



SDG HANDBOOK

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



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TABLE OF CONTENT

• SDG 1 - Overview	1
• Understanding the concept	2
• Facts and Figures	3
• Your Title Goes Here	4
• Your Title Goes Here	5
• Your Title Goes Here	6
Attachment	7



SDG 9: INDUSTRY, INNOVATION AND INFRASTRUCTURE

OVERVIEW

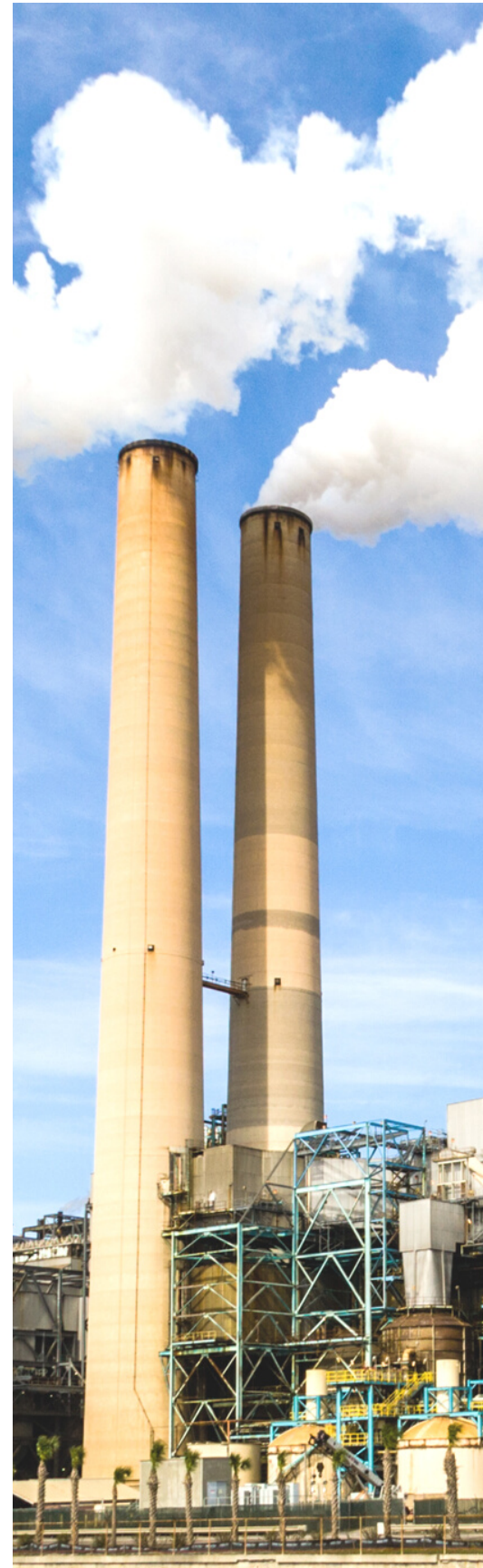
Sustainable Development Goal 9, one of the seventeen global goals established by the United Nations in 2015 as part of the 2030 Agenda for Sustainable Development, places a spotlight on the critical role of industry, innovation, and infrastructure in fostering sustainable development worldwide.

By promoting investment in infrastructure and fostering innovation, SDG 9 aims to bridge the development gaps among nations and create opportunities for all, especially in developing countries. This infrastructure should be designed to withstand environmental challenges, reduce inequalities, and provide access to essential services such as clean water, energy, and transportation. Furthermore, fostering innovation and technological progress is a central aspect of this goal, as it underpins economic growth, job creation, and the advancement of society.

Through the lens of "Sustainability Begins at Home," this handbook will delve into the various facets of SDG 9 and explore ways in which we can educate our children about the importance of sustainable industry, innovation, and infrastructure.

In the upcoming chapters, we will unravel the significance of SDG 9 in the context of sustainable development, providing practical insights and educational tools to engage children in this vital journey. Together, we will inspire our children to become agents of change, fostering a global community that values the role of SDG 9 in building a brighter and more sustainable world. Remember, sustainability truly begins at home!

Remember, sustainability truly begins at home!



UNDERSTANDING THE CONCEPT OF SDG 9:

So let's start by first understanding what SDG 9 is.

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Sustainable Development Goal 9 (SDG 9), titled "Industry, Innovation, and Infrastructure," is a global initiative that focuses on creating a more advanced, innovative, and well-connected world.

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To grasp the concept of SDG 9, let's break it down:

1.1 Industry: This aspect of SDG 9 centers on fostering economic activities, such as manufacturing, construction, and technology development, which drive economic growth and provide jobs. It's about building and supporting industries that contribute to a nation's prosperity.

