

# iY-1 Perspectives

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## Introduction

David Patent

iY-1 Perspectives is a journal for international students enrolled in the International Year-One (iY-1) Program at Syracuse University (SU).<sup>1</sup> The iY-1 Program is designed to give access to higher education in the United States during their first two semesters of university while remaining in their home country. Students then travel to Syracuse to take courses during the summer and matriculate as second-year transfer students the following semester.

Students take credit courses that count towards degree completion and non-credit courses in English for Academic Purposes (EAP) in the two semesters (Fall and Spring) that they study in their home countries. All courses are hybrid, with an SU instructor providing instruction in synchronous online lessons and an instructor in the home country providing in-person instruction for each class. The articles published in this issue represent the work of students in EAP 2, taken in the second semester, in the online component of the course.

This inaugural issue contains papers written about topics related to a global issue, *sustainable development*, which was the theme of the course in the Spring 2023 semester. Students developed their papers over an eight-week period, during which they practiced the skills of analyzing, paraphrasing, summarizing, and synthesizing information from texts about a particular topic of interest related to the United Nations' *Sustainable Development Goals*. The 13 papers included here represent the efforts of students in the program to master key academic reading and writing skills that will help them to succeed as they continue on their higher education journey in the United States.

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<sup>1</sup> <https://professionalstudies.syracuse.edu/academics/international-programs/international-year-one-iy-1-program/>

These papers are by no means perfect and are not intended to be. The purpose of the project is to give students a chance to engage in meaningful work, through which they explore a topic in depth and develop some expertise in it. The core belief behind the project is that undergraduate students, and even those who utilize English as an additional language, have something to say about important issues in today's world, and they deserve to be heard.

## Land-Use/Coverage Changes and Ecosystem Services: The Case of Gansu Province

Yingyuan Xu (Eric)

### Introduction

Gansu Province is located in the northwest part of China. It has a long and narrow landform with complex and diverse landforms, including mountains, plateaus, plains, river valleys and deserts. Most of its region has a dry climate, with arid and semi-arid regions accounting for 75% of the total area. In historical time, this area has been suffered from water and soil erosion and land desertification, which change the coverage and terrain over time. In the last 40 years, the spatial expansion of the urban areas and human activity has accelerated this process, which might cause hidden dangers (Liu et al., 2020).

The purpose of this paper is to consider how large-scale land-use/coverage-change (LUCC) can impact the supply of ecosystem services (ESs). In order to achieve this goal, it is needed to identify the LUCC features in Gansu Province between 1992 and 2015 and then provides the integrated assessment of LUCC with regard to ESs capacity (Liu et al., 2020). Being aware of the relationship between LUCC and the ESs will help to find a way for humans' co-exist with the nature again. Moreover, it can help the local government to constitute laws and rules that can help achieve sustainable development.

### The Sustainable Development Goals

In 2015, the United Nations (UN) published article *Transforming our world: The 2030 agenda for sustainable development* (United Nations General Assembly, 2015). In this article, the UN expounded the 17 sustainable development goals (SDGs), why SDGs should be achieved, and how SDGs can be achieved. The SDGs are about problems in varieties of

Xu, Yingyuan (Eric). (2023). Land-use/coverage changes and ecosystem services: The case of Gansu Province. *iY-1 Perspectives*, 1.

dimensions that today's world has not fully resolved, such as poverty, hunger, equality, ecosystem stability, etc. The UN also gives detailed aims that need to fulfill to achieve the SDGs.

### **SDG#15**

The following paragraphs will focus on the Goal#15 *Life On Land*. Liu et al. (2020) explain that the Goal#15 is the SDGs most frequently occurred in the ESs report of the land in Gansu, which means the ESs indexes are most related to the achieving of the Goal#15. The UN shows the importance of the forests, what people can do to protect the forests and how protecting the forests can relate to people's lives (United Nations, n.d.). The UN argues that the forests are home to terrestrial species of animals, plants and insects, and the loss of forests is undermining the well-being of billions of people. It is important to protect the forests in the earth.

### **Findings and Discussion**

LUCC refers to the changes in area and types of surface vegetation covers and non-vegetation covers due to climate change and human activities. Liu et al. (2020) focus on the LUCC between 1992 and 2015. They divide the land-use forms of Gansu into three types: relevant to ecological conservation (EC), relevant to urbanization growth (UG), and relevant to agricultural and farming development (AD) and compare the land-use forms in Gansu Province. The result shows that in this period of time, Gansu Province has experienced large-scale expansions of grassland, cultivated land, and built-up land. Further study indicates that the forests and bare land have decreased by 6645 and 4066 square kilometers while the area of water bodies had an increase of 45 square kilometers (Liu et al., 2020). The authors warn that the decrease in cultivated land and forests, together with an increase in grassland and bare land demonstrates potential ecosystem degradation.

The ecosystem services are the sum of the benefits that nature provides people and contribute to people's well beings (Eurac Research, 2018). There are four categories of ecosystem services: provisioning services, regulating services, cultural services and supporting services, each of them facilitates the achieving of different SDGs. Since the ESs was invented, the evaluation of the ESs has been a criterion to indicate the state of the ecological environment. Liu et al. (2020) calculate the positive or negative values of different land-use forms will have on the ESs and based on which, they build a series of LUCC-ES models for further study.

The LUCC-ES model based on average capacity of the ESs shows that the forest and the water body have the highest capacities of ESs (6.6 and 4.7) while the build-up land and bare land have the lowest (1.8 and 2.7). Model based on time shows that the capacities of all the four ESs in the middle and Northern part of the Gansu Province had a rapid raise during the 2000s. Model based on contrast of the capacities shows that the northern part of the Gansu Province, which is the location of industrial base, has high capacity of cultural services but has middle capacity of supporting services and low capacities of provisioning services and regulating services. Liu et al. (2020) convince that although the capacities of all the four ESs in Gansu Province have been improved between 1992 and 2015, the capacities of provisioning services and regulating services remain low, which can cause potential downsides like ecological degradation and the decline of the capacity to control desertification.

Liu et al. (2020) suggest that compare with the other two services, provisioning services and regulating services are more frequently related to the SDGs, among which the Goal#15 is the most frequently occurred. She believes that improving the capacities of provisioning services and regulating services is the key to achieve sustainable development in Gansu Province. The local

government of Gansu Province can consult the above-mentioned results before implementing land-use policies to promote large-scale land-use changes.

### **Conclusion**

In conclusion, the relationship between LUCC and the ESs offers a way to measure the role of different land-use forms in achieving sustainable development. It also offers a way for the government to assess the consequences of the land-use policies they are going to implement.

The goal of sustainable development has gradually replaced the blindly pursuing of economic development in Gansu Province. The rapid raise of the capacities of all the four ESs in Gansu Province during the 2000s has showed that the incessant expansion in Gansu Province has already become the past. However, people should still pay attention to the potential ecosystem degradation and find ways to fully achieve sustainable development.

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<https://www.un.org/sustainabledevelopment/why-the-sdgs-matter/>



## **Solutions for Achieving Gender Equality: Improving the Status of Women and Increasing Awareness of Gender Equality among Youth**

Zhuoqi Zhang (Zoe)

### **Introduction**

Nowadays, gender inequality has not been completely eliminated and there are still women and girls who suffer from inequality. According to the United Nations report on the 2022 Sustainable Development Goals, which highlights the importance of gender equality by listing data, the poster mentions that 35 percent of the world's women experience sexual violence between the ages of 15 and 49, and that one in three girls between the ages of 15 and 19 has undergone female genital mutilation in more than 30 countries (United Nations, n.d.)

The United Nations is prepared to take a number of measures to stop gender inequality. This paper will discuss how to further achieve gender equality to advance sustainable development. First, to improve the status of women from all aspects. Secondly, to cultivate the right values from an early age and enhance the awareness of gender equality among young people.

