

# BAREFOOT COLLEGE - INDIA



A unique development strategy initiated in India that focuses on empowering rural communities by harnessing traditional knowledge and skills, combined with modern technology.

## ! PROBLEM

- Rural areas in India, like Tilonia, faced high levels of poverty and unemployment. Traditional livelihoods were often insufficient to meet the basic needs of the community.
- Many people in rural areas had little to no access to formal education or vocational training.
- Schools were often under-resourced, and children, particularly girls, faced barriers to attending school, such as the need to work to support their families.
- Many rural communities had no access to reliable electricity. This affected various aspects of life, including education, health, and economic productivity.

## ✓ SOLUTION

- Barefoot College was founded in Tilonia to train illiterate women, often grandmothers, to become solar engineers.
- These women are trained to install, maintain, and repair solar lighting systems, which brings sustainable energy to their communities.
- The college leverages the traditional knowledge and skills that exist within rural communities, including crafts, artisanal skills, and other forms of indigenous knowledge.
- Barefoot College emphasises the use of solar energy to address the energy needs of rural areas. Solar power is then used for lighting, water heating, and pumping.
- The college provides non-formal education to children and adults, focusing on practical skills and knowledge that are directly applicable to their lives.

## IMPACT ON DEVELOPMENT

### Job creation

- Training rural women as solar engineers has provided them with skills that enable them to earn a livelihood.
- These women often become self-employed, installing and maintaining solar energy systems in their communities.
- By empowering women with technical skills, the college has helped reduce gender-based economic disparities, giving women greater control over their financial well-being.

### Energy access and economic productivity

- Access to solar energy has extended productive hours beyond daylight, allowing for increased economic activity.
- Solar energy reduces reliance on inefficient and costly energy sources like kerosene lamps, cutting household energy expenses.

### Replication and scaling

- The success of the Barefoot College model has led to its replication in other regions and countries, amplifying the economic benefits across more communities.
- The innovative approach has attracted partnerships with international organisations, bringing additional resources and investment into rural developments.

# TOURIST TAX - BHUTAN



Bhutan's tourist tax, officially known as the Sustainable Development Fee (SDF), is a key element of the country's unique tourism strategy. This approach is part of Bhutan's overarching philosophy of Gross National Happiness, which emphasises sustainable development, cultural preservation, environmental conservation, and good governance.

## ! PROBLEM

- The government recognised that unchecked mass tourism could lead to environmental degradation, including pollution, deforestation, and habitat destruction.
- Bhutan has a rich cultural heritage deeply rooted in its Buddhist traditions. The government was concerned that mass tourism could lead to cultural erosion.
- While tourism presents a significant opportunity for economic growth, Bhutan's leadership wanted to ensure that this growth was sustainable and equitable.

## ✓ SOLUTION

- The SDF is a mandatory fee levied on all international tourists, recently cut from \$200 to \$100 per person per night. Children aged 6-12 are half price, and children under 6 are free.
- This fee is meant to attract tourists who can afford to pay a premium for a unique and meaningful experience, rather than mass tourism, following a principle of 'High-Value, Low-Impact'.
- A portion of the revenue from the SDF is allocated to environmental conservation projects, including national parks and wildlife sanctuaries.
- By attracting high-value tourists, Bhutan can focus on developing eco-friendly tourism infrastructure that minimise the environmental impact.

## IMPACT ON DEVELOPMENT

### Revenue generation

- Funds from the SDF are used to improve transportation infrastructure, healthcare and education services, and public utilities.

### Supporting local businesses

- Attracting high-value tourists who are likely to spend more on local products means that the SDF supports local artisans and craftspersons, benefitting traditional local industries.
- Increased demand for locally produced food and beverages boosts the agricultural sector, with farmers and local food producers benefitting from tourists engaging with local culture.