1.2 Innovation: Innovation is all about finding better ways of doing things. In the context of SDG 9, it means promoting creativity, research, and the development of new technologies, products, and services. Innovation is crucial for staying competitive and improving our way of life.

1.3 Infrastructure: Infrastructure refers to the essential physical and organizational structures that enable a society to function smoothly. This includes things like roads, bridges, energy supply, and communication networks. Infrastructure is the backbone of a modern, connected society.



NOW LET'S INCREASE OUR UNDERSTANDING OF SOME KEY DIMENSIONS OF SDG 9:

1.1 Access and Equality: SDG 9 aims to ensure that people everywhere, regardless of where they live or their background, have equal access to industries, innovations, and infrastructure. This means bridging the gap between urban and rural areas and promoting equitable access for all.

1.2. Sustainability: It's about developing industries, innovations, and infrastructure in a way that minimizes harm to the environment. This includes reducing pollution, using resources wisely, and adopting eco-friendly technologies.

1.3. Resilience: Encourages the construction of infrastructure that can withstand shocks and continue to provide essential services.

1.4. Technological Advancement: It promotes research and development, the adoption of cutting-edge solutions, and the use of technology to improve industries and infrastructure.

WHAT IS THE RELEVANCE OF SDG 9 IN PROMOTING GLOBAL INNOVATION, AND WHY ARE WE EVEN DISCUSSING IT?

The relevance of SDG 9 in the global context is significant. Here's how:

Economic Growth: Industries and innovations are major drivers of economic growth. Developing nations can advance their economies by investing in these areas, creating jobs, and improving living standards for their citizens.

Quality of Life: Access to modern infrastructure and innovative technologies directly improves people's quality of life. It means better healthcare, education, transportation, and communication, which enhances well-being.

Innovation for Progress: Innovation is the engine of progress. SDG 9 encourages nations to invest in research and development, driving technological advancements that can solve pressing global challenges, such as climate change and healthcare access.

Global Connectivity: A well-developed infrastructure, including digital connectivity, facilitates global trade and communication. This interconnectedness leads to economic opportunities, cultural exchange, and international cooperation.

HERE ARE SOME SALIENT FEATURES OF SDG 9:

Comprehensive Scope: SDG 9, "Industry, Innovation, and Infrastructure," takes a comprehensive approach to development by addressing the interconnected elements of industry, innovation, and infrastructure. It recognizes that these aspects are fundamental to sustainable growth.

Global Relevance: SDG 9 is universally applicable, relevant to both developed and developing nations. It encourages all countries to invest in improving their industries, fostering innovation, and enhancing infrastructure for the benefit of their citizens.

Sustainability: A core feature of SDG 9 is sustainability. It emphasizes the need to develop industries and infrastructure in ways that minimize environmental harm, reduce resource consumption, and promote eco-friendly practices.

Resilience: Building resilient infrastructure is crucial in the face of increasing climate-related challenges and natural disasters. SDG 9 promotes the development of infrastructure that can withstand shocks and disruptions.

Technological Advancement: SDG 9 promotes technological advancement and innovation across various sectors, recognizing that technological progress drives economic growth and improves quality of life.

By understanding the concept of SDG 9, exploring its multi-dimensional aspects, and recognizing the relevance of SDG 9, we can lay a solid foundation for teaching our children about the importance of addressing Industry, Innovation and Infrastructure and inspire them to take action. Let's empower them to be agents of change in creating a more equitable and sustainable world.

GOAL 1 FACTS AND FIGURES

50%

Half of all people living in poverty are under 18

1 in 10

One Person in every 10 person is extremely poor

80%

80% of people living on less than \$1.90

736 M

736 Million people still live in extreme poverty

10%

10% of the world population lives in extreme poverty

1.3 B

Some 1.3 billion people live in multidimensional poverty



DISCUSSING THE INTERCONNECTIONS BETWEEN SDG 9 AND OTHER SDGS:

Global Innovation is interconnected with various other Sustainable Development Goals (SDGs), and progress in SDG 9 has a ripple effect on achieving other goals. Let's explore some of these interconnections:

2 ZERO HUNGER



SDG 2: ZERO HUNGER:

Access to modern infrastructure and innovation in agriculture are vital for achieving food security and ending hunger.

3 GOOD HEALTH AND WELL-BEING



SDG 3: GOOD HEALTH AND WELL-BEING:

Quality healthcare infrastructure and technological innovations in healthcare contribute to better health outcomes, aligning with SDG 3.