### **The Sustainable Development Goals**

The United Nations Agenda has been instrumental in addressing the challenges of sustainable development and world peace (United Nations General Assembly, 2015). Through its 17 Sustainable Development Goals, the agenda sets out to create a better world for all, where social, economic, and environmental development is prioritized, and peace is maintained. First, the report of the United Nations General Assembly (2015) offers a comprehensive list of solutions to address the social issues related to the 17 SDGs, taking into account the challenges that may arise in implementing them. In addition, the Assembly's solutions are not only based on

Zhang, Zhuoqi (Zoe). (2023). Solutions for Achieving Gender Equality: Improving the Status of Women and Increasing Awareness of Gender Equality among Youth. *iY-1 Perspectives*, 1.

academic research and expert opinion, but also take into account relevant laws and policies at different levels of the country. This approach ensures that the proposed solutions are not only feasible but also sustainable in the long run.

### **SDG#5: Gender Equality**

Each SDG has a unique set of objectives that work towards achieving a specific goal. For instance, SDG#5 focuses on gender equality and empowering women and girls. First, from the perspective of economic development, gender equality is an important factor in promoting social stability and achieving sustainable development. If women have a place in the workplace, they may have unlimited potential, and even enhance the economic development of society and technological innovation. From the perspective of women's personal safety, gender equality is the basic right and interest that women should obtain. Men should be aware of the harm done to women in unequal relationships by both behavior and consciousness and know the seriousness of the behavior and pay attention to it (United Nations, n.d.).

### **Findings and Discussion**

Improving the status of women is a great tool to improve gender inequality. According to a video by TBD Media Group (2020), OSHCO is a company that offers its employees a very equal and non-sexist competitive environment, which not only stimulates women's potential in the workplace but also contributes to sustainable economic development. As a result, women are able to achieve economic independence, gain respect and improve their social status through their own abilities. Rather than the cultural fixation that women should be responsible for being housewives, this fixation is unequal from the start, depriving women of their own freedom of choice and leading to a conceptual weakening of women's social status.

Emphasis on gender equality education in adolescence is a key element in achieving gender equality. Changing subconsciousness of exploitation of female rights and consistent stereotypes of females, establishing healthy and positive values, properly guiding adolescents and increasing their awareness of gender equality. Connolly et al. (2020) point out through their research that the emergence of gender inequality is closely related to the divergence of values. Even in the eyes of many men, women are only reproductive organs and tools for reproduction, which also reflects the stereotype of men as reproductive tools, so the awareness of gender equality among adolescents should be cultivated from an early age to overturn the past stereotypes of women.

Therefore, to address the root causes of gender inequality, it is necessary to identify its underlying problems and propose solutions. Firstly, poverty and social pressure are closely related to gender inequality, so the government should take measures to reduce the pressure faced by citizens. This can include initiatives such as vocational training and financial support for vulnerable groups. Second, the government should prioritize sex education for adolescents to promote a better understanding of gender issues and to encourage healthy relationships between the sexes. Third, it is important to gain insight into the social structure of the adolescent world and assess adolescents' gender norms and psychological growth to prevent the perpetuation of harmful stereotypes. Finally, the media's attention should be focused on promoting gender equality and raising awareness among men, encouraging them to re-examine their views of women and recognize the importance of gender equality. Progress toward gender equality can be made by addressing these issues through multiple approaches (Connolly, 2020).

**Conclusion**

SDG#5 emphasizes the importance of gender equality and the empowerment of women and children. There are numerous measures that the UN can take to help women advance in society to fight for higher human rights, or to raise awareness of gender equality among young people by improving their educational philosophy.

Although women have now elevated their social status in most countries, the problem of gender equality has still not been completely eliminated. Therefore, politics, law and experts should study the causes of gender inequality more deeply and improve the efficiency of achieving SDG #5 so that women can obtain equal rights and achieve gender equality as soon as possible.

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## **Sustainable Development and Eradicating Hunger: The Case of Ethiopia**

Yuheng Liu

### **Introduction**

Famine Early Warning Systems Network (2022) describes a country that still faces a severe food crisis in large parts of the country, Ethiopia. Ethiopia is located in eastern Africa. The country has a population of 122 million, but 10 to 15 million people face hunger, especially in the north of the country. Although the United Nations distributes food to the residents of northern Ethiopia, it still cannot eradicate the real cause of their hunger (Concern Worldwide U.S., 2022). So, the United Nations is trying to help end hunger in other ways.

The purpose of this paper is to consider how to eliminate or alleviate the problem of food shortage in Ethiopia. Here are two examples to help starving people in Ethiopia. The first example is some training for local residents (Concern Worldwide U.S., 2022). Including how to give local people access to clean water, tools, seeds and some funds to help with family farming and animal husbandry. The second example is to provide them with fertilizer suitable for growing crops (UN News, 2022). Both of these points aim at the problem of underdeveloped agriculture in the local poor areas. It provided them with the most basic agricultural knowledge and some basic agricultural tools.

### **The Sustainable Development Goals**

In her video, Taylor (2021) defines and explains these Sustainable Development Goals. This video mainly describes Taylor's views on the global sustainable development strategy and why she likes the global sustainable development strategy. The first is that Taylor believes that a strategy for global sustainability is an easy-to-understand concept that most people can understand. The second thing is that this global sustainable development strategy allows stable

Liu, Yuheng. (2023). Sustainable development and eradicating hunger: The case of Ethiopia. *iY-1 Perspectives, 1*.

development for future generations, with inter-generational equity. The third thing is that Taylor thinks these strategies balance people and the planet. At the same time, Taylor mentioned the difficulties encountered in implementing the strategy. For example, implementing the strategy of global sustainable development should reduce environmental pollution, but this conflicts with economic development. But Taylor believes people should fundamentally change the way our economy works. Taylor believes that we need to strike a balance between social, environmental and economic perspectives so that we can achieve environmental sustainability while also creating a fair future for many poor people.

### **SDG#2: Zero Hunger**

As mentioned by Taylor (2021), we should create a better future for everyone. So, we need to help these hungry people. At the same time, a zero hunger world can have a positive impact on our economy, health, education, equality and social development, as well as social development (United Nations, n.d.). This contributes to the achievement of other sustainable development goals. The supply and production of food should be secure and nutritious, which will consume a lot of capital and social resources. Investment is needed in both rural and urban areas and in social protection so that the poor can access food and improve their livelihoods.

### **Findings and Discussion**

The UN has helped people in poorer parts of Ethiopia with agricultural knowledge and funding. But there are many external factors impeding the development of local agriculture, not least local weather conditions and local wars and conflicts (Mercy Corps, 2019). On the environmental side, people in some areas are extremely dependent on the weather because they need rain to irrigate their crops and feed their livestock. Because of this extreme dependence on the environment, it is particularly easy for these families to suffer hunger for more than a decade.

Because of frequent droughts and floods, these families do not have a good way to cope with food shortages. At the same time, the upsurge in violence in Ethiopia has displaced 2.1 million people who have fled their farms, homes and communities for their safety. So, they don't have a good environment to develop their agriculture. Therefore, it is far from enough to give external resources to help local people fight hunger.

About China, how did they develop their agriculture in 70 years so that they could produce enough food to feed the entire population? Here are two examples (Yang, 2019). One is increasing the diversity of food supply through the development of aquaculture, and the other is the development of agricultural technology. These two examples can well increase food production.

So, what can be done to promote local agriculture in Ethiopia? According to Mercy (2019), when they were helping people in Ethiopia fight hunger, they realized that knowledge was transformative in the fight against hunger. So, they began to educate the local population and to educate local health institutions and families about balanced nutrition to ensure the health of the local population. At the same time, it is important to adapt to the weather so that local people can develop resilient crops and livestock to cope with extreme weather.

However, even if farmers can become self-reliant with various kinds of help, some irresistible factors will still have a great impact on their livelihood and security. The violence in Ethiopia, for example, and the very low purchasing power made it impossible to get food security when there was extreme weather. Therefore, it is very necessary to further realize the global sustainable development strategy, and mankind needs to promote these goals from various aspects.



**Conclusion**

These hungry people still face a lot of difficulties in Ethiopia, whether it's the environment or the weather or other external factors. Helping these hungry people can help achieve Sustainable Development Goal 2. A good example is the help of the United Nations, which is helping hungry people in Ethiopia by training them with more farming techniques and money. The UN's offer of help may reduce the number of hungry Ethiopians in the future, though it will not change their living conditions.

