate the movement of goods and services.

### **Sustainable Development**

The Kyrgyz Republic, a landlocked country in Central Asia, faces several challenges in its efforts towards sustainable development. However, Utah, as a modestly productive state in the United States overall union that maintains the continuity of the US, has implemented effective sustainable development policies—, particularly in the railroad sector—, that the Kyrgyz Republic can adapt for its own benefit.

One of Utah's key strategies towards sustainable development in the railroad sector is investing in efficient and sustainable infrastructure. Utah has built a robust and modern railroad

infrastructure that is reliable, cost-effective, and environmentally friendly. The Kyrgyz Republic can implement a similar strategy by investing in modern and sustainable infrastructure that can cater to the country's transport needs while minimizing its environmental impact. The Kyrgyz Republic can partner with private and international investors to create a sustainable transport system. They can invest in advanced technology like electric trains, which emit less greenhouse gasses compared to traditional diesel trains, and also create less air pollution. Additionally, they can establish efficient rail routes that prioritize energy efficiency, cost-effectiveness, and safety, while considering the needs of the country's population and industry.

Another strategy that Utah has employed is the use of renewable energy. The Kyrgyz Republic can replicate this strategy to minimize the negative environmental impact of the railway system. The Kyrgyz Republic has vast renewable energy resources, particularly hydropower. The country can harness these resources to power its railway system, thereby reducing its reliance on non-renewable energy sources.

The Kyrgyz Republic can also adopt Utah's policy of reducing carbon emissions by encouraging the use of public transport. Utah has promoted the use of public transport by providing affordable and reliable services to the public. The Kyrgyz Republic can replicate this policy by investing in a public transport system that is affordable, safe, and accessible to everyone. This approach will help to reduce the country's carbon footprint while also providing a means of transportation that is accessible to everyone.

Utah has established effective partnerships between the government, the private sector, and local communities to promote sustainable development. The Kyrgyz Republic can adopt a similar approach by creating an enabling environment that encourages private sector participation in the country's sustainable development agenda. The government can offer incentives to companies that prioritize sustainable development in their operations. Additionally, the government can engage local communities in sustainable development initiatives, encouraging them to take ownership of the projects and ensuring their long-term sustainability.

The Kyrgyz Republic can benefit significantly from Utah's sustainable development policies, particularly in the railway sector. By investing in sustainable infrastructure, renewable energy, public transport, and partnerships, tThe Kyrgyz Republic can create a modern and

sustainable railway system that contributes to the country's economic development while minimizing its environmental impact. Through these policies, the Kyrgyz Republic can achieve a sustainable transport system that benefits both the country and the environment.

### **China-Kyrgyzstan-Uzbekistan railroad**

The China-Kyrgyzstan-Uzbekistan railroad is a major infrastructure project that is expected to improve economic growth both in the Kyrgyz Republic and in the Ferghana Valley—, shared jointly by the Kyrgyz Republic, the Republic of Tajikistan, and the Republic of Tajikistan and Uzbekistan. This rail link is expected to be around 1,000 km long, with over half of it running through the Kyrgyz Republic. The project is a part of the China-led Belt and Road Initiative (BRI), which aims to connect China to the rest of the world through a network of roads, railways, ports, and other infrastructure.

The construction of the China-Kyrgyzstan-Uzbekistan railroad is expected to bring significant economic benefits to the Kyrgyz Republic. Firstly, the railway will provide a much-needed boost to trade between the Kyrgyz Republic and the People's Republic of China (PRC). Currently, the Kyrgyz Republic relies heavily on road transportation for trade with the PRC, which is not only slow and inefficient but also expensive. The railroad is expected to make trade between the two countries much more efficient, as it will significantly reduce transportation costs and delivery times. This is likely to increase the volume of trade between the two countries in turn, which will be particularly beneficial for the Kyrgyz Republic's export-oriented industries such as textiles and agriculture.

The railway is also expected to provide a boost to the Kyrgyz Republic's tourism industry. The railroad will pass through several scenic regions in the Kyrgyz Republic, such as the Tian Shan mountains, which are popular with hikers and adventure tourists. Improved transportation links are likely to encourage more tourists to visit the region, which will create new job opportunities and stimulate economic growth. The construction of the railway is expected to generate significant employment opportunities in the Kyrgyz Republic. The project will require a large workforce, both during construction and in the long-term operation and maintenance of the railway, which will provide a boost to the local economy and create jobs in a range of sectors, including construction, engineering, transportation, and logistics.

The China-Kyrgyzstan-Uzbekistan railway is also expected to provide an important transportation link for the Kyrgyz Republic to other Central Asian countries and nations beyond the region. The railway will connect to existing rail networks in the Republic of Uzbekistan and Republic of Kazakhstan, which will make it easier and more efficient for the Kyrgyz Republic to trade with its neighbors. This will not only increase trade volumes while also helping to create a more integrated regional market, which is likely to lead to further economic growth and development.

This railway is expected to provide the Kyrgyz Republic with greater access to the BRI. China's massive infrastructure investment program, the Belt and Road Initiative. As part of this initiative, the PR China is investing in a range of infrastructure projects across Asia, Africa, and Europe that are designed to improve connectivity and trade. The construction of the China-Kyrgyzstan-Uzbekistan railway is likely to increase tThe Kyrgyz Republic 's access to this program, which could lead to further infrastructure investment in the country. The China-Kyrgyzstan-Uzbekistan railroad is therefore expected to bring significant economic benefits to the Kyrgyz Republic. The railway will provide a much-needed boost to trade with PR China, stimulate the tourism industry, create new employment opportunities, improve regional connectivity, and increase access to China's Belt and Road Initiative. While there are risks associated with large-scale infrastructure projects, such as debt and environmental concerns, the potential benefits of this project for the Kyrgyz Republic are significant and could help to accelerate the country's economic development.

### **Potential Policies**

The China-Kyrgyzstan-Uzbekistan railway is an ambitious infrastructure project that is aimed at connecting the People's Republic of China to Central Asia and Europe through a network of rail lines and in particular without involvement of Russian infrastructure. The project is expected to have numerous benefits for the three countries involved—, including improved trade, tourism, and regional integration. However, in order to fully capitalize on the potential benefits of the railway, the Kyrgyz Republic needs to implement a range of policies that will facilitate the efficient and effective use of the railway.

The Kyrgyz Republic should focus on improving its transportation infrastructure. The railway is only one piece of the transportation puzzle, and in order for it to have maximum impact, there needs to be a well-developed network of roads and highways that can connect businesses and communities to the railway in order for it to have maximum impact. The Kyrgyz Republic should invest in upgrading its road network, building new highways, and improving border crossings to make it easier for goods and people to move in and out of the country.

The Kyrgyz Republic should therefore streamline its customs procedures to reduce the time and cost of border crossings. The railway has the potential to significantly reduce transportation costs, but these benefits will be eroded if goods are held up at border crossings due to inefficient customs procedures. The Kyrgyz Republic should work to implement a single window system for customs clearance that will simplify and speed up the process of moving goods across borders.

The Kyrgyz Republic should also invest in developing its logistics and warehousing infrastructure. The railway will only be effective if there are sufficient facilities for storing and transporting goods once they arrive in the Kyrgyz Republic. As such, the Kyrgyz Republic should invest in building new warehouses and logistics centers, and work with private companies to develop a robust logistics network that can efficiently transport goods to their final destinations.

Another key aspect is the promotion of the Kyrgyz Republic should focus on promoting its tourism industry. The railway will provide a new and exciting way for tourists to travel to and through the Kyrgyz Republic, and the country should take advantage of this opportunity by investing in tourism infrastructure and marketing its unique cultural and natural attractions to international visitors. This will not only boost the economy, but also increase cultural exchange and understanding between the Kyrgyz Republic and the rest of the world.

Finally, the Kyrgyz Republic should work to improve its investment climate to attract more foreign investment. The railway will require significant investment to develop, and the nation the Kyrgyz Republic should position itself as an attractive destination for foreign investors looking to capitalize on the opportunities presented by the railway. This will require a range of policy changes, including improving the ease of doing business, reducing bureaucracy, and ensuring transparency and accountability in government. The China-Kyrgyzstan-Uzbekistan railway has the potential to be a game-changer for the economies of all three countries involved. However, in

order to fully realize the benefits of the railway, The Kyrgyz Republic must implement a range of policies that will facilitate efficient and effective use of the railway. This includes improving transportation infrastructure, streamlining customs procedures, investing in logistics and warehousing infrastructure, promoting tourism, and improving the investment climate. If the Kyrgyz Republic can successfully implement these policies (improving transportation infrastructure, streamlining customs procedures, investing in logistics and warehousing infrastructure, promoting tourism, and improving the investment climate), it will be well-positioned to take advantage of the opportunities presented by the China-Kyrgyzstan-Uzbekistan railway and to become a key player in the region's growing economy.

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# **Bhutan On Sustainable Development and Renewable Energy Production Expansion and Diversification**

**By Carter B. Darger**

*Carter Darger is a current junior at Utah Valley University studying political science and global politics. He is a Utah native, having lived in many locations across the state. Carter aspires to continue his study and involvement in law and political science in pursuit of best serving his community and advocating for its needs.*

## **Contextual Abstract**

The Kingdom of Bhutan is a small, land-locked nation in the Himalayas and neighbors Nepal, India, and China. At 4,200 meters above sea level, the mountainous kingdom was the first carbon-negative country in the world (Wignaraja, 2021). Bhutan is especially vulnerable to the impacts of climate change, most pronounced in its glacier shrinkage of 22 percent since the 1980s. Glacial lake outburst flooding is another devastating result of climate change that is increasing in frequency within Bhutan. Additionally, as landslides and droughts become more prevalent and extreme, as they have in recent years, These landslides and droughts have progressively threatened Bhutan's economic and energy security.

The Royal Government of Bhutan (RGoB) recognizes the extreme threat presented by climate change and has stated their commitment to becoming carbon neutral.. Bhutan’s culture prioritizes the protection of nature, and many of Bhutan's renewable energy sustainable development goals (SDGs) are based upon the national concept of “Gross National Happiness” (GNH) which serves as the RGoB approach that prioritizes the well-being of its citizens alongside the protection of the environment (Asia Pacific Economic Cooperation Energy Working Group, 2018). The RGoB’s commitment to environmental sustainability is further outlined in documents such as the Constitution of Bhutan, which includes a mandate for a minimum of 60 percent of land in the country to be maintained under forest cover (Human Rights Council et al., 2019). Efforts to expand sustainable renewable energy systems are placed among the most important initiatives in the nation for this purpose. A significant avenue of protecting the environment and other

sustainability efforts comes from renewable energy systems, and the importance of increasing renewable energy capacity in Bhutan's transitioning economy is shown to be instrumental in achieving sustainable development targets (Human Rights Council, 2019). Renewable energy is also increasingly essential for Bhutan's growing and evolving electricity demand. Bhutan's GNH philosophy and sustainable development targets (SDGs) form the basis of many plans of action the government publishes to guide initiatives over a five-year period, also known as their Five Year Plans (FYPs). At this stage of development, these most recent FYPs are what Bhutan's 2021 *Voluntary National Review* calls "last mile challenges," which includes improving key social outcomes, building economic resilience, and mitigating the impacts of climate change (Ministry of Foreign Affairs, 2021). Bhutan strives through each of its Five Year Plans, to better implement sustainable development policies to protect its citizenry. Significant portions of these plans are already aimed to promote renewable energy diversification and expansion of renewable energy production capabilities. Outlined specifically in RGoB's 12th Five Year Plan (FYP) for FY 2018-2023 are cross-cutting programs and projects that Bhutan, supporting agencies, international government organizations (IGOs), non-government organizations (NGOs), and other entities have been collaborating on and developing for the purpose of expanding the state's energy security through sustainable methods.