### Balanced regional development

- By funding the development of tourism infrastructure in less-visited areas, the SDF promotes more balanced economic growth across different regions.
- Initiatives supported by the SDF often focus on community-based tourism, where local communities are directly involved in and benefit from tourist activities.

# BICYCLE DISTRIBUTION SCHEMES - INDIA



State-run free bicycle distribution schemes in India are a unique and innovative development strategy aimed at enhancing social and economic outcomes, particularly in rural and underprivileged areas.

## ! PROBLEM

- In many rural areas, schools are often located too far from students' homes.
- There is a lack of affordable transport, acting as a barrier to regular attendance and leading to higher dropout rates.
- The additional costs of transport could be burdensome for poor families who may have to make a choice between allocating money for transport or for basic necessities.
- Girls often face additional challenges in accessing education due to societal norms and safety concerns when commuting.

## ✓ SOLUTION

- Free bicycle schemes, administered by the state, target girls especially in rural areas.
- Bicycles reduce the time and effort required for students to travel to school, making it easier to attend regularly.
- Removing such a large barrier to attendance helps to reduce dropout rates amongst girls.
- By targeting girls, the scheme directly addresses the gender disparity in education, with the proportion of girls cycling more than doubling in the decade following the scheme's introduction.
- The free bicycles provided by the scheme effectively eliminate the cost of transportation to school, freeing up money for families to use elsewhere.

## IMPACT ON DEVELOPMENT

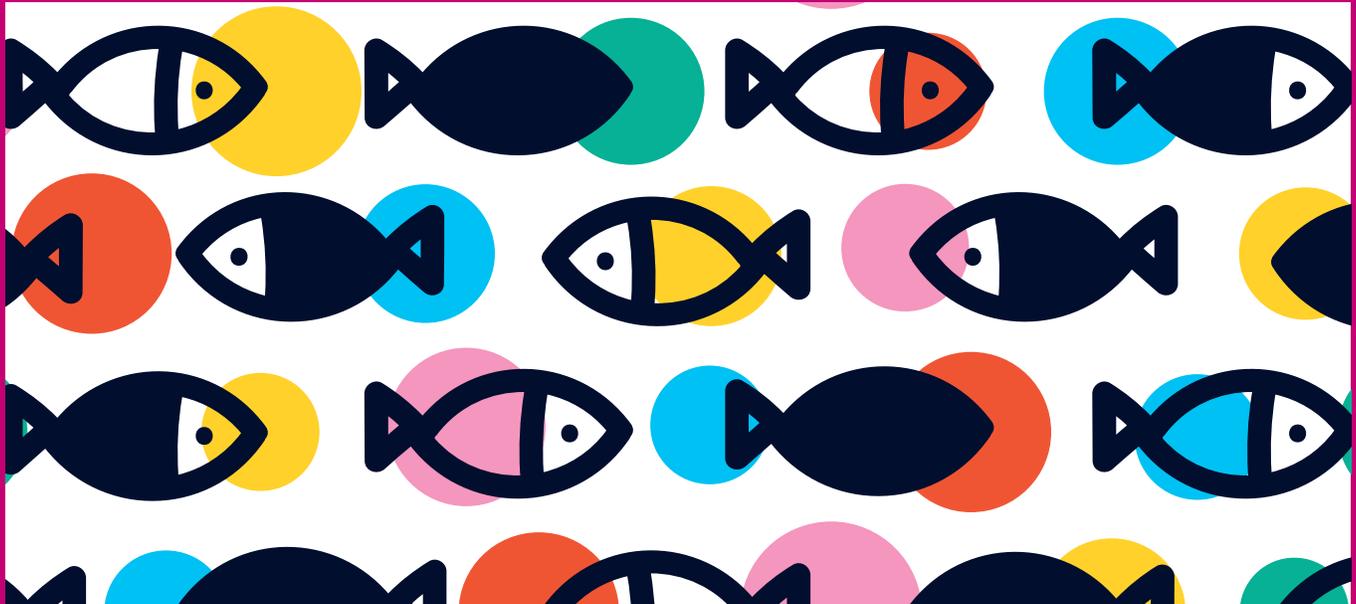
### Long term economic growth

- By enabling students to attend school regularly, the scheme contributes to the development of human capital, equipping individuals with skills and knowledge needed for employment.
- Education is a vital factor needed to escape poverty. By ensuring that more children complete their schooling, the scheme helps to break the poverty cycle in many families.