4 QUALITY EDUCATION



SDG 4: QUALITY EDUCATION:

Accessible infrastructure and technological tools support quality education (SDG 4) by enabling e-learning and improving school facilities.

5 GENDER EQUALITY



SDG 5: GENDER EQUALITY:

Industry and innovation can provide economic opportunities for women, promoting gender equality (SDG 5) and reducing gender disparities.

COMPONENT 2: INSPIRATION

INSPIRING STORIES OF INDIVIDUALS AND COMMUNITIES PROMOTING SDG 9 IN INDIA:



STORY 1

JYOTI GUPTA - BRIDGING THE DIGITAL DIVIDE

In the bustling city of Mumbai, Jyoti Gupta, a young computer science graduate, noticed a stark digital divide in her community. While some had easy access to the internet and digital tools, many children from low-income families were left behind, lacking the essential digital skills needed for the modern world. Determined to make a change, Jyoti started free computer literacy classes in her neighborhood. She collected donated computers, organized workshops, and taught children and adults alike how to use technology effectively.

Over time, her initiative grew, and local businesses began to support her efforts. With their help, Jyoti expanded her program to include coding classes for children and vocational training for adults. Her dedication not only bridged the digital divide but also created employment opportunities for underprivileged youth. Today, Jyoti's organization has empowered hundreds of individuals with digital skills, opening doors to better education and employment prospects.

STORY 2

The Solar Women of Dharnai - Empowering with Clean Energy



Dharnai, a remote village in Bihar, was deprived of basic infrastructure, including electricity, for decades. The lack of power hindered education, healthcare, and economic development. But the women of Dharnai decided to take matters into their own hands. With the support of a local NGO, they initiated a project to bring solar power to their village.

The women were trained to install and maintain solar panels, becoming the "Solar Women of Dharnai." They worked tirelessly to set up solar microgrids, providing electricity to their homes and the entire village. This clean energy transformed Dharnai. Students could study at night, clinics could operate with reliable power, and small businesses flourished.

The impact of the Solar Women of Dharnai extended beyond their village. Their initiative became a model for other communities, demonstrating the potential of sustainable energy solutions in rural India. These women not only empowered their own community but also contributed to SDG 9 by showcasing the importance of innovative infrastructure solutions.

KEY TAKEAWAYS FROM THESE INSPIRATIONAL STORIES:

Community Empowerment

Both Jyoti Gupta and the women of Dharnai demonstrated the power of community-driven initiatives in achieving SDG 9. They harnessed local resources and skills to bridge gaps in infrastructure and technology.

Innovation and Resourcefulness

These stories highlight the importance of innovation and resourcefulness in addressing infrastructure challenges. Creative solutions, whether in digital literacy or clean energy, can drive positive change.

Inclusive Growth

The initiatives in these stories promote inclusive growth by providing opportunities for underserved communities to access infrastructure and technology. This contributes to reducing inequalities.

Local Leadership

These stories underscore the significance of local leadership in achieving sustainable development goals. Individuals and communities can be powerful agents of change when they take initiative and collaborate with others.

Empowering Women

In both stories, women played a crucial role in driving change. Gender equality is not just an outcome but also a driving force for achieving sustainable development.

Take Action

Remember, every action, no matter how small, contributes to the collective effort to end poverty and creating a more equitable world. Be inspired, take action, and make a lasting impact on the lives of others.

SUCCESSFUL INITIATIVES WORKING TOWARDS POVERTY REDUCTION IN INDIA:

1. DIGITAL INDIA CAMPAIGN:

Launched in 2015, the Digital India campaign is a comprehensive initiative aimed at transforming India into a digitally empowered society and knowledge economy. The campaign focuses on improving digital infrastructure, expanding internet access, and promoting digital literacy across the country. Key components include the rollout of high-speed broadband connectivity to rural areas, the establishment of Common Service Centers (CSCs) for digital services delivery, and the promotion of e-governance. Digital India has significantly improved access to digital technologies and created opportunities for innovation, entrepreneurship, and economic growth. It aligns with SDG 9 by fostering innovation, expanding digital infrastructure, and enhancing access to information and communication technologies (ICTs).

2. BHARATNET PROJECT:

The BharatNet project, initiated in 2011, aims to connect all of India's rural areas with high-speed broadband internet. It involves the laying of optical fiber cables to bring internet connectivity to over 250,000 village panchayats (local administrative units). By providing affordable internet access to rural communities, the project has opened up opportunities for education, healthcare, e-commerce, and digital governance. Access to information and digital tools has empowered individuals and communities, contributing to economic development and social inclusion. The BharatNet Project directly supports SDG 9 by enhancing digital infrastructure and bridging the digital divide.