To better advocate for sustainable mountain development in Bhutan, a nuanced and thorough understanding of the energy systems within the state is essential. Through a comprehensive analysis of Bhutan's renewable energy development, the content of this research paper explores the quantifiable effectiveness of Bhutan's initiatives in achieving their goals of energy self-sufficiency through (i) diversifying renewable energy sources, (ii) promoting sustainable energy production expansion, and (iii) advancing energy resilience. This includes the exploration of current and proposed initiatives for the expansion and diversification of Bhutan's energy capabilities. As the 12th FYP comes closer to the finale at the end of this fiscal year, it is necessary to review the progress Bhutan has undertaken toward the implementation of sustainable energy initiatives and the challenges faced in completing these goals. Finally, this paper seeks to advocate for and propose pragmatic initiatives for the purpose of thoroughly strengthening renewable energy capacity and capabilities within Bhutan.

### **Energy Security Concerns**

The United Nations, in the United Nations Sustainable Development Partnership Framework for Bhutan for 2019–2023, indicated that climate-induced disasters, among others, threaten poverty reduction and efforts to eradicate poverty. In 2019, poverty in rural areas (11.9 percent) was reported to be significantly higher than in urban areas in Bhutan (0.8 percent), even as multidimensional poverty reduced in recent years (12.4 percent in 2012 to 5.4 percent in 2017). With poverty being largely a rural phenomenon, and more than 60 percent of the total population heavily dependent on agriculture, climate-induced disaster has significant potential to reverse income gains, and the stability of the economy in Bhutan (Human Rights Council et al., 2019). Alongside this, it is expected that the increasing population and modernization of the state will bring about higher energy consumption. According to the World Bank, as of 2019, Bhutan has achieved nearly universal access to electricity, with electrification rates of over 99 percent for both urban and rural areas. This suggests that Bhutan has made significant progress toward achieving the goal (Human Rights Council, 2019) of electrifying all rural households under its Tenth Five-Year Plan. Bhutan’s growing electricity demand and vulnerable population raise concerns about energy security. This presents sustainable energy production development as being essential in protecting the interests of Bhutanese citizens, further stressing the need for it to take high priority.

Bhutan is reliant on three major industries in its economy; hydropower export, tourism, and agriculture (Asian Development Bank, 2022). Although tourism and agriculture both were significantly affected by the coronavirus (SARS-CoV-2) pandemic, hydropower exports remained relatively stable. During FY 2020–2021, hydropower exports represented about 50 percent of Bhutan’s total exports. The peak demand for electricity that year in the country was 487 megawatts (MW) against the total installed capacity of 2,342 MW, resulting in a significant surplus of energy that was exported to the neighboring Republic of India. Despite Bhutan's annual net power surplus shown above, Bhutan’s power generation from hydropower plants is very seasonal and thus unreliable. Water flows and levels are difficult to control in the dry season, resulting in low power output and realistically forcing Bhutan to import electricity from other states at great cost, offsetting revenue from the export of hydropower made in that same year. Ultimately, Bhutan’s energy production is largely dependent on a single, highly variable resource, hydropower (99.7 percent). Its revenues largely sustain the national economy and are a major source of funding for the government (Asian Development Bank, 2022). With this extreme dependency in mind, it is

essential that energy production capabilities be strengthened and diversified in the state to address potential security risks.

All existing hydro plants in Bhutan are run-of-the-river schemes, defined as a plant that generates power from the daily flow of a river and includes an operational pondage that is limited to the mean annual flow for a 24-hour period (Asian Development Bank, 2023) and therefore seeing limited water storage capacity. And although hydropower is well-suited to Bhutan, it relies on river inflows that are reliant on the availability of water resources. These resources vary significantly by weather, season, and other climatic conditions. As a result, total electricity generation drops to approximately 400 MW during the dry season (December–March) resulting in a power deficit that must be supplemented through imports from neighbors such as India. (Asian Development Bank, 2022). The situation may be exacerbated as domestic water sources face the risk of drying up, which can serve to further restrict river flows. As of April 2023, it has been reported that out of Bhutan’s 7,399 identified water sources, 25.1 percent (1,856) are currently in the process of drying up. Even as the RGoB works to prevent the increase of this figure, it is projected that this shrinkage of water capacity will continue to impact hydropower production for the foreseeable future. Domestic demand for electricity continues to increase at approximately 9 percent annually, and industry sector demand growth has been seen to outpace additions to energy generation systems. Because of river inflow variability and domestic demand increase, it is seen that seasonal power shortages are expected to increase significantly in the upcoming years (Asian Development Bank et al., 2020). Already, in the winter of 2021–2022, Bhutan recorded its most intensive power shortage to date, seeing a daily import average of approximately 150–200 MW from India to supplement its shortage. For Bhutan, power import prices have already become more expensive than their power export tariffs, and it threatens to continue to increase in cost into and past 2030. With the estimated power import from India of more than 400–600 MW for December 2022–April 2023, this creates a situation in which Bhutan must rapidly develop and implement energy production facilities and systems to avoid extensive revenue loss and a dangerous dependency on its neighbors (Asian Development Bank, 2020). To mitigate the climate risk, the risk posed by variable hydropower generation, and seasonal shortages Bhutan has recognized the need to implement alternative energy sources that can be developed and installed quickly; all while further exploring hydropower investments to ensure long-term energy self-reliance and resilience.

## **Royal Government of Bhutan and 12th Five Year Plan Aims For Remedy**

Bhutan and other key entities are continuing to recognize the ever-looming risk presented above. With these concerns in mind, the 12th Five Year Plan (FYP) outlines four significant strategic priorities for achieving the further development of sustainable and resilient energy systems. The first is focused on securing energy security by improving the resilience of energy systems and ensuring a cemented reliable energy supply to meet growing demand. This includes the rapid development of diverse energy sources, especially those that can supplement hydropower during the dry season, such as wind and solar power. The second priority is enhancing energy efficiency by reducing energy intensity and promoting the use of energy-efficient technologies to improve energy productivity. The excessive waste and over-use of energy result in a greatly ballooned energy demand, and by promoting energy-efficient technologies and better energy-efficient practices, energy demand can be effectively lessened while energy generation systems are developed. The third priority focuses on promoting clean energy by deploying diverse clean energy to reduce greenhouse gas emissions, further stressing the importance of diversifying electricity generation. Finally, the fourth strategic priority focuses on strengthening energy governance, which aims to promote transparent energy policies and regulatory frameworks to support sustainable and reliable energy systems (Asia-Pacific Economic Cooperation Energy Working Group, 2018). Therefore the pragmatic remedy for Bhutan will ultimately include both the production of new and strengthened hydropower-related facilities and the diversification of energy through other sources like wind and solar which must be deployed rapidly.

### **Capacity Strengthening and Diversification Efforts**

To alleviate concerns about hydropower energy security and climate change, and following in line with the first and third strategic priorities, steps are being taken to diversify energy resources. Bhutan is endowed with significant natural sources of energy. Aside from hydropower, solar and wind are seen as extremely viable options with a restricted solar energy potential of producing upwards of 12,000 MW each year, highlighting a large reserve of largely untapped opportunity (United Nations Development Programme, 2021). Solar and wind power often have their own special patterns throughout the seasons and during the daytime, which ultimately may serve to complement hydropower production and supplement it in the dry seasons where water flows reduce while both sunny and windy days continue. As a result of this potential, it has been

a priority for RGoB and stakeholders to implement initiatives to fast-track solar and wind development. ABD reports that it intends to drive current generation up to 400 MW over the next 3 years (2022-2025), supporting the Druk Green Power Corporation (DGPC) which has been directed to take the lead in developing solar and wind energy facilities as the RGoB's state-owned generation company.

The ADA's Technical Assistance (TA), anchored in the country partnership strategy for Bhutan (2019-2023), assists RGoB to reform policies to promote further investment in alternative renewable energy sources to hydropower through solar power and wind power. By the end of 2023, it is projected that the TA will have significantly strengthened readiness for further development in enhancing clean energy resources in Bhutan, having approved extending the equivalent of USD \$1,000,000 on a grant basis to the Kingdom of Bhutan for promoting energy security. The ADA, and its subsidiary TA, have and continue to make commitments to provide financial assistance and investment for Bhutan to pursue initiatives that diversify their electricity generation (Asian Development Bank, 2022).

With assistance from the ADB, Bhutan has made significant progress in diversifying its energy systems. The Department of Renewable Energy (DRE) of the Ministry of Economic Affairs of the Royal Government of Bhutan (MEARGoB) prepared the construction of a 17.38 MW solar photovoltaic power plant at Sephu in Wangdue Phodrang as a measure to diversify electricity production. The ADB in 2022 agreed to finance the solar project through grants and loans to the RGoB, with the total projected cost of the solar plant at approximately Nu 1.4, equivalent to 17 million USD (Asian Development Bank, 2022). The project stands to become Bhutan's first mega-solar plant, planned to undergo construction in 2023. It currently awaits final clearance from ADB with projected costs at Nu 1.4 billion and an 18-month construction completion window (Asian Development Bank 2022, Zangpo 2023, et al.).

The Sephu plant is being built to complement already existing renewable infrastructure, including the Solar Photovoltaic Plant, a 180 kW Grid-tied Ground Mounted Solar PV System within Rubesa, Wangduephodrang. Constructed as of October of 2021, it was funded (USD 210,000) by the Government of Japan with United Nations Development Programme (UNDP) support and executed by the DRE under the Ministry of Economic Affairs with the Bhutan Power Corporation as the implementing agency. Even this minor plant is additionally co-located with an

existing 600 kW producing wind turbine farm also within Rubesa, expected to continue to generate 263,000 units of energy a year. Cumulatively, RGoB, ADB, UNDP, and other affiliates expect the expansion of solar energy production capabilities from producing 480 GW in 2018 to achieving 2,840 GW by 2030. Further projections see the increase of solar capacity to 8,519 GW by 2050, eighteen times the 2018 figure (United Nations Development Programme, 2021).

### **Potential Development**

Bhutan has made incredible progress in its development and diversification of renewable energy systems, but energy production must continue to be rapidly developed. The continued rollout of wind and solar plants is essential for the long-term reliability of energy production in the country. But alongside ground solar plant construction, floating solar power generation is a yet untapped area of potential for renewable diversification. Floating solar power generation is a mechanism particularly suited to Bhutan's existing hydropower reservoir areas, which they would float within. Floating solar power systems have been showcased to have greater generation efficiency than ground-mounted solar generation due to the cooling effect the panels receive from their proximity to the water surface. Utilizing floating solar power would also make use of the extremely limited available flat space in Bhutan's mountainous geography, with 140 hectares (approx 107,000 square feet) of space per hydropower reservoir available for generation (Asian Development Bank, 2022 & 2023). Additionally, this area is almost completely unused as it stands, and the water in reservoirs is solely being used for power generation rather than irrigation, drinking, fishing, or recreation. This method of solar generation requires minimal additional infrastructure as floating generation systems are utilized in pre-existing hydropower stations. Thus, access to Bhutan's grid systems with this method is made easy. The ADB in 2022 identified the potential output with this method (28-42 MW per reservoir) and commitments have been made to investigate the implementation of the project, including of the drafting investment plans to implement floating solar systems for nine hydropower reservoirs (6 completed, and 3 currently under construction) (Asian Development Bank, 2022). While the Asian Development Bank has recognized the potential value of floating solar installations, the production and implementation of these systems have been largely unexplored; resulting in Bhutan "missing out" on the full potential here. Already cemented is the viability of these systems, having been recognized by the UNDP as a major point of potential for future clean energy production, and its superiority to ground mounted

systems. With easy access to the grid as mentioned above, Bhutan must further explore implementing floating solar panels.