### Reducing economic inequality

- Providing bicycles to marginalised groups has reduced economic inequality by giving them better access to education and, subsequently, economic opportunities.
- By empowering girls to continue their education, the scheme promotes gender equality in the economy, helping more women enter the workforce and pursue their own goals.

# LUCKY IRON FISH - CAMBODIA



The Lucky Iron Fish are part of a development strategy aimed at combating iron deficiency and anaemia in Cambodia through an innovative and culturally appropriate approach.

## ! PROBLEM

- Iron deficiency is a major health issue in Cambodia, especially among women and children.
- This can lead to anaemia, which causes fatigue, impaired cognitive and physical development, and increased risk of complications during pregnancy and childbirth.
- Traditional supplementation and dietary changes were too costly and inaccessible.

## ✓ SOLUTION

- The solution was to design a small fish-shaped iron ingot that can be boiled with food to release iron, thereby increasing the dietary iron intake of those using it.
- The fish is a culturally significant symbol in Cambodia, associated with good luck and prosperity, making the iron fish both functional and culturally relevant.
- The fish are produced locally, supporting the local economy and ensuring the products are affordable and accessible.
- Collaborations with local health organisations, NGOs, and government agencies have helped with the wider distribution and acceptance of the product.
- The strategy involves working closely with local communities to educate them about iron deficiency and how to use the Lucky Iron Fish. This includes cooking demonstrations and health workshops.

## IMPACT ON DEVELOPMENT

### Cost-effectiveness

- The Lucky Iron Fish is a one-time purchase that lasts up to five years, a much more affordable option than ongoing iron supplements or frequent medical treatments.
- The fish is produced locally using inexpensive materials and labour, keeping production costs low and making it more accessible to citizens.

### Local economic development

- The production, distribution, and education components of the project create jobs in the local community.
- Sourcing materials and labour locally, stimulates economic growth and supports local industries.

### Enhanced productivity

- By improving the overall health of the population, the workforce becomes more productive both in work and daily activities.
- These productive workers are more able to contribute positively to the local economy, increasing participation in the workforce and economic output.

### Reduction in healthcare costs

- Effective prevention of iron deficiency reduces the need for medical treatments associated with anaemia and related issues.
- This can decrease the financial burden on both individuals and the healthcare system.

# CONDITIONAL CASH TRANSFERS - BRAZIL



The 'Conditional Cash Transfers' strategy, particularly exemplified by Brazil's Bolsa Família program, is a social policy designed to reduce poverty and promote human capital development.

## ! PROBLEM

- Brazil faced significant levels of poverty, with a substantial portion of the population living below the poverty line.
- Brazil had, and still has, one of the highest levels of income inequality in the world.
- Many children from low-income families had high dropout rates and low school attendance.
- There were gaps in vaccination coverage and routine health check-ups among children, which affected overall public health.
- Existing social programs were often criticised for inefficiency, which made it difficult to ensure that aid reached those who needed it most.

## ✓ SOLUTION

- The Bolsa Família program targeted families living below a certain income threshold, specifically focusing on families living below the poverty line.
- Eligible families received monthly payments, with the amount varying on family size and level of income.
- In order to continue receiving the benefits, families must ensure that:
  - Children will attend school regularly, with the goal of achieving at least 85% attendance.
  - Children will keep up with regular health check-ups and vaccinations.

## IMPACT ON DEVELOPMENT

### Poverty alleviation

- The program provided cash transfers directly to low-income families, immediately helping to lift many families out of poverty and improve their standard of living.
- Research has shown that the program helped decrease the proportion of people living below the poverty line and reduced extreme poverty.