3. ATAL INNOVATION MISSION (AIM):

Launched in 2016, the Atal Innovation Mission is a flagship initiative that promotes innovation and entrepreneurship among Indian youth. AIM aims to create a culture of innovation and scientific research by establishing Atal Tinkering Labs in schools, Atal Incubation Centers in universities, and Atal New India Challenges to solve real-world problems through innovation. By fostering a spirit of innovation and entrepreneurship, AIM contributes to economic growth and industry development. It aligns with SDG 9 by emphasizing the importance of innovation in industry, infrastructure, and technology development.

KEY TAKEAWAYS FROM THESE SUCCESSFUL INITIATIVES:

- 1. Digital Empowerment:** These initiatives have significantly increased digital literacy and access to information and communication technologies (ICTs) in India, promoting digital empowerment and economic growth.
- 2. Rural Connectivity:** The Digital India campaign and the BharatNet Project have played a crucial role in connecting rural areas, providing access to education, healthcare, and government services.
- 3. Innovation Ecosystem:** The Atal Innovation Mission has fostered an innovation ecosystem in India by nurturing the creativity and problem-solving skills of young entrepreneurs. This leads to technological advancements and industry growth.
- 4. Inclusive Development:** These initiatives prioritize inclusive development by reaching marginalized and rural communities, narrowing the digital divide, and creating opportunities for economic and social advancement.

Activity: Poverty Simulation

"WALK IN THEIR SHOES"

OBJECTIVE

The "Walk in Their Shoes" poverty simulation activity aims to help children experience simulated scenarios of limited resources, inequality, and challenges faced by individuals living in poverty. By participating in this fun and interactive game, children will develop empathy, critical thinking, and a deeper understanding of poverty-related issues.



MATERIALS REQUIRED:

1. Different colored wristbands or stickers to represent different economic groups (e.g., green for high-income, yellow for middle-income, red for low-income, and blue for extremely low-income).
2. Several stations set up around the activity area, each representing different aspects of life, such as food, education, healthcare, housing, and employment.
3. Props and signs to represent various resources and challenges (e.g., play money, empty plates, schoolbooks, medical kits, and cardboard boxes for shelter).



Instructions

1. Divide the children into different economic groups by giving them colored wristbands or stickers. Explain that each group will face different challenges based on their assigned economic status.

2. Set up the stations around the activity area, with each station representing a different aspect of life affected by poverty. For example:

a. Food Station: Provide limited food options and portion sizes to low-income groups, while high-income groups have access to a variety of nutritious meals.

b. Education Station: Low-income groups may have limited access to school supplies or face difficulties attending school, while high-income groups have all the necessary resources.

c. Healthcare Station: Low-income groups may have long waiting times or limited access to medical care, while high-income groups have prompt and comprehensive healthcare services.

d. Employment Station: Low-income groups may face limited job opportunities or lower-paying jobs, while high-income groups have more career options and higher salaries.

3. Instruct each group to rotate through the stations and experience the challenges and limitations faced by their assigned economic status. Encourage them to interact with the props and signs at each station to simulate real-life situations.

4. After the activity, gather all the children together for a group discussion.

Ask them questions such as:

Q: How did you feel during the simulation? What challenges did you face?

Q: Did you notice any inequalities or disparities between the economic groups?

Q: What difficulties do people living in poverty encounter in their daily lives?

Q: How can we, as individuals and a community, work together to address poverty-related issues and create a more equitable society?

"WALK IN THEIR SHOES"



Outcome:

The "Walk in Their Shoes" poverty simulation activity will help children empathize with the difficulties faced by individuals living in poverty. It encourages critical thinking about poverty-related issues and promotes discussions on social justice, inequality, and the importance of supporting those in need. By experiencing these simulated scenarios, children will gain a deeper understanding of the impact of poverty and be inspired to take compassionate actions towards building a more inclusive and empathetic community

Conclusion:

Congratulations on completing the "Sustainability Begins at Home: Teaching Our Children SDG 1 through Small Actions" handbook! Throughout this guide, we have explored the significance of Sustainable Development Goal 1 (SDG 1) - No Poverty, and discovered ways to inspire our children to take action in addressing poverty. Let's recap the key takeaways from our journey:

Understanding Poverty: We delved into the multidimensional aspects of poverty, recognizing that it extends beyond income and encompasses education, health, social inclusion, and environmental factors. Poverty eradication is essential for promoting human rights, socio-economic development, peace, and stability.