However, Ethiopia's internal conflict is a key factor in reducing the number of hungry people. Many are hungry because local violence has failed to develop their agriculture and economy. Of course, increasing food diversity can also reduce hunger. Local residents can grow more food with help from the United Nations. But the hungry should also work harder when they get help. If local people and governments simply accept the UN's help, it will not do much to reduce the number of hungry people.

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## **The Importance of Natural Resources in the Sustainable Development Goals**

Haomeng Wang

### **Introduction**

Even with the rapid development of technology, food insecurity and malnutrition remain a problem and challenge for the world. According to Bahn et al. (2016), by 2019, the hunger rate in sub-Saharan Africa even increased by 1.9% since 2015. As of 2018, the absolute number of hungry people was concentrated in the Asian region, with North America and Europe reporting the lowest hunger rates since 2005. People must do something that try to change the situation so that people can get rid of hunger.

How can people figure these food security and malnutrition problems out all over the world? People should develop agriculture to improve food supply. In order to develop agriculture better, people need reasonably utilize natural resources like water resource (Barthel & Isendahl, 2013) and forests (World Bank, 2004). Although these are two different entry points, they both contribute to the development of agriculture.

### **The Sustainable Development Goals**

In the video (Taylor, 2021), Taylor states the SDGS aim to address the social, economic and environmental dimensions of development in an integrated manner. FAO (2016) states both the SDGs and FAO's strategic framework aim to address the root causes of poverty and hunger and build a fairer society that leaves no one behind.

### **SDG# 2: Food security and nutrition**

Sustainable development goal#2 is to end hunger, achieve food security, improve nutrition and promote sustainable agriculture. For examples, children in Bolivia cannot properly receive a full education due to hunger, and the local government developed a school food law to

Wang, Haomeng. (2023). The importance of natural resources in sustainable development. *iY-1 Perspectives, 1*.

secure children's rights to food. The Philippine government is focused on rebuilding agriculture after Typhoon Haiyan, the largest typhoon on record, hit the central Philippines in 2013 (FAO, 2016).

### **Findings and Discussion**

Develop sustainable agriculture so that the supply of agricultural production is sufficient to eliminate hunger and improve nutrition. Safe and harmless agricultural development and chemical fertilizer free food processing without chemical additives contribute to the realization of food safety. According to Sadeghi and Moghadam (2021), water, energy and food are important resources for achieving economic improvement and social aspirations for sustainable global economic development. These elements are completely interrelated, and they depend on each other to a great extent. It is the water that makes the trees flourish, and the respiration and transpiration of the leaves promote the circulation of water. People therefore need to use a variety of natural resources, including water and forests, as efficiently as possible to promote agricultural development. Such as planting trees, building reservoirs and so on.

Stephan et al. (2018) state the close link between water and food is most evident in the water and irrigation needs of agriculture. In other words, in addition to people's domestic water, water can be involved in agricultural irrigation, which indirectly affects food production. According to Barthel and Isondahl (2013), the Mayans maintained the structure of the dispersed settlement pattern of the city as it expanded, i.e., residential areas clustered in communities around ancillary municipal ceremonial buildings. The family group was the basic settlement unit of a Mayan city, consisting of a raised quadrilateral foundation platform with houses built on each side. Walk together as a farmstead or "garden city". This urban structure is very effective at keeping water in place from the moment it hits the ground, and at keeping water on the ground

for a significantly longer period of time, allowing residents to use "more" water. For modern society, the government can build reservoirs to store a certain amount of water. This water can be used by residents in the rainy season and irrigated in the dry season.

In fact, the definition of forest that forests are not only the patches of trees and vegetation, but also the places where these plants take root. The World Bank (2004) states that forests are central to growth through trade and industrial development in many developing countries. That is to say, some countries, especially developing countries, may overuse forest resources when developing their economies. Such as excessive logging. In fact, forest resources affect the development of local agriculture by affecting the local natural environment such as precipitation and sand fixation, which in turn limits the height of local economic leap.

Obviously, water and forests are just as inextricably linked as the 17 interrelated SDGs. Lush forests play an important role in stabilizing soil, water and water cycles. In other words, forests ensure better rainfall. Besides being the source of life, water is also important to the crops in people's fields. If people consume forest resources in an unplanned way, the local water cycle will be affected, and agriculture and the economy will suffer.

### **Conclusion**

People must spare time to participate in afforestation activities and actively respond to the government's forest city construction. They should also reflect on the sustainability of their work.

In the coming decades, the demand for food is bound to increase. In his TED talk, Friedrich (2019) shows North America's terrible demand for food, especially meat. There is therefore a greater need to develop sustainable agriculture to cope with the increasing demand for food.

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## **Exploring the Use of Artificial Intelligence to Achieve Sustainable Development Goal #3: Affordable Healthcare in Impoverished Countries**

Qianyu Wang

### **Introduction**

Residents in impoverished regions worldwide suffered severe impacts from the COVID-19 pandemic. These residents have limited access to basic healthcare services facilities, facing difficulties and health challenges such as high infectious diseases while living in poverty. In these regions, only 23 percent of the population in low-income countries had received at least one dose of the COVID-19 vaccine in 2022 (Wolf et al., 2022). Without essential living being guaranteed, it is difficult to improve their quality of life and achieve sustainable development. Hence it is essential to take more measures to address these issues.

The purpose of this paper is to give insight into the use of artificial intelligence (AI) in making medical resources more accessible to people living in poor urban areas in developing countries from two different perspectives. The first part discusses AI applications/practice in medical treatment, while the second part focuses on how AI can assist in the development of molecular medicine. Two examples are provided and may serve as a reference for those interested in the topics and may also suggest potential solutions for improving healthcare access in low-income urban areas.

### **The Sustainable Development Goals**

The UN 2030 Agenda formulated an unprecedented collective goal and call to action for a prosperous, peaceful, inclusive and equitable world, based on 17 sustainable development goals (SDGs) that focus on three dimensions including economic, social, and environmental aspects and address challenges such as poverty, hunger, disease, inequality, and climate change.

Wang, Qianyu. (2023). Exploring the use of artificial intelligence to achieve sustainable development goal #3: Affordable healthcare in impoverished countries. *iY-1 Perspectives, 1*.

The SDGs agenda encourage all countries, world leaders, and stakeholders' collaboration to achieve specific goals by 2030 to eliminate poverty, protect the planet, and promote sustainable economic growth (United Nations, 2015).

### **SDG#3: Good Health and Well-Being**

SDG#3 focuses on health and aims to ensure affordable healthcare service that everyone can access. Health is a fundamental part of being human, a healthy economy, and a prosperous society, and poor health can be the main cause of poverty (e.g., COVID-19 influence on the global economy). Progress has been made in achieving this goal, such as widespread immunization and vaccine development, which contribute to reducing maternal and child mortality rates. Current obstacles include the accessibility to healthcare services, the shortage of medical workers, and the widespread pandemic (United Nations, n.d.).

### **Findings and Discussion**

AI has significant potential to revolutionize medical science in various fields, including medical imaging and drug research. According to El Naqa et al. (2019), AI has become the forefront and center of radiology, and machine/deep learning application in radiation therapy has been an area with significant progress. El Naqa et al. argue that using AI as assistance can improve the efficiency, accuracy, and effectiveness of clinical treatment while reducing costs. For example, AI can assist radiologists in image analysis and classification. Manually examining a substantial amount of images cost energy and can have a great influence on efficiency. AI can be used to assist radiologists in checking and classify medical images, including but not limited to: Reviewing the volume of images, improving image quality, assist the radiologist "in the detection and classification of abnormalities" without loss of accuracy. El Naqa et al. argue that with proper development and usage, AI can have outstanding performance compared to manual



evaluation, this method can be faster, cheaper, and more precise. El Naqa et al. conclude that with the help of the most advanced AI technology, imaging informatics has enormous potential that can provide more accurate and personalized healthcare and simultaneously reduces the cost burden for society. On the other hand, healthcare professions have a significant burnout rate (60% caused by bureaucratic work), which might affect performance and cause medical errors. This change could bring out a better outcome.