### Economic stimulus

- The cash transfers boosted consumer spending among low-income families, increasing household consumption and providing a stimulus to local economies.
- The additional spending created a multiplier effect, where increased demand for goods and services in poorer regions spurred further economic activity.

### Human capital development

- By tying cash transfer to school attendance, Bolsa Família incentivised families to keep their children in school, leading to better education outcomes.
- Investments in education contribute to a more skilled workforce in the long term, enhancing economic productivity and supporting sustainable growth.
- The program's health related conditions encouraged families to access preventive care and vaccinations, improving overall public health.

# WIND-UP RADIO



The wind-up radio, invented by Trevor Baylis, is a classic example of innovation driven by necessity and aimed at social impact. The radio was used to stimulate development across the continent of Africa and beyond in an attempt to tackle the AIDS crisis.

## ! PROBLEM

- Trevor Baylis was motivated by the AIDS crisis in Africa and realised that many communities lacked access to critical information about HIV/AIDS prevention and treatment.
- In many rural and isolated regions, especially in developing countries, access to a stable electrical grid is likely to be non-existent or highly unreliable.
- Without electricity to power means of communication, efforts to educate people about health issues and promote behaviour change were severely hampered.

## ✓ SOLUTION

- Baylis designed a wind-up radio, intended to be simple, robust, and sustainable. It operates without batteries or electricity, instead using a hand-crank mechanism to generate power, making it ideal for areas without electrical infrastructure.
- There are no batteries required, reducing the ongoing costs for uses and making them particularly beneficial for users in remote areas where batteries are expensive or hard to come by.
- By providing access to radio broadcasts, the wind-up radio enables communities to receive important information on health, education, and emergency alerts.
- The ability to listen to educational programs and news helps individuals make informed decisions, improve their health, and stay connected with broader societal developments.
- Baylis made sure to patent his radios to secure funding and he ensured that he retained control over the invention and could continue to promote its use for social good.

## IMPACT ON DEVELOPMENT

### Economic empowerment of communities

- Providing access to vital health education helps to improve health standards across entire communities, helping people live and work for longer.
- As well as health advice, communities were also able to use the work to transfer information on a range of topics such as weather forecasts and agricultural practices. This aided communities to engage in economic activities more effectively.

### Job creation

- The production of wind-up radios creates job opportunities in manufacturing and assembly, especially in regions where these activities are newly established.
- Setting up distribution channels, especially in remote areas, creates additional jobs and economic activities.

### Attracting investment

- The success of the wind-up radio demonstrated the potential for innovations that address social issues to attract investment. This led to further investment and the development of more products such as wind-up torches.

# INCREMENTAL HOUSING - CHILE



The Iquique Housing Project located in Chile is a well-known social housing initiative developed by the architectural firm Elemental. This project is notable for its innovative approach to addressing housing shortages and urban poverty through a strategy known as 'incremental housing' or 'half-houses'.

## ! PROBLEM

- Many low-income families in Iquique were living in informal settlements constructed from temporary or substandard materials.
- Due to limited housing options, multiple families often lived together in cramped conditions, leading to unsafe and overcrowded living conditions.
- The cost of urban land was prohibitively high for low-income families, making it impossible for them to afford formal housing in the city.
- Traditional social housing projects were often expensive and could not be scaled sufficiently to meet the demand.
- Previous government-led housing initiatives often followed a top-down approach, with little to no input from the communities they aimed to serve.

## ✓ SOLUTION

- The project's design process involved significant community participation, with residents consulted to understand their needs and preferences.
- Elemental designed and built the first half of each house, including essential structural components and utilities.
- Each house was designed with a clear framework for future expansion, with families given guidelines on how they could extend their homes over time.
- The initial cost per unit was kept low by only providing the essential half of the house, enabling the project to maximise the number of recipients.
- The materials and construction methods used ensured durability and safety, finally providing formal housing for many marginalised communities.

