

(7) Good Practices

<India>

Good Practice 1: The Karnataka State Highways Improvement Project (KSHIP)

1. EIA Phase	Implementation, Monitoring, and Report of an Environment Management Plan
2. System/implementation	Implementation
3. Country	India
4. Outline of good practice	(1) Sectoral Environmental Assessment In accordance with the guidelines issued by the World Bank, the current environment was assessed on the existing roads with a total length of 2,490 kilometers, while also an SEA-equivalent sectoral environmental assessment was conducted on multiple options of the road improvement plan to determine road improvement sections and road maintenance management sections. Based on the FS, the Government of Karnataka designated roads with a total length of 940 kilometers as road improvement sections and 1,100 kilometers as maintenance management sections. At the same time, 428 kilometers were excluded from the improvement section due to poor economic performance. This project was divided into two phases: 394 kilometers were specified as improvement target sites and 1,041 kilometers as maintenance management target sites in Phase 1. In Phase 2, there were 546 kilometers designated as improvement target sites and 57 kilometers as maintenance management target sites. Also, the 193-kilometer road of Corridor No. 12, running from Bijapur to Hubli, was set to meet the national highway standard by the government. This corridor was excluded from the maintenance management sections in Phase 1; finally, the maintenance management section was decided to be 848 kilometers. (2) EIA Implementation and EC Approval Even in Case of Exclusion from EC Application The Karnataka State Pollution Control Board (SPCB) issued to the plan in Stage 1 a pollution environmental clearance (project EC) and a written consent under the Water (Prevention and Control of Pollution) Act 1974 and the Air (Prevention and Control of Pollution) Act 1981. The Karnataka SPCB also insisted that, according to the EIA Notification 1994, this project be excluded from the application of EC procedures, and no EC needs to be obtained from the MoEF (presently, MoEFCC); however, the project implementation unit explained to MoEF the project descriptions and received approval. (3) Participatory Planning For conducting participatory planning with affected people and relevant bodies, a public hearing was held during the FS survey and the EIA survey. Stakeholders were invited to the planning process to have their suggestions reflected in the project design; doing so successfully allowed them to become aware that the project depended on them, allowing the plan to go smoothly.

	Matters pointed out in the public hearing included roofed bus stops, road safety, road surfaces with speed reduction measures, anti-dust measures, bypass and route changes, sidewalks, compensatory measures, tree planting, and conservation of natural water resources. (4) Establishment of an EMP Implementation Unit The Environment Management Plan Implementation Unit (EMPIU) was organized to take environmental conservation measures. This unit monitored the progress of the project, supervised the activities of construction operators, supported construction management engineers, recorded the implementation processes, developed training materials for, and provided training sessions to, staff members from the Public Works Department of the Government of Karnataka, and assisted effective information sharing with other relevant bodies. The EMPIU established under the Project Implementation Unit (PIU) consists of the Conservation and Monitoring Section, the Forest Environment Section, and the Monitoring and Training Recording Section. (5) Careful Environmental Conservation Measures The following detailed environmental conservation measures were suggested: - compensatory tree planting and compensatory afforestation for roadside trees that will be cut down - compression of harmless debris and waste materials for afforestation - conservation of fertile topsoil, stabilization of slopes, prevention of eroded slopes - anti-dust measures taken during the construction period - installation of soundproof walls to schools, hospitals, etc. - compensation of hand pumps, public drinking water supply, wells, and other water sources - conservation, avoidance, compensation, and improvement of water channels - alternative tree planting and alternative afforestation for roadside trees and forests that will be affected by projects - flood countermeasures taken in areas with a high risk of flooding - environmental monitoring during construction and operation works - conservation and restoration of religious facilities and cultural properties - bypass routes and linear change for impact reduction - vertical and crossover drainage ditches - underground recharge inlet and silt capture equipment - forest areas, vulnerable ecosystem areas, measures against wild-animal roadkill, biodiversity conservation - measures for religious facilities and other cultural facilities - reuse and safe disposal of bituminous waste and other hazardous waste materials - improvement of road safety - bus stations and bus stops (6) EMP Implementation Status Monitoring and Recording Careful monitoring was carried out to confirm the steady implementation
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	of planned environmental conservation measures and the effectiveness thereof. The monitoring was conducted on air quality, noise, water quality, compensatory afforestation and other relevant items before and during the construction work and during operation work. The results can be found on the website (https://kship.in/en/project_past_works.aspx). (7) Environmental Management Training - The training manager appointed a facilitator who developed a list of examples prepared by the EMPIU. - The EMPIU developed an annual training program. - The EMPIU created a special lecture program for environmental issues. (8) Establishment of a Compensation Specialized Section The Social Development and Resettlement Cell (SDRC) was established in the Project Implementation Unit to provide compensation services. (9) Cumulative Impact Assessment Cumulative impacts, including existing roads related to road extension, were visualized, and conservation measures were considered from a comprehensive perspective, such as traffic accident measures taken at the point of connecting to existing roads.
5. Background and issues identified (Why and how was this best practice started and evolved?)	Background to the Project The Karnataka State Highways Improvement Project (KSHIP) was commenced by the Public Works Department of the Government of Karnataka to restore the state roads and district roads with a total length of 2,490 kilometers. These roads were selected in the 1996 Strategic Comparison of Alternative Solutions, whose goal was to realize the local road network development policy. The KSHIP was carried out with funds from the World Bank signed on July 21, 2001, and completed in 2010. The road length in the original plan had been 2,414 kilometers, while it was decided to be 2,385 kilometers in the final plan. This project has three stages. As of 2019, Stage 1 was completed with assistance from the World Bank; Stage 2 is under construction with the support of the World Bank and the ADB; and, Stage 3, funded by the ADB, has not started yet. Issues of the Project - This project required a long extension of roads, which would affect buildings and trees along the roads, and this may have caused the risk of strong opposition from affected people. - Compensation measures were so many and so complicated that there was a risk that the measures would not be taken appropriately. - This project was excluded from EC application, meaning that there was a risk that impact prediction and conservation measures would not be considered appropriately. - Prolonged procedures for land acquisition may have caused a risk of delaying the project.