Furthermore, AI has great potential in molecular medicine and drug development. AlphaFold is an open-source and free AI system that can predict protein structures from its amino acid sequence. It has the potential to accelerate drug discoveries and development. One case is DNDi, a research team that aims to address neglected tropical diseases (NTDs), which affect the communities that were neglected and get little attention. Leishmaniasis is an NTD that affects over a million people a year; Dr. Benjamin Perry, a medical chemist in DNDi, used AlphaFold to make further progress against Leishmaniasis (DeepMind, 2022). It proved that protein structure prediction, or use of AI is useful for drug discovery.

Investing in vaccine development has great value as a single technical breakthrough can benefit humanity. One case is the creation of COVID-19 vaccines. According to Dave Johnson (Ransbotham & Khodabandeh, 2021), AI played a significant role in the development of one of the earliest released COVID-19 vaccines in the U.S. in 2020. It's noteworthy that the company wasn't intended only focus on the development of this one drug, which highlights the potential of the system to adapt quickly with minor modifications while ensuring a quality outcome (Ransbotham & Khodabandeh, 2021). The possibilities are truly fascinating.

**Conclusion**

To conclude, low-income urban communities have difficulties to access to affordable and effective healthcare, the focus of SDG3. To address these challenges, AI can aid physicians in diagnosis and decision-making, making healthcare services more efficient, and cost-effective. AI can also play a significant role in molecular medicine and accelerate the progress of drug discovery, both simultaneously lower the cost-burden.

Medical experts, governments and society should realize AI's potential and limitations, fully utilizing the potential of artificial intelligence and collaborating, ensuring affordable and accessible, quality healthcare services for all, with ideas such as assistance in medical imaging and accelerating drug development, more possibilities are waiting to be discovered.

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## **SDG#5: Achieving Gender Equality and Empowering Women**

Jiaqi Wang (Paco)

### **Introduction**

Gender inequality remains one of the most difficult issues plaguing the world today. Despite significant progress in gender equality in recent years, women and girls still face discrimination and exclusion in all aspects of life. This is why achieving SDG 5, which promotes gender equality and empowers all women and girls, is critical.

The main content of this article is to discuss the importance of SDG 5 on a global scale and the challenges that need to be addressed to achieve gender equality. The specific research question is: What are the key drivers of gender inequality and how can we work to create a fairer world for women and girls?

### **The Sustainable Development Goals**

The Sustainable Development Goals are a call to end poverty, protect the planet and ensure a happy life for all. The 17 Sustainable Development Goals, adopted by the United Nations in 2015 as part of the 2030 Agenda for Sustainable Development. (United Nations, 2015) The Sustainable Development Goals aim to address the global challenges we face, including poverty, inequality, climate change and environmental degradation.

### **SDG#5: Achieving Gender Equality**

The issue of gender equality can not only solve the problem of women's rights, but also solve the economic problem. An example would be an economic shortage caused by a shortage of labor in the country. When women and girls are empowered, they can contribute to the development of families, communities and nations. However, despite significant progress in recent years, gender inequality remains a pervasive problem that needs to be addressed. Women

Wang, Jiaqi (Paco). (2023). SDG#5: Achieving gender equality and empowering women. *iY-1 Perspectives, 1*.

and girls still face discrimination in education, employment and political representation. (United Nations, n.d.)

### **Findings and Discussion**

The challenge of achieving Sustainable Development Goal 5 will be difficult and there are several articles exploring solutions to this problem. In this article, “Goal 5: Achieve gender equality and empower all women and girls,” United Nations (2022) describes the progress made towards achieving SDG5. They discuss the successes and limitations of previous gender equality frameworks, including the Millennium Development Goals, and outlines the achievements and prospects for the Sustainable Development Goals. According to the United Nations, while progress has been made in some areas, such as access to education and health care, gender inequality remains pervasive in many areas, including the workplace and politics. They emphasized the need for a more targeted and holistic approach to gender equality and called for consideration of the multiple forms of discrimination women and girls face. For example, in terms of education, in many poverty-stricken areas people will always give priority to boys' education, and girls often need to take on the responsibility of family labor earlier. This has resulted in lower average educational attainment of local girls.

This book, *Cities, slums and gender in the Global South: Towards a feminized urban future* (Chant & McIlwaine, 2015) examines the impact of the gender dimension of urbanization on the achievement of SDG 5. Chant and McIlwaine argue that increasing global urbanization is feminizing poverty, with women and girls in urban areas facing economic, social and political marginalization. They discussed how gender inequality persists in urban settings, such as difficulty finding job opportunities and violence against women. The authors also highlight the potential of the SDGs to address these challenges and promote gender equality, taking into

account women's different experiences and needs. For example, for women in different countries, provide corresponding international assistance according to their age, religion, and education level, and increase the status and rights of local women and their education level. In this way, female groups can provide more help for the construction and development of the country.

### **Conclusion**

In conclusion, achieving gender equality and empowering women and girls is critical to creating a more equitable, peaceful and sustainable world. This essay explores the importance of SDG 5 and the challenges that need to be addressed to achieve gender equality.

While the challenge of addressing gender inequality by 2030 is enormous, significant progress has been made and various initiatives have been undertaken to help address the problem. For example, the establishment of specialized girls' education schools to give women more opportunities to vote. Welfare organizations conduct popular science for local women to eradicate local bad habits against women. I believe that through our efforts, together we can create a more sustainable and equitable future that promotes equality, prosperity and social progress for all.

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## **mHealth and Sustainable Development: The Case of Rural China**

Zhenpeng Liao (Joe)

### **Introduction**

As China's urbanization continues to increase, more and more rural youths have left the countryside and come to the cities to work. Most of the residents left behind in the countryside are the elderly and children. Most of these remaining rural residents lack education and lack money. The most important is the lack of medical resources. According to 'Difficulties and Countermeasures in Cultivating Rural Medical Service Market' (Lin & Tang, 2009), insufficient human resources and insufficient market flow of medical service resources are the main problems in rural medical care. Rural residents in most remote areas are the key care objects of medical resources such as the elderly and children. Therefore, rural residents have greater demand for medical resources than urban residents.

The purpose of this paper is to discuss how to provide needed medical care to all people living in rural China. Two mHealth technologies are proposed as solutions. The first solution is Teleconsultation. The second solution is Electronic Medical Record. Both solutions are related to mHealth and may have different advantages and disadvantages when implemented. Both of these solutions have the opportunity to solve the problem of medical resources for China's remote villages.

### **The Sustainable Development Goals**

According to the video “A Non-boring Definition – Sustainable Development” (Taylor, 2021) the United Nations Sustainable Development Goals are 17 goals for sustainable development adopted on September 25, 2015. SDGs are defined as a goal that turns social, economic and environmental development issues into a sustainable development path. The

Liao, Zhenpeng (Joe). (2023). mHealth and sustainable development: The case of rural China. *iY-1 Perspectives, 1*.



difference between it and other development goals is that SDGs emphasizes two themes, development and sustainability. These two themes may conflict in some cases, but SDGs will try to resolve the conflict. Many people are convinced that achieving The SDGs can develop the present world while allowing future generations to live a life no worse than ours.

### **SDGs#3 Good health and well-being**

According to “Goal 3: Why it Matters” (United Nations, n.d.), the goal of SDG3 is to safeguard the health and well-being of all people. A healthy body is the foundation of work for people. For the United Nations development goals, SDG3 is also the foundation of all development. Only by satisfying people's well-being can people work hard for development, which is why SDG3 is important. However, SDG3 faces great challenges. The arrival of COVID-19 has overwhelmed the previously built health system. In order to solve the harm of COVID-19, a lot of resources have been devoted to the research and treatment of COVID-19. This puts previously achieved health gains at risk. At present, the realization of SDG3 is facing huge challenges, but people and organizations should pay more attention to and support SDG3. If they do this, there will be a better future.

### **Findings and Discussion**

mHealth refers to the provision of medical-related services through mobile devices and information devices. At present, China's rural areas lack the conditions for the realization of mHealth. According to Li (2008), fixed-line telephones and televisions are still the most important means of information communication and reception in rural areas, and rural China lacks a mature and easy-to-use information system. A complete information system is the prerequisite for establishing an mHealth system. To address this problem, the Chinese government should subsidize mobile phones, computers and other information products in the

rural market. Mobile phones should be available to the residents of marginal rural areas. Only in this way can an information system be built in rural China.