### **Conclusion**

Ultimately, Bhutan's need for energy production diversification and overall expansion has been shown to be necessary for the future of the state. Through the 12th Five-Year plan priorities, as well as the support of other actors and investors, Bhutan is rapidly implementing solar ground-mounted plant systems and exploring the development of other means of diversification through items such as floating solar. In terms of quantifiable progress, ultimately it is asserted here that there have been significant strides in attaining and promoting resilience and the expansion of Bhutan's energy systems through renewable diversification.

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## **Sustainable Development In India: Gender Equality**

**By Samantha Davis**

*Samantha Davis is a Senior at Utah Valley University (UVU) studying global politics. Samantha was the UVU Barry Goldwater scholarship nominee in 2021, received recognition from USAID for her project in refugee housing in 2019, and is an active member of the Utah International Mountain Forum, a coalition of student clubs at UVU. Samantha aspires to work in the non-profit business sector after graduation.*

As members of the United Nations work to reach the seventeen sustainable development goals, established in 2015, marginalized groups, such as mountainous communities, are often forgotten. Forums such as The United Nations Mountain Partnership have been created to advocate for marginalized people. The Mountain Partnership fights for the recognition and protection of mountain peoples; India is one of eleven Asian states in the partnership. Mountains cover thirty percent of India. The most extensive mountain range in India, the Himalayas, is the residence of over fifty million people (Distribution, 2023). India has faced significant challenges in promoting the United Nations' sustainable development goals in its mountain communities. More specifically, Indian mountain communities struggle to reach sustainable development goal number five, which is to achieve gender equality, due to the proportion of women who, because of geographic barriers, experience sexual assault, cannot hold a sufficient job, and do not have access to communication technologies.

In their current domestic policy, India has made sustainable development a priority. At the G20 energy week summit, Prime Minister Modi set specific goals for India's sustainable development. Prime Minister Modi pledged to reduce India's emissions to net zero by 2070 by using BESS, off-shore wind, and green hydrogen (S,A, 2023). Although energy is an important aspect of sustainable development, the United Nations expands the definition to include seventeen sustainable development goals. "The Seventeen Sustainable Development Goals (SDGs), which are an urgent call for action by all countries - developed and developing - in a global partnership. They recognize that ending poverty and other deprivations must go

hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth – all while tackling climate change and working to preserve our oceans and forests” (Seventeen Goals, 2023). Sustainable development goal number five is to “achieve gender equality and empower all women and girls” (Seventeen Goals, 2023). On a global level, gender equality in politics, economies, and domestic affairs are improving. From 2015 to 2022 women’s share of membership in national parliaments increased from 22.4% to 26.2% (Seventeen Goals, 2023).

However, on a domestic level gender equality varies greatly. In India “27.3% of women aged 20–24 years old who were married or in a union before age 18. As of February 2021, only 14.4% of seats in parliament were held by women. In 2018, 18.4% of women aged 15-49 years reported that they had been subject to physical and/or sexual violence by a current or former intimate partner in the previous 12 months” (Country Data, 2023). When taking action to reach sustainable development goal number five the Indian government needs to consider geographic variations and the innate challenges associated with them. Rural mountain communities in India are confronted with specific challenges due to their geographic isolation and extreme climate.

The isolation and lack of infrastructure in mountain communities create unique challenges to combating sexual violence which urban communities do not have. When gender violence is present, gender equality cannot be met. The United Nations states “Violence against women and girls is a human rights violation, and the immediate and long-term physical, sexual, and mental consequences for women and girls can be devastating, including death. Violence negatively affects women’s general well-being and prevents women from fully participating in society. It impacts their families, their community, and the country at large. It has tremendous costs, from greater strains on health care to legal expenses and losses in productivity” (Ending Violence, 2023). Eliminating sexual violence is a vital aspect of gender equality and is one of the reasons mountain communities in India struggle to achieve gender equality in the context of the United Nations' sustainable development goals.

In 2012, the news outlet Early Times reported the story of twelve-year-old Mohina, whose parents were forcing her to be married. Mohina’s biological parents are members of the mountainous Bakerwal tribe. Child or teen marriages have been reported in the Bakerwal tribes

before, but local police have taken little action to prevent them from happening again. Mohina refused to marry the man her parents chose for her and made her intention to finish school before getting married or bearing children clear (Child, 2012). Sexual abuse in the form of child marriage or sexual violence is unfortunately common in rural Indian communities. Isolated villages with poor infrastructure make it easier for sexual assaults to occur unnoticed. For example, villages with no toilets create opportunities for sexual assault because women are isolated when they use the restroom. “According to sources, seven cases of sexual assault were reported from the district in January last year. Six cases of sexual assault took place when the women went out to defecate in open. On an average, annually, nearly 95% cases of rape and molestation were reported when the victims had gone out of their homes to attend nature's call” (Absence, 2014). Another barrier to gender quality in Indian mountain regions is limited career opportunities for females.

For generations, Pashu Sakhis, who are traditionally women, have taken care of their village's animals. Similar to a western veterinarian, Pashu Sakhis care for sick, injured, or pregnant animals and livestock. However, Pashu Sakhis struggle to collect fees for their help because tradition states their services should be free (Ani, 2023). The struggle of Pashu Sakhis illustrates one barrier mountain women face when trying to contribute to their local economy. Other barriers include cultural biases, lack of education, strict fathers or husbands, or intense domestic responsibility. If women can overcome these barriers, studies have found women are exceptionally capable as sustainable entrepreneurs and on average have more success than their male peers (Agarwal, et al., 2020). The Covid-19 pandemic severely set back the female labor force in rural villages. Post-pandemic Inflation has increased the prices of basic necessities and rural women are impacted the most. Reporter Dalmia explains the effects encouraging women to join rural economies could have: “Through women's self-help groups (SHG), millions of jobs can be created in rural areas...and it will increase the income of these women. In this PPP model each woman can earn anything between 10000 and 15 thousand per month. Marketing and sales of rural products by private players can have a large-scale impact, boost the rural economy, and address sustainability, efficiency, and inclusivity challenges” (Dalmia, 2023).

Additionally, when women have the disposable income to purchase land they are empowered in their home life. Recent studies show that women in India are owning more land, thus allowing them to make more household decisions, are more involved in healthcare choices,

and have a stronger voice in finances and the home (How More Women, 2023). As rural women join the workforce and control their own income not only is their personal life positively impacted, but the local economy is boosted and gender equality barriers are lessened. However, beyond economically, the fundamental geography of mountain communities makes it difficult for mountain women to develop technologically.

In 2023, the United Nations hosted the Commission on the Status of Women. The primary theme for the conference was “Innovation and technological change, and education in the digital age for achieving gender equality and the empowerment of all women and girls.” At the two-week-long session, the vitality of technology as a tool for achieving gender equality was repeatedly emphasized. Due to steep terrains and low-access villages, Indian mountain communities do not have access to the technology other regions do. Electric lines, telephone poles, and internet cables are more expensive when being run to a mountain community. Repairs on communication technologies, such as satellites, are also costly due to extreme weather in mountain climates. In order for technology to be helpful in combating gender inequality, the United Nations names seven crucial factors: content, capacity development, gender and diversity, access and participation, partnerships, technologies, and finally, economic, social, and environmental sustainability (Gender and ICT, 2018). In a rural village in Zimbabwe, these principles were put into practice. Technology integration, when used to help women in their day-to-day lives, was successful and empowering (Zunguze, 2007). Despite the barriers of sexual violence, workforce inequality, and limited technology access being aggravated by the geography of mountain communities, India has still made efforts to achieve mountain sustainability.

The Mountain Railways of India project is a global example of connecting mountainous regions to urban regions (Mountain Railways, 2008). The railways consist of three main lines: the Darjeeling Himalayan Railway, the Nilgiri Mountain Railway, and the Kalka Shimla Railway. All three railways present impressive engineering to carry passengers and products from large cities to rural mountain villages. “The Mountain Railways of India are outstanding examples of the interchange of values on developments in technology, and the impact of an innovative transportation system on the social and economic development of a multicultural region, which was to serve as a model for similar developments in many parts of the world” (Mountain Railways, 2008). Reliable transportation can help, increase education accessibility and facilitate

technological development. Isolated mountain villages can be up to four hours away from the nearest school, thus making it difficult for women, who have extensive home responsibilities, to find the time to travel to and attend school. Mountain railways can decrease travel time to schools, therefore, giving women the opportunity to receive an education and later be qualified to join the workforce. Additionally, railways make it easier to ship telephone poles, internet cables, large wires, or repair materials to rural communities.

Another strategy of the Indian government to promote sustainable development is to promote tourism in Himalayan villages. The Indian Minister of Environment stated, “Tourism in the Himalayas should be promoted for nature seekers, pilgrims, and spiritual seekers. The involvement of local communities in tourism is most important for integrating such initiatives. All our activities should be round the year and our educational institutions should have formats aligned with it” (Luthra, 2022). Increasing tourism can create jobs, for both men and women, as well as fund the development of safer community infrastructure, such as the addition of public toilets, street lights, and safe public spaces, which can decrease sexual violence in a community. At the same time, if tourism strategies are not implemented with gender equality in mind the impact for women, such as the increase of brothels and the exclusion of women from local jobs, can be negative. While the government is implementing strategies for promoting gender equality, such as railway and tourism development, nonprofit companies also play a role.

Nonprofits can help to promote gender equality in mountain communities by providing resources the Indian government is not currently capable of. For example, AI For Rural is an organization that works in mountainous communities in India and Utah to empower and educate farmers. Another example is the feminist hiking collective, which interviews women in mountain communities to determine their greatest needs and challenges (Mountain women of the world, 2022). UN Women is one of the largest nonprofit promoters of gender equality. “UN Women supports UN Member States as they set global standards for achieving gender equality, and works with governments and civil society to design laws, policies, programmes and services needed to ensure that the standards are effectively implemented and truly benefit women and girls worldwide” (About UN women, 2023). With governments and nonprofits working together, mountain women can be empowered.

Achieving gender equality is an indispensable part of global sustainable development. As India works towards gender equality within its borders the specific barriers faced by mountain communities must be taken into consideration. Sexual violence, workforce inequality, and technology accessibility are all made worse due to the remoteness and climate of mountain villages. Geography plays a vital role in the progress of gender equality. Strategies by the government, such as railroad and tourism development, as well as the efforts of nonprofits, can help overcome mountain-specific barriers to gender equality. As gender inequality is defeated in mountain areas both local and national society will be impacted for the better. “We know that when women are empowered they immeasurably improve the lives of those around them-their families, their communities, and their countries” (O’Malley, 2020).