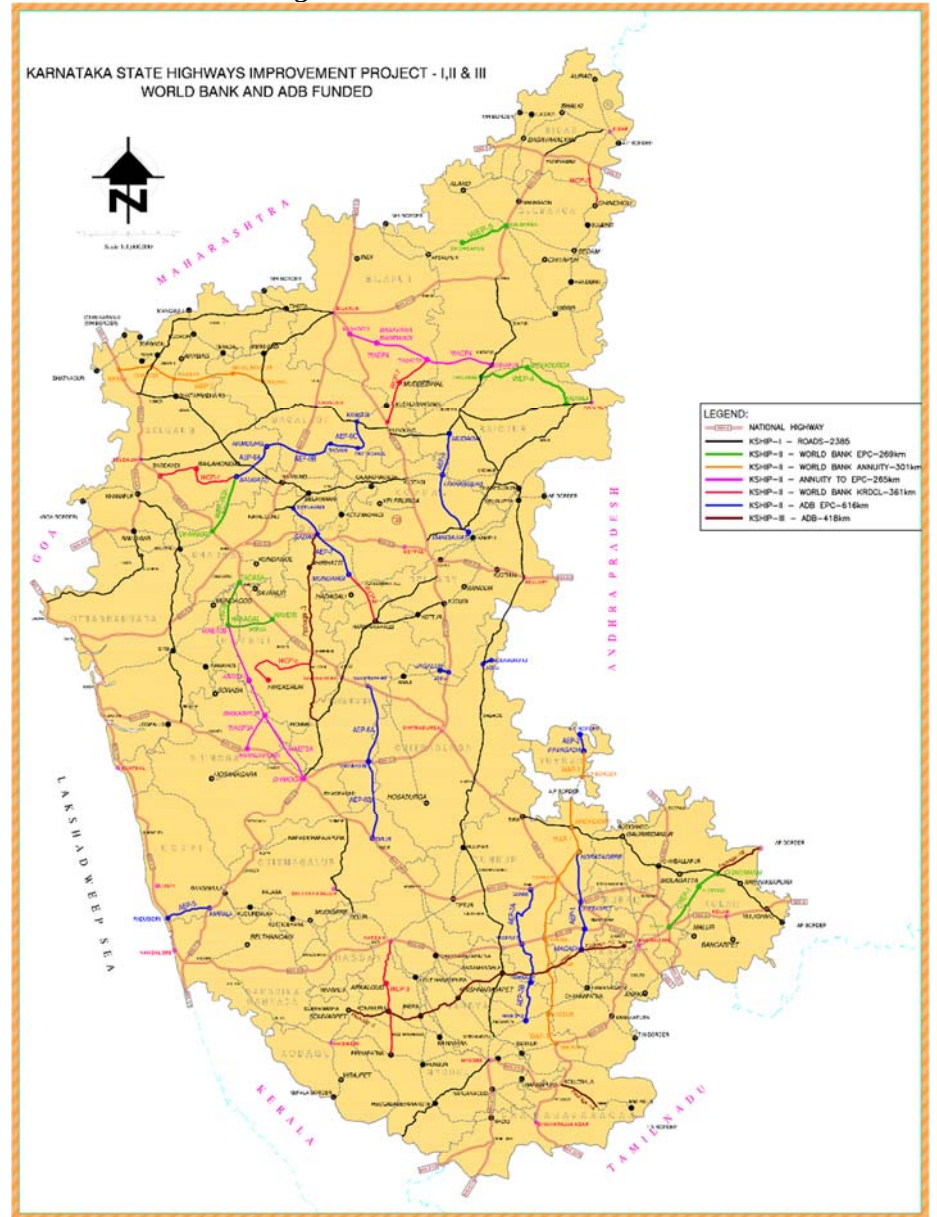
6. Key features of the Good Practices and its consequence /outcomes	The foregoing careful measures allowed for significant reduction in environmental impacts, helping the project go smoothly, except for land acquisition issues. - Establishing a special unit named the EMPIU enhanced the capability of taking conservation measures. - Environmental management training sessions were provided to the EMPIU and the Public Works Department (PWD). - Careful responses were provided to extensive environmental impacts and conservation measures. - Environmental conservation measures were steadily monitored and recorded. Delay in the Project Due to Land Acquisition It took a long time to acquire land, which caused a delay in the project. The method used for land acquisition in KSHIP Stage 1 was either (i) acquiring lands in accordance with the Land Acquisition Act 1894, or (ii) obtaining consent by paying compensation money through individual negotiations. It took 27 to 31.5 months (28 months on average) to complete land acquisition in KSHIP Stage 1. In India, multiple procedures are required if land acquisition is performed under the Land Acquisition Act 1894. It takes 1 to 2 years to complete one procedure; thus, completion of all the procedures requires 2 to 3 years. Officers in charge of land acquisition in KSHIP Stage 1 are also engaged in tasks other than land acquisition. As a result, the longest period of three years was required in the acquisition of some lands. These lessons were applied to Stage 2.
7. Lessons Learned/ way forward	- Establishing a special unit engaged in implementing, monitoring, and recording conservation measures, as well as in coordinating with external bodies, will lead to effective implementation of planned conservation measures. - Capacity-building is necessary for officers in charge of land acquisition. To accelerate the procedures, it should be helpful to appoint officers exclusively responsible for land acquisition. - Participatory planning, sectoral environmental assessment, and cumulative impact assessment are expected to avoid significant environmental impacts of the project and even disputes with the public.