Teleconsultation is an important part of the mHealth system. Teleconsultation is a technology for diagnosing and deciding treatment plans on the Internet through mobile and information devices. According to Feng and Shen (2013), the telemedicine consultation work is conducive to the residents in different rural areas to receive high-quality and convenient medical services, improve the utilization of medical resources, and help control medical expenses. When the teleconsultation system is established, people in remote areas can receive diagnosis and treatment from doctors in higher-level hospitals in basic hospitals through information equipment. How can a teleconsultation system be built? To establish a Teleconsultation system, basic rural hospitals should establish remote network connections with advanced township hospitals, and township hospitals should have dedicated doctors responsible for online connection with rural hospitals. Teleconsultation plays an important role in solving the problem of lack of medical resources and funds for residents in rural areas of China.

While teleconsultation can provide medical services to residents of remote villages in China, another promising approach is the Electronic Medical Record. According to Liu et al. (2011), Electronic Medical Record is defined as the digital storage record of medical services for clinical diagnosis and treatment of patients and guidance intervention by medical institutions. Electronic Medical Record can help hospitals respond to large-scale diseases, environmental pollution and other problems faster in remote areas. Because residents in rural areas of China lack basic medical knowledge, they cannot effectively communicate with doctors. The Electronic Medical Record can help doctors understand the condition more quickly and make better treatment. Establishing an Electronic Medical Record system requires a large and complete

central information center. Only in this way can better information be collected, and a convenient information system operating system is also essential. An Electronic Medical Record system can better manage and collect disease data of rural residents and Meet the health needs of rural residents in China.

mHealth has many advantages in rural China. However, the compatibility between the mHealth system and the original medical system must definitely be considered in SDG3. According to Lehoux et al. (2002), the mHealth system has high requirements for doctors. For example, the workload of a doctor in charge of remote consultation will be greatly increased, and the excessive workload will lead to a decline in medical accuracy. Under fatigue, their medical level may be lower than that of doctors in basic hospitals. In addition, a local doctor has a better understanding of local patients and the reserve of medical resources than a remote doctor who has only read electronic files. The prescriptions that doctors in other places may prescribe may not be suitable for local conditions. There is incompatibility between mHealth and traditional medical care, but it is hoped that as time goes by, the mHealth system will be better integrated with the local medical system.

### **Conclusion**

People living in remote villages in China face many challenges, including insufficient medical resources, which is the focus of SDGs 3. The mHealth system can come to help them. The first solution, teleconsultation can solve the shortage of doctor resources. The second option, Electronic Medical Record, allows the medical system to quickly respond to large-scale diseases such as infectious diseases. While both solutions have their own drawbacks, both solutions are promising solutions to the problem.

At present, the lack of medical resources is a worldwide issue. It is hoped that the world will take the development of mHealth in rural China as an example, so that mHealth can help the poor and those who lack of medical resources in the world to provide health and well-being. In the contemporary era where technology is more and more developed, it is important to use technology to help meet SDG3.

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## **Adolescent Health and Sustainable Development: Reducing Short Video Addiction**

Keyun Li

### **Introduction**

In recent years, with the rise of short videos platforms and the popularity of smart internet devices among students, the phenomenon of teenagers' addiction to short videos has become increasingly prominent. Nowadays, almost all teenagers use mobile phones, including many children under 14. At the same time, short videos apps are also popular among them. It is an indisputable fact that short videos have a deeper and deeper influence on teenagers. In a TED talk about smartphone addiction, Welton (2019) described the madness of teenagers using smart phones today. Teenagers' addiction to mobile phones and short videos will lead to many physical and social problems, which is a challenge to the sustainable health of teenagers' body and mind.

The purpose of this paper is to show the harm of short videos to teenagers and make suggestions to reduce the related harm. The first is related harm, mainly in mental health (Liu, 2022). The second is advice, which requires more guidance, companionship and education (Liu, 2022). Although short videos have many hazards, they can be reduced through limitation and improvement.

### **The Sustainable Development Goals**

The United Nations General Assembly (2015) discusses the UN Agenda for Sustainable Development in 2030 and expresses the need to achieve sustainable development goals through actions. SDGs include eliminating poverty, promoting quality education, creating job opportunities, reducing inequality, coping with climate change and so on. The article emphasizes that these goals need the joint participation of government, enterprises and individuals to strengthen relations and allocate resources (United Nations General Assembly, 2015). Among

Li, Keyun. (2023). Adolescent health and sustainable development: Reducing short video addiction. *iY-1 Perspectives, 1*.

them, the cooperation between individuals and institutions and SDG#3: Good health and well-being are relevant details.

### **SDG#3: Good health and well-being (Nations. , n.d.)**

Ensuring a healthy life and promoting well-being are essential to building a prosperous society, which is SDG#3. The United Nations (n.d.) explains SDG#3 in detail, which contains how to achieve this goal, indicating that people can start by promoting and protecting their health. Starting from self-change is a key link to reduce the harm of short videos.

### **Findings and Discussion**

The harm of short videos is mainly in the mind. Like many other addictions, short video addiction can cause distraction, delay behavior, increase anxiety and possibly depression. Due to spending a lot of time on short videos, the time for socializing and learning is reduced, and the social ability and learning ability are weakened, resulting in less interest in socializing and learning, thus spending more time on mobile phones, forming a vicious circle (Liu, 2022). In addition, watching short videos for a long time and using mobile phones excessively will challenge the eyesight and cause insufficient sleep quality (Welton, 2019). Therefore, it is urgent to reduce the harm of short videos. Here are three suggestions to reduce short videos.

First, organization and platform management can reduce the harm of short video. For example, some short videos applications in China will turn on teen mode automatically. These platforms will analyze user habits to determine whether they are teenagers and children, and then push appropriate content. In this mode, users will also be limited to the length of time they use the applications every day.

Second, the company of family and friends is also very important. This requires parents to put down their mobile phones and communicate with their children in reality. In order to

understand the recent life and study situation of children. Then give companionship and help. Friends and peers can talk and relieve stress through communication, not through short videos and social media (Liu, 2022).

Third, the individual efforts of teenagers are also very important. It is necessary to establish real interpersonal relationships offline and actively participate in outdoor activities, sports and academic campus activities, sports activities can promote teenagers' socialization and exercise. Campus activities can train teenagers' cooperative ability and social skills. Through communication, you can also make friends, talk about difficulties and relieve anxiety.

### **Conclusion**

In a word, short video addiction, as a kind of mobile phone addiction, will cause damage to teenagers' physical and mental health, so society should pay attention to related research and find ways to reduce related harm. This is also to better achieve the health goals of SDG#3.

At the same time, the popularity of short videos and electronic internet devices among teenagers has been overwhelming. Society should find ways to improve the devices and arrange them reasonably to benefit teenagers.



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## **Dibao and Urban-Rural Integration (URI) for Sustainable Development Goal #1**

Hai Jiang (Cody)

### **Introduction**

In China poverty is the most common and severe issue of society. From the beginning, Chinese government had placed elimination of poverty as their first top priority. According to Wang and Zhang (2020) in 1981, 88.32% of population lived in poverty and 43.95% poverty population of the world was in China. Until 2015, the poverty rate was 5.7%, over seven hundred million people lifted out of poverty. Today Chinese government claims that obsolete poverty is eliminated in China. However, relative poverty is still a severe problem in China which significantly hinder Chinese people to achieve sustainable development.

The purpose of this paper is to consider how poverty can be eradicated in all its form in China. Two pieces of research may offer two workable solutions. The first solution is Dibao, a policy which gives direct financial aid to poor (Gao, 2017). Second solution is the development of urban–rural integration (URI) which is considered as an effective way to achieve sustainable development in developing countries (Niu & Xu, 2023). Though two research are using separate ways to respond poverty issue in China, both solutions have potential to address the poverty in China and the world.