The Power of Small Actions: We learned that even small actions can make a difference. By engaging in activities, promoting empathy and compassion, and supporting local initiatives, we can contribute to poverty reduction efforts.

Interconnections with Other SDGs: We explored the interconnections between SDG 1 and other Sustainable Development Goals. Poverty is intertwined with hunger, health, education, gender equality, and more. Progress in SDG 1 positively influences the achievement of other goals.

Inspiring Examples: We were inspired by stories of individuals and communities who have combated poverty and successful initiatives in poverty reduction. Their experiences demonstrate the power of resilience, innovation, and collective action.

INSPIRATION FOR TAKING ACTION:

By embracing the knowledge gained from this handbook, we have the power to create meaningful change and contribute to the realization of SDG 9. Here are some inspirational ways to take action and inspire others:

1. Raise Awareness: Start by educating yourself and others about the importance of industry, innovation, and infrastructure in sustainable development. Share knowledge through discussions, workshops, or social media to raise awareness and build support for change.

2. Volunteer and Support NGOs: Take the initiative to volunteer your time, skills, or resources to organizations working towards improving industry, fostering innovation, or enhancing infrastructure. Your involvement can have a direct and positive impact on communities in need.

3. Mentorship and Skill Sharing: Offer mentorship or skill-sharing opportunities to empower individuals, especially young people, in developing their potential. Help them acquire skills that are vital for participating in the workforce and contributing to economic growth.

4. Sustainable Philanthropy: When giving back, prioritize initiatives that focus on long-term sustainability and positive, lasting impacts. Support projects that align with SDG 9's goals of creating resilient infrastructure, promoting innovation, and enhancing industry.

5. Advocate for Policy Change: Engage with local and national leaders to advocate for policies that promote social justice, inclusivity, and poverty eradication. Join or support advocacy campaigns that champion the principles of SDG 9 in your community.

Remember, every action, no matter how small, contributes to the collective effort to end poverty and creating a more equitable world. Be inspired, take action, and make a lasting impact on the lives of others.

Additional Resources

RECOMMENDED BOOKS, FILMS, AND WEBSITES FOR FURTHER EXPLORATION OF SDG 1:

BOOKS

"The Third Industrial Revolution: How Lateral Power Is Transforming Energy, the Economy, and the World" by Jeremy Rifkin

"The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses" by Eric Ries

"The New Industrial Revolution: Consumers, Globalization and the End of Mass Production" by Peter Marsh

"Infrastructure: A Guide to the Industrial Landscape" by Brian Hayes

"Innovators: How a Group of Inventors, Hackers, Geniuses, and Geeks Created the Digital Revolution" by Walter Isaacson

FILMS

"The True Cost" (2015) - Explores the social and environmental impacts of the fashion industry, highlighting the need for sustainable practices in manufacturing and infrastructure.

"Print the Legend" (2014) - Documents the rise of 3D printing technology and its potential to disrupt traditional manufacturing and infrastructure development.

"Design & Thinking" (2012) - Examines the role of design thinking in solving complex challenges, including those related to industry and infrastructure.

"Modern Times" (Movie) - A classic film by Charlie Chaplin that satirizes the dehumanizing effects of industrialization and the pursuit of efficiency.

5. "The Social Network" (Movie) - Depicts the creation of Facebook and the transformative power of digital innovation in the 21st century.

LEARN MORE HERE

United Nations Sustainable Development Goals - Visit the official SDG website to access reports, data, and resources related to all the Sustainable Development Goals, including SDG 9.

World Bank - Infrastructure - Explore the World Bank's resources and data on infrastructure development, policies, and projects.

UNIDO - United Nations Industrial Development Organization - Learn about UNIDO's efforts to promote industrial development and innovation for poverty reduction and sustainable growth.

Global Infrastructure Hub - Access research and insights on global infrastructure development and financing.

Now, it is time for us to take action.

Remember, sustainability begins at home, and our actions, no matter how small, have the power to create lasting change.

As we conclude this handbook, we invite you to explore other Sustainable Development Goals and continue your journey towards sustainability. Each goal is interconnected and contributes to creating a better world for present and future generations.

Thank you for joining us on this inspiring journey of teaching our children about SDG 9. Let's continue our efforts to foster a sustainable Bhava (consciousness) and contribute towards building a world where no one lives in poverty.

**Take the knowledge gained here and make a difference.
Sustainable Bhava starts with us!**

To learn more about sustainable living and other Sustainable Development Goals, visit sustainablebhava.org and continue your journey towards a more sustainable future. Let's create a world of equality, justice, and opportunity for all together



About Us

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