8. Photo

Monitoring work during construction (Stage 1 supported by the World Bank)



Location of roads in Stages 1, 2 and 3



Good Practice 2: Rampur Hydro Electric Project (RHEP)

1. EIA Phase	Monitoring, resettlement compensation
2. System/ Implementation	Implementation
3. Country	India
4. Outline of good practice	Resident Participation-based Social Survey and Resettlement Compensation Planning Socioeconomic surveys and the compensation and resettlement plan are important items for the EIA and the Environment Management Plan (EMP), and these items were developed in accordance with the EIA Notifications 1994 and 2006. However, the issue of the Land Acquisition, Rehabilitation, and Resettlement Act (LARR) 2013 made it mandatory to conduct a detailed social impact assessment (SIA). After an independent SIA agency carried out an SIA, the Social Impact Management Plan and the Rehabilitation and Resettlement Plan (R&R Plan) were developed with deep involvement of the affected people. Affected communities were regularly involved in the preparation process of the socioeconomic survey, the SIA, and the R&R Plan. As a result, the involvement of communities came to play a vital role in obtaining and implementing environmental clearance; forest clearance; SIA under the Land Acquisition, Rehabilitation, and Resettlement Act 2013; and other green clearances. Careful Social Impact Assessment and Public Hearing In the social impact assessment, careful consideration was made to equally distribute the profits from the project and thereby prevent people from suffering negative impacts without receiving compensation. The survey results were incorporated into the RAP to develop the Sustainable Community Development Plan (SCDP). In order to solicit opinions and suggestions for the project, 17 public hearings were held for 200 people concerned, including local residents, community representatives, affected people, journalists, government officials, youth organizations, and women's organizations. In addition, seven public hearings were held for 140 people who were involved in the RAP development. Active Community Development The project operating body, Satluj Jal Vidyut Nigam Limited (SJVNL), opted for an active and innovative approach to local community protection and community development, while also providing various supports for equal compensation, diverse resettlement measures, on-demand local infrastructure upgrade, creation of job opportunities, upskilling, and welfare and cultural activities. In addition to recovery of affected community livelihoods, this project also supported the development of more extensive areas. The SJVNL's innovative project design of the hydroelectric projects (NJHEP and RHEP) and its successful community development programs led to the establishment of the Local Area Development Fund (LADF) under the State Hydropower Policy 2006 of the Government of Himachal Pradesh. Under the State Hydropower Policy 2006, hydroelectric projects generating more than 5 MW that are conducted within the state after 2008 are required to allocate 1.5% of the project cost to community development. Diverse and Generous Resettlement Compensations The following generous resettlement compensations were provided: - The land prices for the land acquisition were evaluated by comparing with the market price of the adjacent land for the past three years. The main villages were Jagathkhana and Poshna. Multiple parameters were used for fair land evaluation. Compensation unit price per Bigha was 4.0 to 4.5 lakhs of rupees (400,000 to 450,000 rupees), which was 10 times higher than the unit price set previously. The