### **The Sustainable Development Goals**

In the article *Transforming our world: The 2030 agenda for sustainable development* (2015), United Nations set 17 sustainable developments goals (SDG) of human society. United Nations set those goals to provide a guideline for how we make the world a better place. It represents an ambitious and transformational vision. In this vision humans will build a world without poverty, hunger, disease and want. A place where every life can prosper their population.

Jiang, Hai. (2023). Dibao and urban-rural integration (URI) for sustainable development goal #1. *iY-1 Perspectives, 1*.

This article is a promise and announcement of humans to create a better world. It promotes humans to improve their world by setting goals.

### **SDG# Goal 1. End poverty in all its forms everywhere**

In “Goal 1: Why it Matters” (United Nations, n.d), United Nations gives a comprehensive view of poverty. It shows us why there is poverty, why poverty needs to be solved and how we address poverty. The United Nations claims that there are still 10% of people in this world living in extreme poverty which means there are more than 700 million people floundering to reach clean water, medical help, education, and sanitation. Then, the article explains what causes poverty. Poverty is caused by unemployment, social exclusion, disaster, and other phenomena that stop people from productivity (United Nations, n.d). Human have decreased the rate of extreme poverty, but the issue of relative poverty is still a severe problem that hampered people achieve sustainable development.

### **Findings and Discussion**

According to Wang and Zhang (2020), in 2014, China's multidimensional poverty index was 4.0%, and the multidimensional poverty population was 55.27 million. Depending on definition of poverty, 16.8% of Chinese population can be defined as Multidimensional Poverty poor. Most of poor in China are living in rural area, and the worse situation of Multidimensional Poverty poor is nutrition, school year and cooking fuel. According to Wang and Zhang (2020), the few major challenges of anti-poverty in China are reducing relative poverty in the region, developing vulnerable groups and decreasing the poverty due by diseases and old ages.

Gao (2017) discusses the effectiveness of Dibao—direct financial aid—in anti-poverty. She finds out that Dibao is effective on erasing extreme poverty, but for anti-poverty it is not that efficient since its limited benefits and the wrong targeting and gap in benefits distributed. Dibao

decreases the depth of poverty but not poverty rate. Besides, using different poverty lines affects the effectiveness of Dibao. Dibao is less effective to respond relative poverty because Dibao assistance standards are low compared to average income and consumption levels and the rate at which consumer prices rise, and Dibao's assistance overlooked the needs of education and healthcare (Gao, 2017). Then, the author brings out a few changes that may enhance the effectiveness of Dibao, such as, increase the financial support of Dibao, broaden the targets of Dibao and enrich the measure standards of Dibao (Gao, 2017). This article indicates that Dibao is an effective tool to decrease extreme poverty, but less effective to reduce relative poverty, so with a few changes Dibao may become a better tool to address both extreme poverty and relative poverty (Gao, 2017).

In the research, Niu & Xu (2023) found out the relationship between urban-rural integration (URI) and poverty. Urban-rural integration is a development and realizing of the equivalent life quality between urban and rural residents. The authors claims that URI has an inverted U-shaped relationship with rural poverty, which first intensifies and then slows (Niu & Xu, 2023). The results of spatial effect decomposition, a method to find out the spatial correlation and spatial heterogeneity of the data, showed that there was a spatial effect in the impact of URI on rural poverty in the province and neighboring provinces. Hence, by controlling the rate of URI, governments can reduce poverty in rural areas. However, high URI rate also increases the poverty rate of urban areas. Hence, authors believe Chinese government should focus more on URI and change URI to solve poverty.

In addition, Niu and Xu (2023) also point out the relationship of URI and poverty shows how inequality development causes both rural and urban poverty. When labor flows from countryside to city, the increase of population will cause more pollution, shortage of public

services and unemployment. Hence, the URI needs precise design and management, so that it will have greater benefits than harm. With this research the government can implement URI in a beneficial way and use it to address poverty.

The research mentioned can be used simultaneously to solve poverty in China and two research can complement each other which make them more effective because both methods help rural poor and URI can help those poor which are not the target of Dibao but live a hard live. Also, Dibao can help URI efficiently by stopping too many rural poverty flows into the city since Dibao can provide rural poor enough money so that they do not need to work in the city. By combining both methods, the government may create an effective and comprehensive policy for anti-poverty in rural areas.

### **Conclusion**

Today, poverty remains the biggest obstacle for people to achieve sustainable development. In China, anti-poverty is facing the next stage of challenge which is solving relative poverty. Dibao is one of the practical solutions as a form of financial transformation to poor. URI also provides a solution to decrease rural area poverty. Although these solutions are not perfect and need further research and improvement, both offer a bright future of anti-poverty in China.

Due to the COVID-19 pandemic, the United Nations (n.d) estimates that 71 million additional people will live in extreme poverty. What can be sure is that poverty will remain the greatest problem of human society. In China, the negative effect of COVID-19 pandemic is also serious. Lots of people lost their job and paid much more money on healthcare. Hence, the Dibao and URI is critical for China to address poverty issue. However, without support from local and national governments, poverty issue will not change for poor who live in rural area in China.

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## **Gender Equality and Sustainable Development in Africa**

Han Li

### **Introduction**

In much of Africa, men and women are treated unequally, with many women stuck at home taking care of children and keeping house. According to a 2009 report (UN, 2009), many women in Africa are not treated equally. The United Nations hopes to take a series of measures to help African women obtain equal treatment and achieve sustainable development.

The purpose of this article is to consider how women living in Africa can be treated equally with men. Equal education was proposed as a possible solution. Giving women equal education with men can improve women's status and make women get equal treatment with men. It has the potential to address the inequalities between men and women in Africa.

### **The Sustainable Development Goals**

The concept of sustainable development goals (SDGS) was put forward at the 1992 Earth Summit, aiming to ensure the current situation of people's needs without compromising the ability of future generations to meet their own needs (Taylor, 2021). In order to achieve the goal of sustainable development, the United Nations has set 17 sustainable development Goals, which cover human, environmental and human rights issues, and aims to achieve these goals over the next 15 years.

### **SDG#5: Gender Equality**

Achieving gender equality and giving women the same rights as men, which is the fifth goal of the Sustainable Development Goals, mainly aims to give women the same rights as men all over the world, which is very important for sustainable development because it is a fundamental human right (United Nations, n.d.). Empowering women can advance the world.

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## Findings and Discussion

Education is a great way to address gender equality as a sustainable development goal, because it not only empowers women with knowledge, broadens their minds and gives them confidence, but also teaches men the importance of gender equality, for better economic development (Cole, 2022). By changing the local traditional perception from both male and female aspects, we can better achieve the goal of sustainable development. Gender equality is very important.

Women should receive educational opportunities, which means women can work, and their social status will improve, because they will have time for themselves and stable income. When both men and women have income in a family, especially when women's income is higher than that of men, then women will get more equal treatment (World Bank, 2013). What's more, after women receive education, they will have better talent than men in some jobs, so the company will give priority to women rather than men in the recruitment, improving women's social status and giving women a certain social voice.

In Africa, not all women have access to education. If a woman without education wants to work, she loses her job because she does not meet the requirements of the company, so she has no stable economic source. She can only play the role of a housewife in the family, take care of the house and take care of the children. The only breadwinner in the family may be the male member of the family, so women are not treated relatively equally in the family.

By comparing educated women with uneducated women, it can be seen that there are great differences in their lives, and they are treated differently in some specific places, which shows that education can help women get equal treatment with men. Equal education can help



African people to realize SDG#5 gender equality. The government can adopt and support this approach to help African women obtain equal rights and treatment.

### **Conclusion**

People living in Africa still face many challenges, including women's access to gender equality, which is the focus of Sustainable Development Goal 5. The government can try to solve the problem of gender equality by giving women access to education. In other parts of the world, there are some areas that are facing the problem of gender equality. The regional government can also try to give women access to education to solve the problem, which is a promising solution to the problem.

With the development of the times, gender equality will be achieved in many places, but there will still be some areas that have not solved this problem. The government and educators should work together to help local women obtain equal rights and speed up the progress of achieving Sustainable Development Goal 5.