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# **Sustainability and Cuban Women in the Face of the Blockade**

**By Dallas Fabela**

*Dallas Fabela was born and raised in Taylorsville, Utah. He attended Taylorsville High School and played on the golf team where he developed his lifelong hobby. He recently graduated Magna Cum Laude with a bachelor's degree in political science from Utah Valley University. He aspires to further his education and secure a career as an urban development planner.*

## **Introduction**

As the globe prepares to deal with the ramifications of a global climate crisis the need for sustainable development is becoming more apparent. The United Nations with its 2030 agenda set out a pathway for achieving sustainable development globally economically, socially, and environmentally. One region that deserves to be mentioned when discussing sustainability is the plethora of mountainous nations worldwide. Mountainous regions carry great importance for all of humanity. Nearly half of humanity relies on mountains for fresh water, and with climate change rapidly changing the environmental makeup of mountains, much stress needs to be put on sustainable mountain development (SMD) (Andersen 2022). As for Cuba, we see roots of sustainable mountain development dating back to the 1980s before most of the world was familiar with the idea. (Lane 2012). Cuba has been repeatedly viewed as a sustainability leader at a global level, and according to the most recent Sustainability Development Index (2019), Cuba was ranked as the fifth most sustainable country. Cuba created their SMD initiative with watershed management in mind. Plan Turquino was among the more difficult changes the Cuban government oversaw after the revolution. However, it paved the way for sustainable development to thrive in Cuba. Even as the U.S. embargo hinders potential progress the island nation has repeatedly shown fervor toward sustainability. Not only sustainability in the environmental sense but also with their advancements in medicine, social equality, and economics (Kuntz 1993). Unfortunately, since the onset of the global COVID-19 pandemic, Cuba has encountered major economic woes leading to civil unrest and uncertainty. With the negative relationship between the U.S. and Cuba, resulting in a decades-long embargo on the island nation, there is a need to examine sustainable development in Cuba while combating the negative externalities brought upon by the embargo. The impacts of the blockade are felt not just by the Cuban government but disproportionately impact the Cuban

people. As we will examine in the rest of this research paper, the embargo hinders social, health, and economic sustainability in Cuba.

### **Environmental Sustainable Development in Cuba**

In Cuba's most recent Voluntary National Review submitted in 2021 the country discusses the key sustainable development goals. As the presentation of the report states, Cuba is committed to achieving the 2030 agenda and has strengthened the environmental, social, and health aspects of sustainable development. The environmental protections include "sustainable consumption and production practices, sustainable management of natural resources and the adoption of mitigation and adaptation measures to ensure physical and food security of society and the most vulnerable settlements" (Voluntary National Review 2021). As for the social aspect the Cuban government has made strides with the creation of the new family code which protects the most vulnerable groups in Cuba and increase gender equity.

In listing some of the challenges Cuba faces in achieving the 2030 agenda the first statement addresses the U.S. blockade. The blockade has cost the Cuban economy \$147 billion 853.3 million dollars, a staggering number to think about. The island nation also addressed concerns with the energy matrix, food production, high import dependability, and the country's technological backwardsness (Voluntary National Review 2021).

What makes Cuba's success with Plan Turquino even more encouraging is that it was accomplished with the United States' embargo in place. The embargo placed on Cuba by the United States has done a great deal of harm to the island nation's economic, social, and political livelihood. Despite calls by a conglomerate of countries and the United Nations the embargo still persists and was ratcheted up during the end of the Trump administration with Cuba being placed on the state sponsor of terrorism list. Despite the embargo, Cuba has still made strides in improving sustainability in their country.

Plan Turquino was one of Cuba's first moves toward sustainability after the revolution. This was a plan to rediscover, reintegrate, and develop Cuba's mountainous regions. Before the revolution, Cubans who lived in mountainous areas lived lives of seclusion and precariousness. Plan Turquino provided these forgotten areas with the means to promote the development of their

communities. Through the work done via Plan Turquino, much of the mountainous regions were mapped out. Most of the areas were abundant with water, wood, exportable good, etc. However, for Cuba to make the mountainous areas work they needed a population increase. So Cuba set out to do just that, building some 300,000 homes and improving living conditions in the mountainous regions (Garcia 2018). What Plan Turquino did wonderfully was ensure there was no erosion of the communities values and culture. Sustainable development, especially in mountainous regions, hinges on the ability of mountainous communities to successfully integrate sustainable development into their daily lives. It is not enough to simply set up a renewable water source, introduce a new way of farming, or implement just any form of sustainable development in a region that may not understand or just simply reject those methods. To successfully implement sustainability in secluded mountainous regions one must include the thoughts, culture, and values of those who have lived in the region.

Plan Turquino, as well as Plan Manati, have been heralded by the UN with their 1995 updates. The UN also points to both of Cuba's SMD projects as important case studies that also contribute to the FAO Mountain Mandate Program (Lane 2012). Cuba also received praise from the FAO for its "exceptional record in disaster management that has had a positive effect on its sustainable agriculture and forestry programs and watershed management" (Lane 2012).

A 2021 study conducted by Jyrki Luukkanen and Anaely Saunders examines where Cuba succeeds in sustainability and where improvements can be made. Luukkanen and Saunders utilize the Sustainability Window (SuWi) and Doughnut Economy theories to assess certain areas of production in Cuba. SuWi presents a method to analyze the maximum and minimum economic development levels while not increasing environmental stress or diminishing social sustainability. The authors of the study then utilized the doughnut model, created by economist Kate Raworth, which is a visual representation of the potential shortfalls of sustainability in an economy. This study showed that Cuba had sustainability pitfalls when it comes to renewable water use, energy consumption, energy savings, and organic farming (Lukkanen and Saunders 2021). Cuba's energy grid has been a place of concern especially once the weather begins to warm and energy demand rises. Energy blackouts have impacted Cuba quite heavily with a period in February of 2022 resulting in nearly half of the islands' 11 million inhabitants being without power (Havana Times 2023).

These sustainability shortcomings have been addressed by the Cuban government. Las Tunas, a province in Cuba, is undergoing a major renewable energy project. Installing much-needed solar panels, with the hopes of fully supporting Las Tunas' energy demand with just solar. The province is also home to wind turbines Herradura I and II, potentially creating a renewable energy home for Cuba (Herrera 2023). There are also efforts to increase sustainable agriculture throughout the island nation. Cuba's government under the branch of Increasing Resilience of Agricultural Ecosystems (IRES) has made a conscious effort, alongside Cuban farmers, to adopt a more sustainable attitude towards food development (Garcia 2023). Many of the farmers committed to sustainable food development are women farmers who make up about 46 percent of the 51,700 farmers assisted by the IRES (Garcia 2023). Cuban women developing sustainable agriculture is a trend that we will continue to see, and discuss, in Cuba with the recent IRES projects and the PIAL projects. As for water use sustainability China recently committed to sending construction equipment to Cuba for the country to deal with drought issues. In an article, by Ana Luisa Brown of Prensa Latina, the completion of the drought mitigation project will benefit 4 million Cubans and improve the overall health of Cuba's water supply.

A Cuban Business Report staff article on the success and challenges of sustainable development in Cuba echoes the sentiment that Cuba is viewed as a global leader in sustainability. Cuba has the largest number of unspoiled beaches, the healthiest coral reefs, and forests in the Caribbean. As the report shows Cuba has engaged in many policies to conserve and protect many of the island's ecosystems. Whether it is the Ramsar Global Wetlands Treaty, sustainable agriculture practices, mountain development, or green energy projects Cuba again is showing they are committed to sustainable development (CBR Staff). One area of concern the report points to is Cuba's tourism sector. Tourism is a vital part of Cuba's economy and it has struggled to regain its footing since 2020. As the CBR report states, according to official Cuban media, "conserving and promoting the natural and cultural heritage, minimizing the negative economic, social and environmental impact of the industry." This is what Cuba's policy needs to be regarding the tourism sector. Economic growth and sustainable development go hand in hand with each other but quick large economic growth can degrade local biodiversity causing severe damage to a region's natural resources.

Another case study worth examining is the small town of La Picadora which is situated between the Karst Mountains and a forested coastal area. La Picadora was a small sugar cane production town but as the Soviet Union fell and sugar exports were no longer as lucrative the small town was forced to adapt (Machado and Fernandez 2022). What La Picadora did was shift their agriculture method to agroecology, a more sustainable agriculture method. As pointed out in the article discussing La Picadora agroecology works best as a social and political movement towards a more equitable agriculture model (Machado and Fernandez 2022). The surrounding areas of La Picadora have become more ecologically diverse due to the agroecology shift in farming. La Picadora is showing a path forward, not only for Cuba but for the globe. Small-scale farming focused on self-sufficient sustainable agriculture will go a long way in conservation and environmental sustainability. An important note of the case study of La Picadora is the lack of capital and tech strategies. Many neoliberal approaches to sustainable development can actually harm areas that are not familiar with or willing to use new technology. La Picadora presents a framework of how to shift small mountainous areas into strong agroecological havens.

### **Social Sustainability, Women, and the Embargo**

The unfortunate reality of the embargo is that it disproportionately impacts the people of Cuba, women in particular. An Oxfam report in 2021 showed how Cuban women are impacted daily by the outdated embargo. As per the embargo, Cuba has difficulty obtaining medical supplies, particularly feminine health products. What this means for Cuban women is a lack of good quality sanitary napkins causing problems for women during their menstrual cycles (Oxfam 2021). It was also found, through Oxfam's work in Cuba, that the blockade perpetuates the patriarchal system and "runs roughshod over women's different needs, potential, opportunities, and autonomy." Other medical concerns that have come about due to the blockade include mammogram screenings for women. As medical resources shrink the formerly yearly screening is only being performed if there is an illness present or suspected (Kuntz 1993).

There is some hope that the new Family Code signed into law in 2022 will bring about a more prosperous future for Cuban women. The new Family Code has important legal phrasing that will give women legal protection. The code promotes equal distribution of domestic responsibilities amongst men and women and extends labor rights to those who care full-time for

children. This is an important change to the traditional family structure in Cuba which has forced many Cuban women into caregiving roles. The country is also creating more opportunities for women, providing them the chance to break away from their traditional roles in the service and care industries (Campbell 2023). Cuba has long realized the important role women will play in transforming society and pushing for sustainability, but it is now providing a legal framework to help assist Cuban women in bettering themselves.

The new family code has not fully protected Cuban women against gender-based violence. There have been calls from Yo Si Te Cero, a Cuban feminist collective, on the back of recent Cuban women going missing and being killed, for the Cuban government to create new laws to protect against gender-based violence. In an article published in 14yMedio, a survey conducted in Cuba showed that 26.7% of Cuban women between the ages of 15 and 74 have suffered some type of violence in their partner relationship. It is unfathomable that women, not just Cuban women, have to continue to be beaten, bruised, and killed before governments around the globe recognize a need for protecting a vital portion of the population.