## IMPACT ON DEVELOPMENT

### Economic empowerment of residents

- By providing formal housing, the project enabled residents to invest in their homes, turning them into valuable assets and helping them to create their own wealth.
- As residents expanded their homes, they often hired local labour and purchased materials locally, stimulating the local economy.

### Increased stability and reduced vulnerability

- Secure housing reduced the risk of eviction and displacement, allowing families to plan for the future in a stable economic environment.
- Living in legally recognised housing within the urban area provided residents with better access to education, healthcare, and employment opportunities.

### Leveraging government resources

- By using public funds efficiently to provide only the essential 'half' of the housing, the project maximised the impact of government resources, allowing more families to benefit.
- By improving the living conditions and reducing informal settlements, the project potentially lowered long term costs for the government on health and social services.

# CABLE CAR PUBLIC TRANSPORT - BOLIVIA



The La Paz cable car, officially known as Mi Teleférico, represents an innovative approach to urban transportation designed to address the unique geographical and logistical challenges of La Paz and neighbouring city El Alto in Bolivia.

## ! PROBLEM

- La Paz is situated in a valley at the bottom of steep hills, while El Alto is located on a plateau.
- The altitude difference and rugged terrain make traditional road transport inefficient and slow.
- The narrow and winding streets of La Paz, combined with a growing population, have led to significant traffic congestion, making daily commutes lengthy.
- The levels of traffic congestion were contributing to high levels of air pollution and the government was in need of a greener alternative.

## ✓ SOLUTION

- Initiated in 2012, a cable car system consisting of several interconnected lines was constructed, forming a comprehensive network that covers key areas of La Paz and El Alto.
- The system features numerous stations strategically located in densely populated areas and important transit points.
- The cable car network is integrated with other forms of public transportation, such as buses, providing a seamless travel experience for commuters.
- The cable car lines provide direct routes between key areas, significantly cutting down travel time compared to the winding roads.
- Unlike buses and cars, the cable cars are not affected by traffic jams, offering consistent and predictable travel times.
- Public engagement and education campaigns helped build trust among residents, ensuring high support and participation with the system.

## IMPACT ON DEVELOPMENT

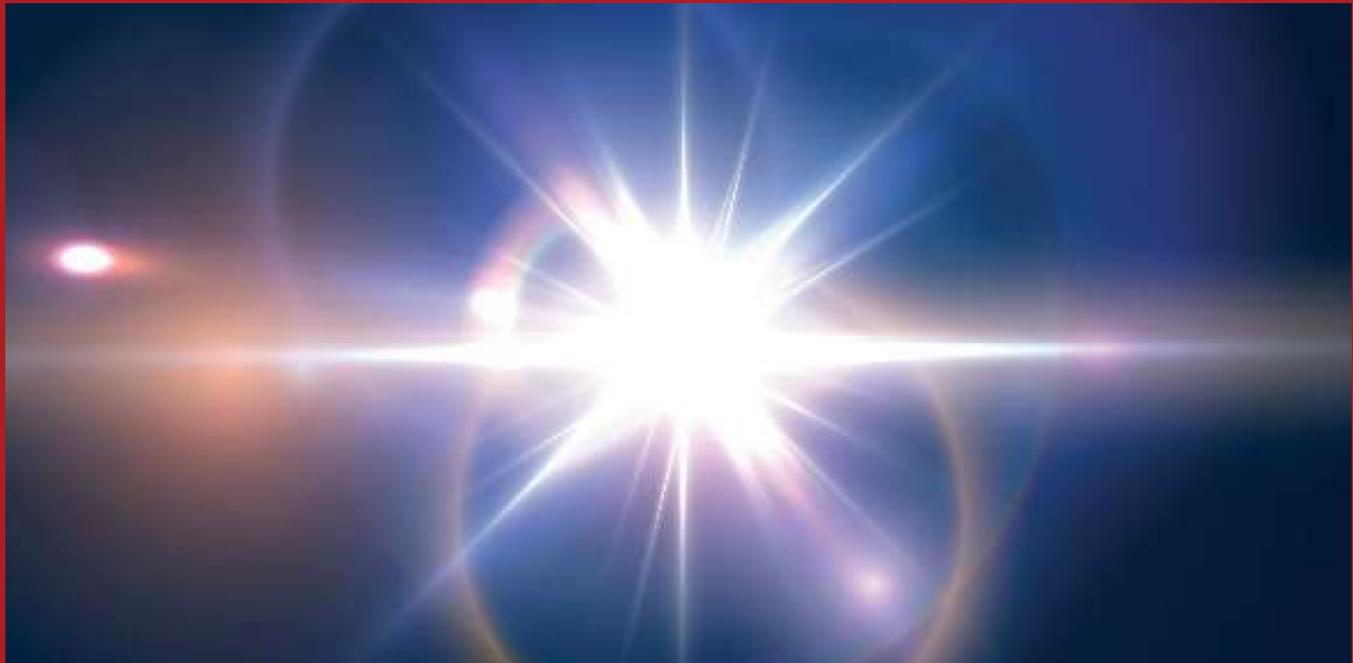
### Improved access to jobs and services