	compensation amount was notified within one to one and a half years after the unit price was informed. - The parameters for calculating the compensation amount vary depending on the land type; for example, the unit price of irrigated farmland is four times higher than before, while non-irrigated farmland is 10 to 20 times higher than the previous unit price. - The District Level Market Rates Fixing Committee applied the determined compensation amount exclusively to the land acquisition of this project to prevent delays due to land acquisition. - Additional compensation measures were also taken for affected people. The compensation measures include the following: development of connecting roads to resettlement residential areas from the main lines; construction of roads to houses from the connecting roads; provision of sewerage and drainage systems; building of drinking water supply facilities; and installation of streetlights. - From the perspective of the poverty levels among groups of socially vulnerable people (scheduled castes/scheduled tribes (SC/ST) and female-headed households), the compensation money of 18,000 rupees was paid to each of 51 households within the area affected by the RHEP. - 34,000 rupees was paid to irregular residents subject to resettlement and 11,000 rupees to irregular land users as compensation money. - For the sake of long-term and sustainable growth, technical training and vocational training were provided to local young people to make them capable of galvanizing their communities. - Infrastructure for access to schools was developed to enhance educational effectiveness. - For the purpose of improving the local employment rate, small jobs were directly entrusted to local people, while vehicles were rented from local business operators, and construction work was also outsourced to local companies. - For the empowerment of women, free toilet seats were distributed to 2,191 households to make them more aware of health and sanitation, while pressure cookers were also provided to 139 families to reduce their housework, and camping designed to motivate them to increase their income was held as well. - Programs for AIDS education, agriculture, horticulture, and livestock were provided, while agricultural instruments were supplied, and financial assistance was also offered. In addition, water was supplied by drilling wells and using hand pumps and water trucks. - Health management facilities were established. - Basic infrastructure was developed around the planned project sites. - Financial support was provided to local, national, and international-level exhibitions and events, the renovation of various temples and shrines, and cultural night festivals. - A highly transparent and effective communication system was developed and operated for smooth communication with stakeholders.
5. Background and issues identified (Why and how was this best practice started and evolved?)	Outline of the Project The Rampur Hydro Electric Project developed by the 412 MW-generating Rampur Hydro Electric Plant was planned in Himachal Pradesh and supported by the World Bank. This project was conducted near Rampur, located along the Sutlej River, downstream from the Nathpa Jhakri Electric Plant, which had been funded by the World Bank. In the Rampur Project, power is generated at the electric power plant on the right bank of the Sutlej River using the final effluent from the Nathpa Jhakri Electric Plant instead of a dam. The project operating body, SJVNL, is a business entity co-owned by the Government of India and the Government of Himachal Pradesh. The Rampur Hydro Electric Project is a public investment project carried out under the support of Satluj Jal Vidyut Nigam Limited (SJVNL). Background to the Project Development