Overall, Cuba's new family code is one of the more, if not the most, progressive provisions in the world. It goes a long way in securing gender equality, LGBTQ+ rights, and equaling out the dominant male society that has emerged in Cuba. The Family Code passed with a 2:1 margin in what was an unprecedented referendum in Cuba. Aside from the important LGBTQ+ rights, arguably the most important aspect of the Family Code is the inclusionary attitude towards Cuban women in the workforce. As mentioned before Cuban women are often pigeonholed into caregiving roles but the new Family Code is seeking to do away with the traditional roles of Cuban women. A National Gender survey in Cuba held in 2016, revealed that Cuban women spend 14-18 hours more per week on housework than men (Chathukulam and Joseph 2023). There is a stunning inequality in housework and caregiving in Cuba but with the new family code and other initiatives to include Cuban women in the traditional workforce, the country will soon begin to see a beneficial impact.

Along with programs like Cuba's Local Agricultural Innovation Project (PIAL) women are seeing themselves leading sustainable development initiatives. Some of the key impacts of PIAL include: "increased inclusion of women in developing and implementing farm innovations;

increased self-confidence for female farmers and farm-family members; increased productive diversification on family farms; and, increased employment and household income through women-led micro-industry projects and facilitation of commercialization opportunities” (Benitez et al. 2020).

Cuba’s PIAL program has created a more inclusive agriculture sector built on the back of an agroecological approach. Agroecology has been touted by the UN as a sustainable agriculture method that fits within the Sustainable Development Goals the UN laid out. One of the goals of the SDG is achieving gender equality, and Cuba’s PIAL program attempts to do just that. In a report on how PIAL can lead to an equaling out of genders in Cuba it was found that many women farmers are leaders of PIAL groups (Benitez et al. 2020). Cuba’s agriculture sector has long been viewed as a male-dominated industry, however, that is not the case. With the introduction of PIAL women have had their voices amplified in the agricultural sector (Benitez et al. 2020). Women farmers are leading groups, sharing their innovations and expertise with all different backgrounds of farmers and they have PIAL to thank for that opportunity that they may have not had otherwise.

“ The starting point for these efforts has been working to change attitudes and behaviors of individual women and men through participation in the PIAL, in part by building women's capacity and confidence to engage in agricultural innovation and creating spaces for their active participation in activities locally as well as nationally and internationally, thereby increasing their autonomy and self-esteem.” (Benitez et al. 2020)

It is an encouraging sign that through PIAL Cuban women are being provided with more opportunities than they would have otherwise. Building a sustainable society is a difficult task but it cannot only stop at examining economic and environmental facets. Instead, as the UN lays out in its SDG, the inclusion of women and focus on gender equality is an important step towards building a sustainable society. Without eradicating typical gender norms and patriarchal attitudes sustainability will not be achievable.

## **Conclusion**

Through initiative after initiative, Cuba continues to show they are dedicated to creating a sustainable country. Climate change is not an individual issue for countries and should not be

viewed through that lens. Sustainable development needs a global coalition where every country is dedicated to reversing the damages we have caused. If the consumer attitude of Western countries continues unchecked the earth's ecosystems will become untenable. Cuban leaders are conscious of this fact, much like the rest of the world, however, they have been one of the only countries to truly stand out as a leader in sustainability. In 2006 and 2016 the World Wildlife Foundation found that Cuba was the only country in the world with a sustainable model of development (CBR Staff 2017). This was accomplished in the face of the damaging U.S. blockade, who knows what types of sustainable development could come out of Cuba if they were allowed to operate freely and openly with not only the U.S. but allies of the U.S. as well. As examined in the Oxfam Report and Diane Kuntz's article the embargo has massive economic, political, and social effects on Cuba. Washington Office on Latin America found that the embargo has cost the Cuban economy nearly 144 billion dollars, a similar number recognized by the UN (Oliver and Venancio 2022). Not only does the embargo impact Cuba economically it also greatly impacts much-needed humanitarian aid in times of crisis, like the COVID-19 pandemic. Coalition after coalition, country after country, NGO after NGO, has called for the end of the Cuban embargo but no signs from the United States Government lead anyone to think the embargo will end in the near future. However, this has not stopped Cuba, instead, it has only strengthened its ability to perform in the face of adversity. Plan Turquino, the agricultural shift of La Picadora, the PIAL initiative, and the new family code are just some examples of Cuba's ability to create a sustainable society. Nevertheless, Cuba has the ability and practice to engage in sustainable development. Regardless of the harsh impacts of the U.S. blockade, and admission onto the State Sponsors of Terrorism list, Cuba has continually proven to the world they are capable of being a sustainability leader.

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## **An Analysis On Sustainable Development In Mountain Tourism and Rural Communities**

**By Jake Lamoreaux**

*Jake Lamoreaux has lived his whole life in Orem, Utah and he is a senior at Utah Valley University. His major is in Political Science, and he has previously completed a minor in National Security Studies. What he is hoping for currently career wise is being able to serve in some form of an assistant/advisory position, whether that be local, national or international, he hopes to be able to make a positive difference.*

Sustainable development is one of the most important components of policy development. It is an all encompassing approach aimed at tackling the issues of poverty, economic growth and environmental protection. This approach is applied across the board in order to achieve a more sustainable future. Two of these areas are in recreational mountainous regions and rural areas and communities. This analysis is about how sustainable development has or hasn't been implemented in these two areas in France with the goal of answering what value is more needed in terms of achieving sustainable development. The conclusion that I have reached is that more education and in turn research on the macro and micro level is going to be incredibly important in these areas.

A good place to start as an example would be for information that people who visit mountains regularly for activities know about proper conservation. In France and similar countries and locations around the world in terms of geographical makeup, outdoor recreation is increasingly growing in popularity. In France, this is highlighted specifically in terms of hiking and cycling among the other sports[1]. This has been a trend for decades now, especially since over the past few decades, there has been a blending of sport and tourism across Europe as a whole. In the transition from the 1980's to the 90's, there has been an increasing demand for "active tourism" that has led to a drastic increase in commercialization of the French Alps in particular[2].

While the location for various outdoor activities depend partially on the natural conditions of a given spot, development can come into play to make these conditions viable. Philippe Bourdeau, Jean Corneloup and Pascal Mao noted while charting the recent history of sports tourism that "The ' uncontrolled ' location of activity sites would not therefore be sufficient to characterize adventure sports tourism as a diffuse activity, if this was not accompanied by specific

conditions influencing the use of sites such as natural conditions (climate and accessibility) and cultural conditions (variety of participants and living accommodations)". This requires that recreational sites be developed with a variety of complex components like parking, facilities and the role of public or private owners. In terms of the visitors of these sites, Bourdeau, Corneloup and Mao pointed out 5 key factors that have led to a rise of popularity in France; The development of individual sports as opposed to collective sports, the diversification of sports participation models, the exaggerated segmentation of sports disciplines, the changes and adaptations of winter sports by consumers and the mythology of adventure in natural environments[2].

However, many participants or visitors are unaware of how much impact they can have on the environment and wildlife in these areas, in spite of outdoor recreation being a means to help connect with nature and being able to promote greater environmental awareness. An example comes from a survey that was published by the International Mountain Society. It was conducted in 4 different sites across the French Alps and was meant to capture the attitudes and general attitudes that recreationists have about restricting travel for conservation reasons. The survey questions that were asked were done so with these bigger ideas in mind; "What are the sociological and spatial profiles of the visitors of the northern French Alps' protected areas, What are their levels of knowledge of protection statuses and wildlife, To what extent does their place of residence influence their relationship with their site of practice, and is this relationship similar across mountain sites and among skiers and hikers and How likely are recreationists to accept conservation measures meant to minimize wildlife disturbance, depending on their place of residency, their activity, and the mountain site they visited"? Overall, 2786 people took the survey but that number was trimmed down to 2559 because of incomplete ballots. 49 percent of responders were skiers while 31 percent were hikers[1].

It is also worth mentioning that only 37 percent of all of the respondents were women, 47 percent of all respondents had a master's degree or higher and 47 percent worked as managers or higher ups. The data might be a little different if more women or lower income people were surveyed but we won't know for sure. The authors of the survey also noted that there wasn't enough data gathered about respondents' knowledge of what different statuses would imply and about the sensitivity of wildlife to any disturbances. When it comes to the data itself, it played out in a very interesting way.

When it comes to knowledge of wildlife and site status, it was higher for skiers than hikers in both instances (54% to 44% and 37% to 29% respectfully). A very strong majority agreed on supporting some amount of conservation measures being put in place while support was higher for hikers (86% to 76%). However, limiting areas of access was not a popular option. The authors of the survey noted that respondents called such actions a hindrance on freedom and individual choice, noting that “refusal of interdiction is also refusal of constraints or, at least, a demand for loosening of restrictions to the benefice of individual responsibilities and preference for incentive over obligation”. It was also noted that disapproval of restrictions decreased with distance and that disapproval was more correlated with being local to the region rather than tourists, in a very “not in my backyard” attitude towards that policy[1].

Again, it was noted by the authors of the survey that the survey was imperfect, not diverse enough and not the most well framed. But it is a good thing to have some data out there anyway in order to develop a pathway forward to better research on the topic. This is something that the surveyors acknowledged, saying simply that “Limitations represent opportunities for future research”. This opportunity is also there for education and awareness of conservation efforts to be increased. It was summarized best by one of the suggestions they give which will close this section, which was that “Managers should work with locals to help them acquire more positive attitudes toward conservation. This can be achieved through local events or communication through municipal newsletters. Cooperative management and inclusion of stakeholders and local visitors in the development of measures to reduce disturbance could make them more likely to accept and comply with measures. Simultaneously, managers should try to improve knowledge of occasional visitors via visitor centers, pedagogical signs, ski resort guides and other mountain professionals, mountain stores, or even tourist accommodations”[1].

Something else that Bourdeau, Corneloup and Mao mentioned was that “one of the most remarkable consequences of the recent growth in adventure sports tourism is the spread of such activities beyond the mountains to most of the mountain or even hilly 20 rural areas capable of providing a quality environment. For many of these rural areas, sports tourism is gradually taking over from agriculture as the motor for spatial management, and is bringing about a radical change in spatial patterns with many of the activity sites concerned (rocky escarpments, mountain torrents, canyons) located at the margins of those areas traditionally used and developed for agriculture or

stock rearing”[2]. This leads to a related area of focus, which is that of the effect of climate change in these mountainous regions. An example of research being available on this subject is one study published in 2019 related to mountain pastures in the French Alps, what is currently being done to address climate change in a sustainable way and how effective those measures are at the moment[3].

Because of the ensuing changes in precipitation patterns, variability of temperatures and water availability, climate change is going to have a drastic effect on summer mountain pastures, with more drastic long term implications on ecosystems and biodiversity. There are a variety of practices that have been recently put in place to make necessary adjustments, but they haven’t been able to properly manage climate change and the uncertainty that comes along with it.

Current tools also have a problem making a connection between mountain pastures and livestock farms. The study acknowledged the three main weather and climate hazards that leave an impact on pastures; drought, temperatures after snowmelt and frost after snowmelt. The writers ultimately propose a development for a new diagnostic tool that would help identify exposure to climate hazards, evaluate a given pasture's sensitivity to hazards and analyze their capacity for adaptation to reduce negative effects[3]. This is a good example of how conducting ample research can help lead to new policy ideas to get us closer to more sustainable development in these regions.

It is important to keep in mind how much the political, social and agricultural landscape has been altered over time with different technology and priorities over decades of development. In these social-economic systems (SES), the way people have contributed or impacted these environments have gone through a lot of changes. As a demonstration, we can take a look at the Meije, a mountain in the French Alps, to see what changes have occurred over the last century in terms of development. The authors of the research noted that in the early 20th century, weather conditions and altitude made it difficult to settle in the region but ultimately people were able to gain some stability through the establishment of farming systems. As the labor force ended up disappearing by the 1950s came around, technological innovations provided some compensation for farmers[4].