- The cable car system has improved access to employment opportunities, particularly for residents of El Alto who commute to La Paz, enabling people to seek better jobs.
- Improved transportation has made it easier for residents to access services such as healthcare, education, and shopping, contributing to a better quality of life.

### Tourism growth

- Easier access to cultural and historical sites in La Paz and El Alto has made the region more appealing to tourists, with a transport network that can now support more visitors.
- The cable car network itself has become a tourist attraction, drawing visitors interested in the world's highest urban cable car system, with local businesses benefitting.

# LITER OF LIGHT - PHILIPPINES



The Liter of Light project is a global initiative that gained momentum in the Philippines. It aims to provide affordable, sustainable lighting solutions to communities with limited or no access to electricity.

## ! PROBLEM

- Many communities in developing regions, including the Philippines, suffer from a lack of reliable and affordable electricity.
- Energy poverty limits access to basic services and opportunities, affecting everything from education to health.
- There was a reliance on kerosene lamps and other non-electric lighting sources which can lead to environmental and health issues.
- Inadequate waste management systems were causing large amounts of plastic waste to be discarded, left to pollute the environment.

## ✓ SOLUTION

- The Liter of Light project designed a light bulb that was produced with cheap and accessible materials that could refract sunlight to produce a light equivalent to a 55-watt incandescent bulb, as opposed to relying on electricity.
- The project began collecting used plastic bottles, water and bleach to construct easily accessible and recycled solar light bulbs.
- Volunteers and community members assemble the lights which are then distributed to local communities to be installed in the roofs of homes.
- Locals are trained to maintain and even produce the solar lights, ensuring sustainability and creating jobs.

## IMPACT ON DEVELOPMENT

### Job creation

- The project incorporates local communities into the production process, creating jobs for people and providing income and education.
- Community members are trained to produce and sell the solar lights, encouraging small-scale entrepreneurship.

### Cost savings

- By providing an affordable alternative to expensive grid electricity or kerosene lamps, the project helps families save money on energy expenses, allowing that spare money to be used elsewhere.
- Access to reliable lighting extends productive hours for both households and businesses, facilitating greater productivity, with more work and education able to be completed.

### Environmental and health benefits

- Replacing kerosene lamps helps to reduce health-related expenses for families, enabling a healthier population to be more productive and contribute more to the economy.
- The project promotes the use of renewable energy and recycling, which can have positive long-term effects on the local environment. A healthier environment supports agriculture, tourism, and other sectors crucial for economic development.