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## **Land Degradation and Sustainable Development Goal 15 in Northwest China**

Yuhao Fan

### **Introduction**

Soil degradation is a common environmental problem, which has a persistent and serious impact on the earth's environment. China's arid northwest has been described as one of the world's most wind-eroded areas. Wind erosion is one of the main causes of soil degradation in northwest China. The temporal and spatial variations of wind erosion were determined in the revised wind erosion equation, and the potential driving factors and influencing factors of soil erosion were studied. The results show that the wind erosion decreased significantly from 1990 to 2013. Government-aided programs to combat desertification, as well as increased precipitation and lower wind speeds, may have contributed to these trends (Jiang et al., 2019).

The purpose of this paper is to analyze the issue of land degradation and what can be done to achieve Sustainable Development Goal 15. In this paper, the methods of land degradation prevention and control in Ningxia Province and Xinjiang Province in China are put forward. Although the Chinese government mainly adopts ecological control measures for soil degradation in northwest China and implements the policy of returning farmland to forest, local governments adopt different ecological control measures due to the actual situation of soil degradation and different local environment.

### **The Sustainable Development Goals**

The United Nations Sustainable Development Goals (SDGs), the 17 global development goals set by the United Nations, will continue to guide global development efforts from 2015 to 2030 after the 2000-2015 Millennium Development Goals (MDGs) expire. On 25 September 2015, the United Nations Sustainable Development Summit was held at its headquarters in New

Fan, Yuhao. (2023). Land degradation and sustainable development goal 15 in northwest China. *iY-1 Perspectives*, 1.

York. The 193 member States of the United Nations formally adopted 17 Sustainable Development Goals at the summit. The Sustainable Development Goals (SDGS) aim to address the social, economic and environmental dimensions of development in an integrated way from 2015 to 2030 and shift to a sustainable development path (United Nations General Assembly, 2015).

### **SDG#15: Life on Land**

The purpose of Goal 15, Life on Land, is to halt and reverse land degradation. My article reports on stopping and reversing land degradation as part of Sustainable Development Goal 15. According to the United Nations, about 1.6 billion people depend on forests for their livelihoods. Eighty percent of the animals, plants and insects on land also depend on forests. The world lost 3.3 million hectares of forest between 2010 and 2015 (United Nations, n.d.). 2.6 billion people depend directly on agriculture for their livelihoods, but 52 percent of agricultural land is moderately or severely affected by soil degradation. Arable land is being lost at about 30 to 35 times the historical average rate. Each year, 12 million hectares of land are lost to drought and desertification (23 hectares per minute). Such an area has the potential to produce 20 million tons of grain. Globally, 74% of the poor are directly affected by land degradation (United Nations, n.d.).

### **Findings and Discussion**

Ningxia Province has followed the attitude of the Chinese government in addressing soil degradation and made more appropriate measures according to local conditions. The Ningxia provincial government's policy to combat land degradation is through vegetation restoration and sand stabilization measures. From 2012 to early 2020 land degradation had reversed, vegetation cover had increased by 28 percent and soil quality had improved. In order to make the program

work better, farmers were trained. The implementation of the project has also increased farmers' income. As land degradation is curbed, 3,396 tons of soil will be preserved each year. It also saved the lower Yellow River \$20 billion in sediment cleaning costs. The average number of sandy days per year has dropped from 12.4 to 9.1 (World Bank, 2021).

In Xinjiang Province, soil degradation has become more serious and environmental problems have caused the local government to develop a unique set of treatment plans. Due to its fragile ecological environment and human factors, soil degradation in Xinjiang is very serious. In the 1980s residents spent a quarter of their time in dust storms. As a result, according to the local government's index, continuous and large-scale afforestation has been carried out throughout Xinjiang, and green areas have been continuously expanded. Meanwhile, drip irrigation and the improvement of planting technology have made planting trees in Xinjiang less difficult than before. Since 2012, Xinjiang has brought 28.3756 million mu of desertified soil under control by relying on key national projects such as the Three Northern shelterbelts, returning farmland to forest and grassland, and preventing and controlling desertification around the Tarim Basin, achieving a "double reduction" of desertification and desertified land. The government has found that the desert crop has a stabilizing effect on soil and water. Because of that, ecological control measures also promote the employment of farmers (Yu et al., 2022).

Although Ningxia Province equality measures are not quite the same, they are going in the same direction. Both start with vegetation coverage to regulate factory activities. Moreover, vegetation projects not only effectively stabilize soil and water but also bring employment opportunities to farmers. For example, farmers can plant cash crops that stabilize soil and water, become forest rangers or plant trees. In contrast, the ecological environment of Xinjiang Province is relatively fragile due to the lack of water source. Therefore, the measures of Xinjiang

Province should take into account the water source and pay more attention to the protection of soil.

### **Conclusion**

People living in northwest China used to face a very harsh climate. These problems are caused by serious land degradation. This is the focus of improvement in Sustainable Development Goal 15. Xinjiang and Ningxia provinces are examples of this. They have adopted a series of projects and measures to revegetate degraded land and benefit local farmers. There are some differences in the details, but they are all good ways of starting from a common point of view and adapting to local circumstances.

Soil degradation is still a serious problem. If left unchecked, it could lead to more species extinction and a serious threat to human life. Now, though, the problem of soil degradation in northwest China has been alleviated. Although the natural environment of people living in northwest China has been significantly improved, this is a long-term goal and local governments and people still need to be concerned about soil degradation and reducing the impact of human activities on the land. The plans for soil stabilization still need to be adhered to.

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## **Increasing the Number of Bees and Sustainable Development Goal #15**

Jianwei Huang

### **Introduction**

Honeybees are the most dominant pollinators on earth. Their furry bodies can transport large amounts of pollen. The important impact of bees on crops is enough to draw attention to the conservation of bees. Ninety percent of the world's top 107 crops are patronized by bees (Klein et al., 2007). Human agriculture is dependent on bees as pollinators. Honeybees have social, ecological and economic importance (Patel, 2021).

Today, the long-standing reciprocal relationship between bees and humans is threatened by the recently reported decline in honeybee populations (Potts et al., 2016). The decline in honeybee populations has given rise to a large number of studies on the impact of honeybee populations on agriculture. But bees are not limited to agriculture for humans. The research question was to find the economic and social advantages of bees to attract people to breed bees.

### **The Sustainable Development Goals**

Sustainability was first defined in modern times in a report published by the Brundtland Commission in 1987. The birth of this report reflected the recognition at the time of the impact of poverty and environmental damage. The report also gave the broadest definition of sustainable development as "meeting the needs of the present without compromising the ability of future generations to meet their own needs" (Taylor, 2021).

### **SDG# 15: Life on land**

Biodiversity and the ecosystem services can be the basis for climate change adaptation and disaster risk reduction strategies because biodiversity and the ecosystem services can provide benefits and increase people's resilience to the impacts of climate change. The extinction of

Huang, Jianwei. (2023). Increasing the number of bees and Sustainable Development Goal #15. *iY-1 Perspectives, 1*.



species caused by humans can make entire ecosystems more vulnerable. Ultimately, human societies and economies are also affected (United Nations, n.d.). Bees as pollinators can provide food for a large number of animals, which is extremely important for biodiversity.

### **Findings and Discussion**

The decline of honeybee populations has a huge impact on terrestrial ecosystems. This is because plant reproduction and animal food can be negatively affected. The decline in honeybee populations has raised too much concern about the impact of honeybees on agriculture. This study focuses on the impact of honeybees on sustainable development. It also increases the importance of honeybees by promoting their social and economic benefits. Increasing the number of beekeepers in a way that increases the number of farmed bees and maintains the ecosystem.

Keeping bees has far-reaching benefits for both the environment and the practitioner. Bees are known to be important pollinators, which means they play a key role in helping plants reproduce and spread. As a result, beekeepers can help accelerate the spread of local plant seeds, greatly increasing the density and range of local plants. This in turn can provide more food and habitat for local herbivores, thus enhancing the local ecology. However, one of the most important benefits of beekeeping is its potential to mitigate the effects of natural disasters and climate change. Because local plant populations are more diverse and robust when bees are present, they have a greater chance of withstanding the effects of extreme weather events and other environmental stresses. In addition, beekeepers produce products and services such as honey, pollen, bee wax, propolis, royal jelly and pollination services that can provide a diversified source of income and help offset some of the costs of starting and maintaining a beekeeping business (Carroll & Kinsella, 2013).