This emerging infrastructure ultimately led to an increase in trade and production of milk. The authors also noted that “This transformation was accompanied not only by a loss of traditional knowledge and skills associated with subsistence agriculture but also by a shift in families and

their lifestyle to a modern system, in which farming is a business. This adaptation also significantly impacted natural capital, through a transition from a cultivated to a grassland landscape, and a resulting increase in hay meadow biodiversity, fertility and soil stability”. With the next 50 years, the establishment of the Common Agricultural Policy in 1962 helped drive up self-sufficiency in terms of food production on the national level and across Europe at large.

Agriculture also benefited from the previously mentioned growth of mountain tourism and also the increase in multi-activity demands. Changes in CAP became common to accommodate for increasing environmental causes and rural development. In each phase, the common drivers of development have been “accessibility was a prerequisite for the local development, for supporting local livelihoods and tourism development”[4].

The authors concluded by stating that “This study highlights the need for scientists to engage with local stakeholders and decision makers to co-produce knowledge based on past trajectories for informing future adaptation pathways”[4]. So, the main point is that there are a lot of factors that can come into crafting better policies that can push us towards sustainable development. The only other factor that hasn’t been mentioned yet is the decision making process itself. Coming up with policy is one thing but getting policy implemented is another thing entirely. For example, a study published in the Journal of Alpine Research looked at local governance and how outside industry can come into the picture and influence it while attempting to regulate artificial snowmaking at various ski resorts[5].

For some quick background information, the authors of the study wrote that “The growth in the use of snowmaking equipment in the European ski industry over the last few decades demonstrates this technology’s relevance to this economic sector. Its ability to ensure snow reliability in ski resorts depends on future adverse meteorological conditions caused by climate change, water availability, compliance with environmental regulations and the ability to cover the capital and operating costs of the facilities” so this plays a major role in this aspect of the tourism industry. When it comes to the political dynamics of this issue, it depends on the characteristics of the resorts, including the quality of the snow cover, scarcity of water and other characteristics of the resort like elevation and previous history. With this, they note that “Snowmaking therefore develops in different ways, depending on the specific characteristics of each ski resort and the links

between the different stakeholders. In addition to the involvement of local authorities, regional institutions also influence the equipping of resorts through their public policies”[5].

The study highlighted that subsidies toward ski resorts have been provided routinely in some of these recreational areas. This also highlights how a policy window for snowmaking is opened, through the recognition of the policy issue (the lack of snow), knowledge that an existing solution is available and the political context favoring this change. When looking at the Auvergne-Rhone Alps region, stakeholders noticed that snowfall has been vulnerable since the 2006-07 winter season. The political majority also changed hands in 2015, which brought along a change in mountain tourism policy. This majority was in favor of more promotion of mountain tourism and presented an incentive to ski lift operators, which was a 30 percent grant rate and a 600,000 euro threshold for each project. This is shown through the study to be caused by a strong correlation between the views of local and regional officials and those of the skiing industry at large.

It is worth noting that the effectiveness of this policy path is still unknown because of the recency of these policies and the lost data due to the Covid pandemic putting a pause on tourism[5]. Regardless, this is a demonstration of how having a strong enough push for a solution can influence local governments to take steps in a given policy direction. It also shows how industry can have massive influence in that process so for the possibility of more sustainable solutions to come into place, it would have to be either with the support of the industry or powering against their opposition.

Then we come to the other side of the story with rural development because they are a comparable policy area. Ever since its establishment by the European Union in the 2000s, the nationalized program leading the way for rural development has been lead by two main pillars; the previously mentioned Common Agricultural Policy which specifically watches over rural development and the Rural Development Regulation which is in charge of a variety of measures having to deal with agriculture, the environment and tourism. An article in Economics and Statistics noted that “The evaluation of this policy therefore constitutes an important issue, both in terms of democracy, to estimate how effectively public resources are being used, and to identify ways of improving the relevance, consistency and effectiveness of the measures implemented. However, there are very few studies measuring the impact of the RDR itself” and this also ends up applying to CAP as well[6].

When it comes to why, there are some reasons being mentioned. One is that the programs are too complex to understand and assess. Another is that there are studies focused on different components and measures rather than the program as a whole. These studies end up being pretty contradictory in terms of effectiveness, although they usually agree on federally implemented programs being more efficient than state implemented programs. The article did make an attempt to look at the overall rural development program, known as the PDRH. It did so looking at four key axes; “Improving the competitiveness of the agriculture forestry and agri-food sectors,

Preserving a varied and high-quality rural agricultural and forestry area with a respectful balance between human activities and the preservation of natural resources, Maintaining and developing the economic attractiveness of rural areas by drawing upon the diversity of resources activities and stakeholders and a link between actions for the development of the rural economy”[6].

When it comes to the budgetary balance of these four axes from 2007 to 2015, axis 2 had 64 percent of the budget, axis 1 had 23 percent, axis 3 had 8 and axis 4 and 5. So while agriculture and to a lesser extent forestry had greater priority, the attractiveness of the region and information about the economy have fallen behind. While there isn’t much reason given to the lack of allocations towards understanding that link, there are some possibilities as to why attractiveness has less focus. One is that managing residential attractiveness is more complex to measure and therefore could be deemphasized. The authors seem to agree with this line of thinking when they mentioned that “the impacts on attractiveness to new inhabitants or the reduction of outgoing migration cannot be established” although they acknowledge that the quality of various services helps attract people to stay. What they ultimately conclude with is that more research is absolutely needed in order to help generate better data on components to sustainable development like climate induced migration and the preservation and even restoration of biodiversity[6].

Another piece of research involving rural development takes aim specifically at the PDSR program over the past 25 years. The authors wrote that “This summarization of the PSDR approach aims to provide a tool that bridges the gaps in rural development between top-down knowledge and local innovation and between researchers and actors”. They noted a handful of reasons why rural areas get left behind, including but not limited to population decline, geographical remoteness, lack of institutions for residence to increase educational opportunities and a general

lack of regional centers and services. In spite of these limitations, the authors noted 5 key knowledge-based approaches to rural development that have made innovation more achievable. Those approaches are in the following areas; the governance of agricultural lands, the territorial attractiveness and well-being, the agroecological transition in the territories, the territorialized food systems, and the bioeconomy and circular economy. While the authors still point out some key flaws like requiring more coordinators at many different levels, more community involvement and a general need for more research, the program does create a vision for what rural development should feature[7].

Overall, being able to have more research and hopefully having that research translate into greater technological development is a major key to achieving greater sustainable development. The path still isn't easy but progress can be made and already has. As an example, the United Nations developed the 2030 agenda for sustainable development, which highlights 17 different goals for countries to achieve in order to protect the environment, combat inequality and eradicate poverty. In the most recent review that France took part in, the UN reported that there is a lot of progress to be made, specifically when it comes to gender inequality, unemployment and managing natural resources[8].

At the same time, they have also achieved a high standard of living and quality of life, have made important strides in climate action in putting forward plans to cut greenhouse gas emissions and promoting lessening carbon footprints, been making proposals to protect ecosystems and restoring biodiversity and have supported a strong social solidarity system with its social security program (although newer developments aren't great) and guaranteeing a minimum income and various social services, to name a few of the positives. The review also acknowledged that "France has volunteered to present its 2030 Agenda implementation approach at the very first high-level political forum held since the adoption of this agenda" and has also hosted a variety of conferences and agreements in regards to combating climate change[8]. While again, a lot of progress can be made, and progress isn't always linear and can be influenced by other political challenges, it is attainable if political leaders have the will and drive to attain such important goals.

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# Islam's Impact on the Kalash People

By Handen T. Torsak

*Handen Torsak was born and raised in Provo, UT. He attended Provo High and while there took advantage of a program that allowed him to work on his associate's degree through Utah Valley University (UVU) at the same time. He graduated with his associate's a few weeks before he graduated high school. Following high school, he served a mission for the Church of Jesus Christ of Latter-day Saints in both the Kentucky Louisville and the Czech/Slovak Mission, the majority of that time living in Slovakia. He is currently a Junior at UVU studying Political Science.*

## Abstract

This research paper explores some of the challenges that the Kalash people of Northwestern Pakistan face from living in an intolerant political and religious environment. Thus, we will discover the significance of the impact Pakistan and its people has had on the Kalash beliefs and the survival of these beliefs for a millennial. The hope is that all who read will come to see the importance of tolerance among all religions, ethnicities, nations, and cultures.

Pakistan is a mountainous country that creates the eastern border of the Middle East. It stands as the second most populous Islamic country in the world with a Federal Islamic parliamentary government that enforces its constitution. Within the borders of Pakistan, exists minority groups that have survived despite the oppression that extends from intolerant people and organizations. One such minority is the Kalash people who live in northwestern Pakistan. To this end the people of Kalash are affected by the politics of Pakistan, the religious majority of Pakistan as well as the geography of Pakistan which has played a role in the preservation of the Kalash. To understand the impact of these things we must answer a few basic questions. How does the landscape of Pakistan play to the benefit or disadvantage of the Kalash people? Who are the Kalash? What effect has Islam had on the culture, religion, and traditions of the Kalash? How does the constitution of Pakistan affect the Kalash people?

There are about 7.8 billion people living in the world right now and with this diverse population, we see many diverse cultures, religions, and peoples. One group that illustrates part of the beauty of diversity is the Kalash people in Pakistan. Kalash is a name used to define multiple

things including the people, their religion, their ethnicity, and the valleys in which the Kalash people live. These people stand at about 3000 and claim they are descendants of Alexander the Great's army. (Skidmore, 2021) This by itself makes them a unique minority, but what adds to their uniqueness is their culture.

The clothing that men wear is like that of their Islamic counterparts, we find the biggest difference is in women's clothing. The women of Kalash and Islam both wear modest clothing. In Pakistan, Islamic women can choose to wear a hijab or not and they are often found wearing colorful tunics with trousers, while Kalash women and girls wear a black dress with colorful geometric or floral patterns stitched around the hem of the dress, the cuffs of the sleeves, the elbows, and the shoulders. Women and girls also wear a shushut which is an open-top headdress with a narrow rectangular fabric that reaches from the mid to lower back. This hat is embroidered with beads, shells, and bells which create geometric patterns. Another article of clothing that follows the same pattern and materials is the pat'i which is a colorful belt. Their unique clothing is the result of centuries of tradition and the power of parents to pass on their traditions to their children.