# MOBILE BANKING - KENYA



M-Pesa is a mobile banking and payment service launched in Kenya in 2007 by Safaricom, a leading telecommunications company. The development strategy behind M-Pesa is a compelling example of how technology can drive financial inclusion and economic growth in emerging markets.

## ! PROBLEM

- Kenya had a large unbanked population with limited access to traditional banking services.
- Many people lived in rural areas where banks were scarce or non-existent.
- There was a high demand for a secure and efficient way to send and receive money, particularly for people who were working in cities and needed to send money back to their families in rural areas.

## ✓ SOLUTION

- Safaricom partnered with commercial banks to integrate the M-Pesa system with existing banks, providing a seamless way to transfer funds between mobile accounts and bank accounts.
- Kenya had a high rate of mobile phone usage, even in rural areas, making mobile phones an ideal platform for delivering financial services.
- M-Pesa utilised basic SMS technology, which was widely accessible and did not require advanced smartphones.
- A network of local agents was established to facilitate cash transactions, becoming a critical part of the service and providing physical touchpoints for users.

## IMPACT ON DEVELOPMENT

### Increased financial inclusion

- By providing an accessible and affordable way to send and receive money, M-Pesa brought financial services to millions who previously had no access to banking.
- Users are able to save money securely and access microloans, which improves their financial security and ability to invest in their own education, healthcare and businesses.

### Economic growth and business development

- Small and micro-enterprises benefited from easier transactions, better cash flow management, and access to broader markets.
- Businesses, both large and small, were able to reach more customers by accepting mobile payments, leading to increased sales and market expansion.

### Government and policy benefits

- The success of M-Pesa encouraged regulatory bodies to develop frameworks that support mobile financial services, benefitting the broader economy by creating a more inclusive financial system.
- The growth of businesses and economic activity facilitated by M-Pesa contributes to increased tax revenue for the government, helping to fund public services and infrastructure.

# TOURISM - GOA



In an attempt to encourage greater tourism in Goa, a state in western India, the local government focused on leveraging the state's natural beauty, cultural heritage, and unique attractions to create a sustainable and thriving tourism industry.

## ! PROBLEM

- There was a heavy reliance on seasonal tourism that led to significant fluctuations in visitor numbers, causing economic instability for businesses dependent on tourism.
- Unregulated tourism activities and inadequate waste management exacerbated problems such as beach erosion, littering, and marine pollution.
- Poor road conditions, inadequate public transport, and limited connectivity to remote areas hindered the ease of travel within Goa.
- The economic benefits of tourism were not evenly distributed, with the coastal areas earning more rewards, leading to regional disparities and limited economic growth.

## ✓ SOLUTION

- Improved connectivity by upgrading roads, expanding the local airport, and increasing rail and bus infrastructure.
- Encouraged investment in a diverse range of accommodations, from luxury resorts to budget hotels.
- Developed amenities such as clean beaches, public restrooms, and tourist information centres.
- Ensured that basic services like water, electricity, and waste management are reliable and efficient.
- Developed facilities and explorations across the region, such as rural expeditions and adventure activities to encourage a more diverse range of tourism opportunities.
- Implemented comprehensive tourism policies that outline clear guidelines for sustainable tourism development, investment incentives and regulatory measures.

## IMPACT ON DEVELOPMENT

### Increased revenue

- With an increase in the number of tourists, both domestic and international, there is a direct boost in revenue generated by their spending on accommodation, food, shopping etc.
- Higher tourist spending leads to increased tax revenue for local and national governments such as from India's Goods and Services Tax.

### Job creation

- The tourism sector directly creates jobs in hotels, restaurants, travel agencies, tour operations, transportation services and many more industries.
- There is also significant indirect employment generated in sectors like construction and agriculture that support tourism.

### Infrastructure development

- Locals are able to benefit from the increased investment in infrastructure such as roads, airports, public transports, and utilities, improving the overall living standards.
- The thriving tourism industry will also attract more private investment, further improving the levels of infrastructure in the region.