Beekeeping is often promoted in the context of rural development because it can provide monetary, nutritional, and social benefits to poor families without requiring land ownership or large capital investments. In some areas of Africa, constraints to improving livelihoods through bee-related activities have been attributed to a lack of knowledge about beekeeping processes, access to equipment, and training (Minja & Nkumilwa, 2016). Vocational beekeeping education can promote economic opportunities for employment and entrepreneurship and diversification of indigenous groups, and help empower women, including those in traditionally patriarchal societies, to promote gender equality (Mburu et al., 2017; Pocol & McDonough, 2015).

Honeybees are not only good for the environment, but also for the economy and gender equality. Bees are widely grown as an economic activity, and their products and services not only help farmers gain income, but also create jobs. These three points are good reasons to attract people to breed bees. The decline in the honeybee population will also slow down as a result.

### **Conclusion**

The honeybee population is declining over the years. This has a negative impact on SDG15. Because the ecology of the forest will be destroyed by the decrease of bees. Humans will also be more vulnerable to address disasters. This study is looking for the social and economic advantages of bees to attract more people to beekeeping. Firstly, honeybees have a diverse range of products and lower start-up assets. Secondly, honeybee farming can provide a large number of jobs to improve the local economy. Third, beekeeping can promote gender equality.

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## Introduction

David Patent

iY-1 Perspectives is a journal for international students enrolled in the International Year-One (iY-1) Program at Syracuse University (SU).<sup>1</sup> The iY-1 Program is designed to give access to higher education in the United States during their first two semesters of university while remaining in their home country. Students then travel to Syracuse to take courses during the summer and matriculate as second-year transfer students the following semester.

Students take credit courses that count towards degree completion and non-credit courses in English for Academic Purposes (EAP) in the two semesters (Fall and Spring) that they study in their home countries. All courses are hybrid, with an SU instructor providing instruction in synchronous online lessons and an instructor in the home country providing in-person instruction for each class. The articles published in this issue represent the work of students in EAP 2, taken in the second semester, in the online component of the course.

This inaugural issue contains papers written about topics related to a global issue, *sustainable development*, which was the theme of the course in the Spring 2023 semester. Students developed their papers over an eight-week period, during which they practiced the skills of analyzing, paraphrasing, summarizing, and synthesizing information from texts about a particular topic of interest related to the United Nations' *Sustainable Development Goals*. The 13 papers included here represent the efforts of students in the program to master key academic reading and writing skills that will help them to succeed as they continue on their higher education journey in the United States.

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<sup>1</sup> <https://professionalstudies.syracuse.edu/academics/international-programs/international-year-one-iy-1-program/>

These papers are by no means perfect and are not intended to be. The purpose of the project is to give students a chance to engage in meaningful work, through which they explore a topic in depth and develop some expertise in it. The core belief behind the project is that undergraduate students, and even those who utilize English as an additional language, have something to say about important issues in today's world, and they deserve to be heard.

# **Artificial Intelligence and Sustainable Development: Removing Unequal Education in China**

Dongxu Qin

## **Introduction**

China has gone through several reforms and utilized compulsory education on a large scale. For decades, China's per capita education rate has improved. However, there are serious educational inequalities within China. Yang et al. (2014) argue that the main cause of educational inequality is the difference between urban and rural areas. In descending order of proportion, the other causes of educational inequality are social class, age, gap of gender and regional difference. Promoting equality in education in China is a matter of urgency for sustainable development.

Artificial Intelligence (AI) is a new technology which has great potential. Modern people can use AI to improve their efficiency of mechanical work like making Excel tables and searching for clear information on the internet. It is amazing that AI can be used in more complex jobs. The powerful intelligence and function of AI can effectively help students get a better education regardless of difference of urban-rural, social class and other factors. This paper will consider the feasibility of using AI to aid teaching and prove AI will remove the inequality in education in China to some extent. At present, AI has a strong educational auxiliary function, which can greatly improve the teaching efficiency and quality of teachers. In addition, teachers can use AI to better understand students' needs.

## **The Sustainable Development Goals**

Sustainable Development has been discussed for a long time. It seems that we can learn about it in any public campaign. Specifically, Taylor, (2021) gave clear explanation of it.

Qin, Dongxu. (2023). Artificial intelligence and sustainable development: Removing unequal education in China. *iY-1 Perspectives, 1*.

Sustainable Development can be traced to indigenous cultures. In 1992, the definition started to gain recognition and became widespread following the Earth Summit. After that, people begin to attach importance to “Sustainable Development”. Sustainable Development predominantly means people meet their own needs without undermining future generations. It involves balancing economic, social, and environmental factors to ensure that development is both sustainable and equitable. The progress of globalization is accelerating, trade between different regions, the rapid development of technology and the extensive use of non-renewable energy all force people to attach importance to the sustainable development. It is important to people in today's world.

#### **SDG#4: Quality Education**

Equal education is an important factor in achieving sustainable development. In "Goal 4: Why It Matters" (UN, n.d.) the author mentions that education is a crucial factor. In other words, education makes for upward social and economic mobility, so it's the key to getting out of poverty. In addition, equality in education is critical to reducing inequalities such as achieving gender equality, promoting tolerance and building more peaceful societies. In addition, making all students receive the same, high-quality education is conducive to the growth of human cognition as a whole. This means that people make progress in overall morality and innovation.

#### **Findings and Discussion**

How useful is AI in education, and will it be a slick technology that can't be used in real life? In the face of such questions, it is undeniable that most people have no clear cognition on the functions of AI. Obviously, AI can be used in “Lifelong Learning” and “Employing AI Learning Technologies” (Ally & Paris, 2022). Lifelong Learning means AI can be used to set lifelong learning goals according to different people, characteristics and occupational needs. In



addition, based on the existing information and curriculum, the AI can write the corresponding topic and syllabus. For example, teachers can utilize AI application to read and scan the content of one chapter of history textbook, then AI can list correspond teaching outline. Employing AI Learning Technologies means that people use AI to practice individually. When students are worried about how to pass the weekly test, students can do certain question in test, and they can repeat it again and again to make sure they know the relevant knowledge points and are able to complete the relevant questions in the test. Furthermore, AI can always be used in translation, which is beneficial to students who only communicate effectively in a local language.

Furthermore, Dubois (2018) mentions that AI helps teachers to understand students in teaching to achieve the goal of providing the same education for every student. AI can provide teachers with more data and information of students to better understand students' learning situations and needs. It's hard for teachers to be familiar with every student, but AI can improve this relationship with the teachers and students. Furthermore, the cost of AI is inexpensive for most people. In modern society, most families hold mobile devices and students can use AI. However, in the past, it was common for parents in China to spend much money for children to have extra classes out of school. This event has created huge inequality in education because by spending money, parents can help some students learn more knowledge and thus win in the exam-oriented education system. By AI using, students can reduce the socioeconomic gap and difference of urban-rural.

In “AI-Enabled Personalized Interview Coach in Rural India,” Nayak and her colleagues (2022) state that AI provides interview training and guidance for young people in rural India. People in this experiment used their own mobile phones to use AI applications. In the end, 86% of respondents thought of feedback reports useful or very useful; 96% respondents wanted more

practice on the portal. The data indicates that the portal is useful in rural and young people because of its characteristics. This example is constructive for China. If this experiment can be conducted in China and provide AI learning assistance, it will make a great contribution to the equality of education in China.

### **Conclusion**

The problem of unequal access to education is significant in China, the focus of SDG#4. To address these issues, AI helps children access equal education, personalized feedback and support to create a more sustainable future. In addition, teachers can understand students well by AI. In fact, the low cost of AI will reduce the phenomenon of inequality. An example of India gives people inspiration that AI can be provided in rural places.

In modern society, AI technology is advancing rapidly. More and more leading technologists and scientists strive for AI technology. The education sector will benefit from it. Government spending and subsidies are also needed to promote equality in education and contribute to sustainable development. There is no doubt that AI will make an extremely important contribution to sustainability.

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