More than clothing has been passed down from generation to generation though and among the most important things to have been passed down is the Kalash religion. According to "most anthropologists consider the Kalasha religion to be polytheistic, because it has many deities." Their major deities are Sajigor, Mahandeo, Balumain, Dezalik, Ingaw, and Jestak." (Ali, 2011) Though there are multiple gods and goddesses, not all of them are seen as equals. One group view "many local deities and 'divine beings' as being only messengers. This interpretation would be given in conjunction with another closely associated idea that there is also a single most important 'Creator God' called Dezau." (Darling, 1979) Like most polytheistic religions their gods and goddesses have special powers and responsibilities over different aspects of life or the environment. To these gods and goddesses, the people of Kalash erect shrines and altars to offer sacrifice and pay homage. Now, their main god "Dezau is rarely appealed to through animal sacrifices, he has no altar and is conceived of as omnipresent and omnipotent. In prayers or oaths, he is frequently referred to as Xodai, the Urdu (Persian) word for God, or sometimes even Allah himself." (Darling, 1979) Though no sacrifices are offered up unto Dezau they are offered up to some of their other gods and goddesses. These shrines "are wooden or stone altars with an effigy of a human head inside

holes in these shrines. Horses, cows, goats, and sheep were sacrificed.” (Kalash - New World Encyclopedia, n.d.) Being polytheistic sets them apart from most of Pakistan’s Islamic population who are monotheistic. Thus, Islamic neighbors deem the Kalash to be “kafirs” which means that they are non-believers of the Islam. (Ali, 2011) To this end, we will now examine the impact that Islam has had on Kalash beliefs.

To understand the impact that Islam has had on the Kalash we first need to learn about Islamic beliefs and how these beliefs are expressed particularly towards the Kalash. First, the Creed of Islam which every Muslim must accept says “I testify that there is no God but Allah. I testify that Muhammad is the Prophet of Allah.” This is an affirmation of monotheism, and a rejection of polytheism, idolatry, agnosticism, and atheism. (Lewis, Churchill, 2021, p. 13) As mentioned earlier, the Kalash are polytheistic but worship one god above the others, and to these gods and goddesses, they build shrines. This goes against the teachings of Islam and the Quran which is Islam’s holy scripture.

The Quran says “kill the idolaters wherever you find them and take them prisoners, and beleaguer them, and lie in wait for them at every place of ambush. But if they repent and observe Prayer and pay the Zakat, then leave their way free.” (AT-TAUBAH 9/5, p. 257) To this, a Kalash religious leader once explained “Our Muslim neighbors blame us for worshiping idols of stones and wood. We do not worship these things, but we go to the places that are signs and symbols of our deities where we offer sacrifice and pray to only one God. We are neither pagans nor atheists.” (Din, p. 14) Unfortunately, due to the lack of understanding another’s beliefs and a misinterpretation of this verse from the Quran, terrorist groups pose a threat to the survival of the Kalash, but most Muslims are far more tolerant and compassionate towards those with differing beliefs.

Those who are more tolerant live the teaching found in a Hadith also known as the teachings of the prophet Muhammad “You will not enter Paradise until you believe, and you will not believe until you love one another. Shall I inform you of something which, if you do, you will love one another? give greetings (peace) amongst yourselves.” (Sahih, 54.) Most Muslims are tolerant people, but due to the evil actions of offshoot extremist groups, the beauty and richness of Islam have been stained in the eyes of many around the world. Islam teaches that love and tolerance is one of the many keys to living a good life. Thus, the Kalash are free to worship their gods and

goddesses in whatever way they desire, nevertheless where two or more differing beliefs coexist there is bound to be the exchange of beliefs.

It is a common belief among Muslims that the truth found in Islam is for all people and must be shared. On the contrary, the Kalash do not proselytize, but they do share their beliefs in other ways. The spreading of Islam has impacted some of the beliefs of the Kalash people as well as converted some over to Islam. The way Islam reaches potential converts is through “people, institutions, or groups.” (Kazmi, 2016) Being that these are the ways that cultural diffusion and Islamic proselytizing efforts happen it could be extremely difficult to influence the Kalash because they live in three isolated valleys that were difficult to get to. This could play a large role in maintaining the purity of the Kalash religion, nevertheless being that country the Kalash live in is an Islamic state they are exposed to Islamic teachings that enrich or corrupt the doctrine of Kalash. One belief that has been influenced by Islam is the concept of an afterlife. The Kalash believed that there wasn't an afterlife and that they only need to be concerned with this life but being “influenced by Islamic concept of hereafter the Kalash started to use the terms of Qiyamat (hereafter) Arasat (day of resurrection and judgment), Likewise they use the words of Behesht (paradise) and Duzhakh (hell) in the context that the Muslims of the area use these terms with the same meaning and pronunciation.” (Kazmi, 2016) This is just one small example of how Islam has impacted the Kalash, but the point is that such changes in Kalash doctrine provide an easy segway into accepting and practicing Islam. It also shows how Pakistan practices soft power to influence the citizens of its country.

Unfortunately, this peaceful way of converting others is not always taken by some Muslims. “Like many other minority communities in Pakistan, the Kalash are increasingly facing threats by Pakistani and Taliban authorities to convert to Islam and renounce their traditional way of life.” (Bay, 2018) A few violent attacks occurred in 2016 when Taliban militants killed two Kalash shepherds and stole approximately 2900 animals. (Desk, 2022.) The actions of the Taliban and Islamic extremist groups are not only condemned by the rest of Islam, but it also goes against the teachings of the Quran which says, “There is no compulsion in religion.” (Surah 2. Al-Baqarah, Ayat 1--1, n.d.) Thus, we see that Muslims who live by the teachings of the Quran and the prophet Muhammad seek to proselytize in a peaceful manner while extremists or intolerant people who do not fully understand or live these teachings seek to threaten or force the Kalash to convert.

Another thing that impacts the Kalash is the state of Pakistan. In the constitution of Pakistan declares “Islam shall be the State religion of Pakistan.” (National Assembly of Pakistan, 2012.) This section of the Pakistan constitution testifies that the laws of Pakistan will be structured on the beliefs of Islam. It implies that it will favor Muslims over other groups of people. In Pakistan and other Islamic countries, there is no separation of church and state, so the entire legal system would be based on Islam rather than merely a constitution.

One base of religious freedom is found in the Quran which “provides an environment where people can fully enjoy the freedom of thought and freedom of religion.” Ironically, the constitution of Pakistan only provides minimal freedom to religious minorities like the Kalash even though freedom of religion is established in the Quran. (Good News Network, 2018) The guarantee of religious freedom in the constitution is found in part 2 article 20 which says, “Subject to law, public order and morality, — (a) every citizen shall have the right to profess, practice and propagate his religion; and (b) every religious denomination and every sect thereof shall have the right to establish, maintain and manage its religious institutions.” (National Assembly of Pakistan, 2012.) These constitutional rights granted to the Kalash and other minorities are good in theory but in practice, these rights are lacking. “Discriminatory laws and constitutional injunctions in Pakistan have reduced religious minorities to second-class citizens, leading to gross human rights violations by both the state and non-state actors.” (Human Rights Report | Pakistan, 2021) Intolerant individuals have created a legal system that persecutes and minimizes the impact of minority religious and ethnic groups. Islam and the state of Pakistan are not the actors to blame for the human right violations towards the Kalash, but individuals that are fueled by hatred are to blame. An example of government actions against the Kalash began in 1982 when the government claimed parts of the Kalash ancestral lands for logging operations. Not only were the Kalash not included in the profits gained from the operation, but their cultural integrity was being threatened. (Roopali, 2010.) The Kalash are at a disadvantage in many ways because of their poor economic status and being considered second-class citizens, so legally they do not have equal rights with their Muslim counterparts. To some degree this inequality is legal based on article 19 of the Pakistan constitution which describes the rights of speech and press, but the part of this article that makes inequality is this “there shall be freedom... subject to any reasonable restrictions imposed by law in the interest of the glory of Islam or the integrity, security or defense of Pakistan or any part thereof.” (National Assembly of Pakistan, 2012.) Restrictions are placed on the Kalash

because of them being different from the Islamic majority, Mehak Asad said “We have seen a couple of incidents in the past that clearly establish the narrative of religious intolerance in Pakistan towards minorities, which is contrary to what the Quran and Islam says.” This quote from a Pakistani citizen powerfully shows how individuals within the country see the hypocrisy of the intolerant laws and discriminatory actions against minorities.

Despite the harsh reality of people persecuting the Kalash on a religious, ethical, and political bias the Kalash endure. The hate and intolerance of religious and political individuals create many issues for the Kalash people, but despite those in Pakistan who do not live by their beliefs and persecute them; the Kalash remain faithful to their beliefs and traditions. Yet, most Muslims live peacefully with the Kalash. Religiously, the beliefs of Kalash continue to develop and deepen thanks to the Islamic doctrine shared with them by the Muslims in the surrounding communities. The existence of extremist groups and prejudice laws cause more harm than good to the Kalash. They are indeed a peculiar people in Pakistan, whose unique culture has existed for 4000 years is endangered due to this intolerance. Prejudice and hate will never bring peace, but love and tolerance will bring peace and enable minorities like the Kalash to thrive.

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## **Peru's biggest natural disaster is corruption**

**By Tauafanga Sperry**

*Tauafanga "Fanga" Sperry was born and raised in Utah. As a second-generation Tongan American, his family moved from Tonga to the US in order to secure a better future for posterity, including higher education. With a strong desire to guide others in their own path through education, Fanga has counseled Congolese immigrants in their higher education and participated in Utah Valley University's outreach program, Cultural Envoy Leadership Program (CELP), to help high school students of low-income backgrounds consider college. A recent graduate of UVU's Political Science program with a French minor, Fanga hopes to help support and develop education programs in third-world countries.*

Peru has always been a country rich in natural resources. This is largely due to the Andes mountains crossing the country from North to South which are rich with natural resources such as ores, reserves of oils and large forests. The mountains are known to hold large deposits of copper, iron, lead, zinc, bismuth, phosphates, and manganese. As well as rich metals such as gold and silver. (Pulgar-Vidal) They also are very symbolic in the local cultures, traditions, and are considered sacred to many of the indigenous tribes. Despite their importance and richness in natural resources, Peru itself does not have the resources to capitalize on its wealth, relying on third-party companies and foreign aid to extract these materials.

However, there is also another key factor impeding Peru from fully collecting these resources. Peru has had a long history of political instability as a developing nation. During the presidency of Alberto Fujimori (1990 – 2000) who is currently in prison for human rights violations, funds were being embezzled, kill orders being given, and several other abuses of power that were affecting the country. In 2020 Peru went through three presidents in a span of a week due to an impeachment and a resignation on evidence of corruption. (NPR) Even Peru's current government is also under scrutiny for corruption. This long history of corruption at elite-levels of society has negatively impacted the Andes Mountain sustainable development and is affecting its own autonomy to produce natural resources. So, what exactly has corruption done to affect Peru and its natural resources? In this paper I will analyze how government corruption in Peru has affected Peru's sustainable mountain development by monopolizing natural resources, increased privatization, and its effects on international relationships.

### **Current level of Government Instability**

Today political instability in Peru is still ever so prevalent. Its current president, Pedro Castillo, who was elected in July of 2021, has already gone through two impeachment trials in his 8 months of being in office after accusations of graft. Despite his wins, his approval rating amongst the Peruvians sits at 25% (Aquino, US News) These accusations come from a deeply ingrained history of political greed that been shown by government officials who use public goods for personal gain. The Government Goes Unchecked Now the Peruvians are no stranger to this phenomenon going on in their country. In a study conducted by Sofia Vera, she analyzed the opinions of Peruvians of the current state of their government and learned that “In some regions, the percent of respondents who think corruption is “very common” among public officials reaches as high as 80%, but in others, corruption is considered “very common” only for 20% of respondents.” Learning that “More importantly, although corruption has become one of the most critical problems for Peruvians in recent years, corruption concerns vary considerably across the country. Only a handful of regions see corruption as the top political concern, while the rest are primarily worried about the more pressing matters of crime and unemployment.” (Vera) Corruption is almost universally recognized by the Peruvian people but because of the lack of concern, it largely goes unchecked. Problems are pushed under the rug for later or only resolved when it becomes an “unnoticeable issue”. Giving free reign to politicians to decide to do whatever they want.