# URBAN ROOFTOP FARMING - SINGAPORE



Urban Rooftop Farming in Singapore is a strategy aimed at enhancing food security, sustainability, and community engagement in a highly urbanised environment.

## ! PROBLEM

- Singapore is a densely populated island with limited land resources. As urban development continues, the availability of land for traditional agriculture diminishes.
- Singapore imports more than 90% of its food, making it highly vulnerable to global supply chain disruptions and trade fluctuations.
- The concentration of buildings and infrastructure in urban areas increases local temperatures, creating a phenomenon known as the urban heat island effect.

## ✓ SOLUTION

- Companies and building owners are encouraged to convert rooftop spaces into farms. This can be through direct investment or partnerships with agricultural firms.
- The Singapore government provides incentives, grants, and technical support to promote rooftop farming.
- Farms are encouraged to use soil less farming techniques due to their space efficiency and reduced water usage.
- Utilising vertical space on rooftops with stacked layers of crops maximises productivity.
- Green roofs contribute to reducing the urban heat island effect, managing stormwater, and improving air quality.
- Rooftop farming helps in reducing the carbon footprint associated with importing food and promotes sustainable agricultural practices.

## IMPACT ON DEVELOPMENT

### Economic diversification

- The development of rooftop farming has spurred the creation of new businesses and startups focusing on agricultural technologies.
- The potential for profitable urban farming ventures attracts private investment, fostering economic growth and innovation in the sector.

### Reduction in food import costs

- By growing food locally, Singapore reduces its dependency on imported food products. This can help lower the costs associated with importation and mitigate price volatility.
- Urban farms can also reduce transportation and logistical costs associated with moving food from farms to urban areas.

### Sustainable urban development

- Rooftop farms can contribute to green building certifications and sustainable development goals, potentially qualifying for subsidies that promote eco-friendly development.
- Green roof, including those used for farming, can reduce heating and cooling costs for buildings by providing natural insulation, leading to long-term energy savings.

# TV SUBTITLES - INDIA



The use of subtitles on TV in India to teach literacy, known as Same Language Subtitling, is an innovative and effective development strategy, aimed at improving reading skills and literacy rates among viewers.

## ! PROBLEM

- Despite significant progress over the years, India still faced high illiteracy rates, particularly in rural areas and among marginalised communities.
- Many regions in India had limited access to quality education, with schools under-resourced and a shortage of trained teachers.
- The dropout rates in primary and secondary education were high, with many children leaving without acquiring basic literacy skills.
- Women and girls were particularly disadvantaged, with lower literacy rates compared to men and boys.

## ✓ SOLUTION

- Popular television programs, especially songs and movies, were chosen to be subtitled because they naturally attract a large audience.
- Subtitles were created in the same language as the audio, meaning Hindi songs would have Hindi subtitles, Tamil songs would have Tamil subtitles, and so on.
- As viewers watch the program, they see the text and hear the corresponding audio simultaneously, reinforcing word recognition and comprehension.
- Since songs and popular movie dialogues are often repetitive, viewers get multiple opportunities to see and hear the same words.

## IMPACT ON DEVELOPMENT

### Improved workforce skills

- Higher literacy rates translate to a more skilled and employable workforce. Individuals are better equipped to undergo training and secure jobs that require literacy.
- Literate workers are generally more productive, as they can understand instructions, follow protocols, and communicate effectively, boosting workplace productivity.

### Economic inclusion

- Literacy empowers individuals to access better employment opportunities and earn higher incomes, contributing to poverty reduction.
- Improved literacy among women can lead to their greater participation in the workforce, increasing household incomes and creating a more diverse and inclusive workforce.

### Health and social benefits

- Literate individuals can better understand health information, leading to improved health outcomes. Healthy populations are more productive and incur lower healthcare costs.
- Literacy enables individuals to make informed decisions about their lives, finances, and communities. This leads to more effective participation in the economy and society.