	In 2004, the run-of-river Rampur Hydro Electric Project was suggested by the Government of India. In October 2004, an implementation agreement was concluded between the Government of India and the Government of Himachal Pradesh (GoHP). On October 20, 2004, an implementation agreement was signed by SJVNL and the Himachal Pradesh State Electricity Board (HPSEB). In the autumn 2005, the World Bank issued the project information document. In December 2005, this project was granted a techno-economic clearance. After an EIA and an EMP were prepared and submitted to the Environment Impact Assessment Authority (EIAA) in 2006, an EC was issued by the Ministry of Environment and Forests (presently, MoEFCC) on March 31, 2006¹ (SJVNL & DHI [India] Water & Environment Pvt. Ltd 2007). In 2007, the International Bank for Reconstruction and Development (IBRD) provided financial assistance to the Rampur Hydro Electric Project. In 2012, the Rampur Hydro Electric Project was registered as one of the Umbrella Carbon Facility Tranche 2 of the World Bank. The Swedish Energy Agency issued a clearance to this project; however, the conditions established by the World Commission of Dams (WCD) are not applied to this project, and the EU Linking Directive is not followed. Land Acquisition Procedures SJVNL needed to acquire an 80-hectare tract of land for construction of buildings. 50 hectares of the land are government-owned forest districts, while 30 hectares are privately owned lands extending over four villages in three Panchayat districts of Kullu and Shimla, with 167 landowners. In September 2005, the State Revenue Department started the acquisition of the private lands in accordance with the Indian Land Acquisition Act 1984. In December 2005, the District Level Market Rates Fixing Committee was organized. Consisting of a Deputy Commissioner–class chairperson and representatives from the main administrative departments, this Committee conducted an independent and objective assessment. The land acquisition was completed in October 2006. EIA Survey and EMP Survey This project was classified as Category A, and EIA and EMP surveys were conducted by WAPCOS Limited (WAPCOS) and SJVNL. At the same time, the following surveys were also performed: - Indian Institute of Technology, Roorkee, conducted flow monitoring on the Nathpa-Jhakri stretch of the Satluj. - SJVNL carried out a visual survey of the inflowing river on the Nathpa-Jhakri stretch of the Satluj. - A water quality monitoring report was submitted quarterly to the Nathpa-Jhakri Hydro Electric Project (NJHEP), SJVNL, and the Himachal Pradesh State Pollution Control Board (PCB). - SJVNL performed a terrestrial biodiversity survey. - SJVNL carried out a cumulative impact assessment in the Satluj River area. This project observed the Environment Protection Act 1986, the EIA Notification 1994, the ADB policies, and World Bank project policies. SJVNL summarized compensation methods and implementation systems in the Resettlement Action Plans (RAP) and submitted them to MoEFCC.
6. Key features of good practice and	Major Compensation Measures as Best Practices - land acquisition in a fairer manner - option for voluntary resettlement

¹. <https://ejatlas.org/conflict/rampur-hydroelectric-project-india>.

its consequences/ outcomes	- support for income generation - assistance for better community welfare - continuous health insurance services - gender-sensitive support - direct dialogue with communities Results - The average income of affected families was 26% higher than the standard income, which was 41% higher than the average income of the families in the comparison group. - There was an increase in real estate properties for 63% of affected people, such as extension of the compensated land or house. - The ratio of people who have income and revenue from regular jobs is 5% higher than the standard, and 6% higher than at the sites of the comparison group. - The housing standard of affected people remarkably improved. - The land acquisition procedures went smoothly, with no strong opposition. - The land acquisition procedures were started much earlier than the start of construction, allowing for commencement of the civil work as scheduled. - Support details were determined independently by affected people, such as technical training, scholarships, clinics, and health care patrol vehicles.
7. Lessons Learned/ way forward	- Land acquisition, land assessment, and development of compensation rules should be done based on opinions from affected people. - Allowing affected people to use facilities at the planned project sites improves their living conditions. - Education and awareness-raising activities are important for smooth implementation of projects. - Conducting projects while harmonizing with communities improves the socioeconomic situation of the communities and even makes the projects go smoothly. - Resettlement and compensation should be performed promptly to avoid delays in projects. - It is effective to conduct awareness-raising campaigns to make people aware of various aspects of horticulture, agriculture, livestock, etc. Following the campaigns, the introduction of organic farming can publicize health risks and even improve agricultural processes and technologies. - Continued training sessions, even after the completion of the training, can further enhance participants' occupational abilities. - It becomes hard to measure the effectiveness of projects if indexes for organization reinforcement have not been set. - Even if there are no problems at the time of developing a compensation plan, corrections may need to be made before implementing projects, according to the local market prices. - There are some cases where, even though community development succeeded, inappropriate data, improper assessments and predictions, and other issues are not mentioned. - The impacts of power lines are not mentioned in this project, and sufficient information on land acquisition when installing power lines has not yet been disclosed. - The EIA does not refer to landslide, soil erosion, and other risks.

8. Photos

Site of the Rampur Hydro Electric Project



A water truck to support households



Support for women



Portable clinic



Additional welfare measures



Houses at the relocation destination



Public hearing



Community's involvement



Sources: (World Bank 2014), (K Schneider 2006), (Ministry of Power, India 2019)