Often authorities will “develop” infrastructure programs that are meant to positively impact the locals and improve the public community, but these areas are particularly susceptible to corruption and secret agreements. “In fact, the central actor in one of the largest recent corruption scandals in Latin America is the international giant Odebrecht, a construction company that has admitted to paying some \$800 million in bribes to public officials across the region.” (Vera) Many Peruvian officials were linked to the scandal when it came to light and even former President Ollanta Humala and his wife were charged with taking bribes. Allowing natural resources to be siphoned off by foreign powers rather than letting Peru itself fully benefit from their resources.

Despite the surrounding controversies and scandal after scandal, Peruvian style are hesitant to act. In studies conducted on Peruvian’s responses to corruption “The results suggest that even types of corruption with side benefits would be harshly punished when attributed to incompetent politicians. They also indicate that while voters punish corruption more leniently when a candidate

is competent, they respond negatively to corruption regardless of the prevalence of corruption, which casts doubt on the idea that voters in highly corrupt environments are acceptant of corruption.” (Vera) How is this currently affecting the Andes mountains?

### **Natural Resources – Pollution, Health and Livelihood, Environmental Damage**

Mining is an essential component in the economy of the Andean communities with it accounting for over 60% of Peru’s exports. There are estimated to be about 200 mines in operation and many more major projects to be developed. (International Trade Administration) It has a deep influence on most of Peru’s outlying regions and is integral in many of the indigenous cultures and stands as sacred symbols for the native groups. While they produce an enormous revenue for the Peruvian people, behind the scenes are very serious issues that affect the locals and their communities. Many of the indigenous people are subject to the environmental damages that mining companies produce. “Mining in particular is associated with environmental destruction, human rights abuses, repression, forced displacement—especially of indigenous peoples—local conflict, social tensions, the spread of HIV and AIDS, alcoholism, drug abuse and other health-related problems, prostitution and violence against women” (Brown) These communities are at the whim of companies trying to cut costs by any means necessary. Unfortunately, they are also sometimes enabled by the government, either at a local or federal level, who choose to look the other way or endorse policies that negatively impact both the environment and people of the area.

When President Castillo ran for office a large portion of his campaign was focused on the rights of minorities, indigenous people and the working class. However, he has been criticized for not making deeper reparations to protect indigenous people. His neglect has left them at the mercy of the local governing power whether that be criminal or political in nature. In some extreme cases local communities have become subject to mafia groups that force them into labor and participation in “illegal logging and sexual abuse of women” (Urrunaga et al. 2012: 16). (Duri)

Government neglect goes beyond civil injustice. It has been noted that provisioning for environmental protection is rather weak as well. Environmental review used to fall to the Ministry of Energy and Mines and most environmental protection assessments were approved without much prevention. (Duri) Because of this environmental damage it is more prevalent because of governmental negligence. In studies done by San Diego University they found that in a department that has four polluting mines, there was an increase in “...number of children under five years of

age admitted to health facilities with acute respiratory problems by 47 per 1,000 population or about 37 percent.” They also discovered that in the Jun’in department, more precisely the Andaychagua mine, that much of the natural resources there; zinc, copper, lead and silver when removed create a reduction in pH which makes water more acidic. This acidification can harm fish, amphibians and render water unsuitable for irrigation and drinking. Without regulations being put into check there will be a continuous rise in issues with health, livelihood and environmental damage surrounding the mining industry.

These complications have even been noticed by the Canadian government commenting on Peru’s weakness in social and environmental protections. Critiquing a 2011 law that was supposed to hold prior consultations with affected indigenous communities that did not seem to have much effect when it came to foreign business. However, there have been small steps towards government reparations with them passing laws to funnel a significant amount of mining revenues into the regional governments. (Brown) There is still room for improvement though and much of it will be Peru’s government taking accountability to maintain regulations and there are still also other types of corruption that need to be addressed besides negligence. “For instance, in Peru, there is a significant risk of mining laws being drafted in favor of private over public interests (Rosana and Magaly 2019: 49).” (Duri) Because of this, sustainable mountain development without political backing is fighting an uphill battle against policy privatization.

### **International Relationships – Self Interest Policies, Free Trade, Corruption**

So why is privatization hurting the Andes community? Many countries over the years have worked hard to maintain working relationships in hopes to increase a foothold in Peru’s resources. Peru has gone into many free-trade policies with various countries around the world both in and outside of Latin America. Because Peru lacks the funds to capitalize on their natural resources, they have allowed foreign powers into the market which has led to a monopolization and privatization of the natural resources. Not all these countries however have Peru’s best interests in mind, their number one goal is to make a profit which also affects the locals of Peru and the environment. Two countries we will be examining in this case are Canada and China, two contributors to Peru’s mining industry and analyzing their different approaches.

Trade-liberalization seems to have a double meaning in Peru’s case. While its original intent is to free up trade and reduce and remove barriers like tariffs and surcharges. Its concealed

meaning is meant to benefit some parties more than others. Now these often seem to be linked to foreign aid. Stephen Brown in analysis on Canada's participation in the mining industry has noted that "Foreign aid has always been linked to donors' self-interest, including commercial interests, although donors have demonstrated varying degrees and types of self-interest over time." He also pointed out that the Canadian Embassy promotes and lobbies interests to the Peruvian government for Canadian mining companies. These efforts are directed in securing contracts and proposing laws in favor of these foreign Canadian companies. Now who is at fault here? Peruvian government for inappropriately handling Peruvian markets and regulations, or the foreign countries that take advantage of the corruption to further self-interest? In further studies done it was found that,

"Canadian companies are responsible for one-third of the 171 incidents in developing countries that they tracked over a 10-year period. Of these, 60% involved community conflict, 40% "environmental contamination and destruction" and 30% unethical behavior (CCSRC, 2009, pp. 10, 16). Mining is thus a deeply divisive issue, and mining communities are often split into pro- and anti-extractive camps. Against this background, Canada's foreign aid programme took a controversial "extractive turn" of its own" (Brown)

Even with this known data often the motives are hidden behind economic improvement for the poor. It is often assumed that the mining of natural resources will benefit those in poverty but that is not often the case. "Moreover, the sudden large-scale infusion of funds into weak local institutions is often not well spent, and it has generated new problems and conflicts in Peruvian communities" (Brown) Without proper guidance and budgeting councilors to help the locals, natural resources have been known to be labeled as a "curse" for the affected communities.

In an analysis done by Kerry Ratigan and China's relationship with Peru. They have stated that China has taken what is called a "soft power" approach, seeking to build deeper relationships with Peruvians and reshape public opinion over their mining projects. He notes that Peruvians generally trust the Chinese government but few turn to China as a model for Peru. In efforts to build deeper relationships with the Peruvians and to entice them into their model they have developed projects that are meant to help the locals. One project of considerable notability is the Toromocho project done by Chinalco, a Chinese mining company. Toromocho was a mining project that expanded the worksite of previous mining companies and was meant to bring in \$7.6 billion in tax revenue for the Peruvian state while also creating 5,000 jobs. An issue that they had

run into during the development of Toromocho was the relocation of the citizens of the town Morococha. With over 5,000 residents living on the mountain, Chinalco created a community roughly 15 minutes from the site in which they created new homes, new roads, schools, a health clinic, and churches. This new community was outfitted with electricity, plumbing and a more functional infrastructure much of which the citizens in Morococha lacked. Because of this it attracted a lot of the residents and when a referendum was held, most of the locals voted for the relocation. (Ratigan)

Much of Chinalco's focus was meant to build the Peruvian community and create safer working conditions for the workers making the mine an open pit mine, but even with their good intentions unforeseen problems still arose amongst the workers. Tensions arose between the unskilled local laborers and outside professionals due to a difference in clearance based on employment. Those who moved to the newly built community called Nueva Morococha were labeled as traitors by their neighbors who refused to leave their original homes causing division in the communities. (Zhu) Aside from strained intra-community relations, environmental hazards were discovered during development as two nearby lakes were affected by an illegal discharge of acid effluents (Zhu). While China's attempt to gain favor amongst the Peruvians was a "soft power" approach. Were these attempts just a form of manipulation for the natural resources located in the Junín Department?

As the increased privatization of natural resources occurs in Peru. More and more mountain communities in the Andes are affected by foreign actors who obtain permits and contracts through questionable and illegal methods that displace indigenous groups and harmfully impact the environment. Because most companies are foreign there is less concern directed towards maintenance and long-term goals made towards sustainable development in the Andes region and even when attempts are made, they are still in the best-interest of the company and not the Peruvians.

### **What is being done?**

Despite the damage that has come from corruption there are still programs being developed to help further sustainable mountain development within Peru. A Swiss company called Helvetas has begun an Andean Forest Programme and have been partnering up with local communities such as; Ccerabamba, Huironay, Pacchani, Kiuñalla, Llanucancha, Atumpata and Micaela Bastidas to

improve the environmental infrastructure. They focus on planting trees, protecting springs and also monitoring the water sanitation and regulation within the districts. Climate change has also been a large issue that is a risk to the forest and landscapes. “Only 5 to 10 percent of original Andean forests remain today, yet 40 million people depend on them for their environmental services.” (Mountain Partnership) Without proper regulations and government accountability many people are at the risk of losing their livelihoods. What the Andean Forest Programme is trying to accomplish is only a small portion of what needs to be done.

With very little resources available from the Peruvian government, how should foreign aid help? Helvetas seems to be taking the most ideal approach. Brown suggests that “[a]id donors should focus on locally owned strategies that reflect poor people’s priorities, independently of whether they include or exclude allowing [foreign] companies to operate on their territories. Aid may thus contribute to a donor’s commercial interests, but the latter should not be the underlying motive” (Brown) The Swiss have set out to influence local communities to build self-sustaining systems by influencing policies that the Peruvians can develop themselves. One such example is the Abancay Municipal Drinking Water Company that is one of Peru’s first systems designed to help monitor and manage the sanitation sector within the communities. They have been aided by the National Sanitation Services Superintendence in establishing this new department to guide Peru down a prosperous path. With Peru at the helm of the project it allows for internal stability and prosperity that prospers at a pace that the local communities can handle and allows them to learn through trial and error. This is especially important because “when weak, local governments do not sufficiently enforce limits on externalities or adequately compensate communities, especially as international prices for resources rise. Data from Peru indicate that acute, observable environmental pollution and associated negative health and livelihood impacts are important drivers of social conflict near extractive sites. (Studies San Diego) As more and more groups influence Peruvians to take control of their lands and enforce policies and regulations internally. They will be able to build a community that is self-sustainable and prosper.

### **Conclusion**

Peru’s greatest asset will always be its abundance in natural resources. While it is currently impeded by its own lack of funds and corruption. There is a huge potential for their economy to grow as its government enforces environmental and political regulations as well as not privatizing

contracts to the highest bidder. When the locals are considered and given the opportunity to grow, they can expand the economy and revenue for long lasting foundations, rather than damaging the environment, livelihood, and health of the indigenous people of the region. This ensures a more positive environment to ensure sustainable mountain development in the Andes of Peru.

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