BRIEFING PAPER

CUTS Centre for Competition, Investment & Economic Regulation
CUTS C-CIER

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Regulatory Impact Assessment: Hydro Sector in India

Before introducing a law, the government neglects to anticipate the consequences of actions in the future, due to which laws often tend to fail to meet the desired objectives. Hence, Regulatory Impact Assessment (RIA) comes as a facilitating tool to estimate costs and benefits before the decision is taken. It is one of the ways of continuous learning as it can build in innovation standards within the process.

This Briefing Paper discusses CUTS' case study on hydro sector in Himachal Pradesh where it has intricately explained various steps involved in RIA. In addition, by identifying the problem and undertaking thorough cost and benefit analysis, best alternative is selected for adoption.

Introduction to RIA

Regulatory instruments such as policies, legislations, rules, and regulations etc. (regulations) have pervasive impact and potential to impose superfluous costs on stakeholders thereby affecting multiple stakeholders in different ways. It is, therefore, imperative to understand the effect of such proposed and existing regulations to formulate most optimal design for these regulations. Also, sub-optimal regulations have the ability to raise various complications and uncertainties associated with obligations, which also must be evaded. Hence, there is a need to subject regulations to greater scrutiny than in the past so as to ensure net benefit to consumers.

RIA is an instrument that essentially comprises stakeholder engagement in policy making and review. It is a formal as well as systematic method for assessing the costs and benefits, economic and non-economic, of regulatory proposals and the overall aim is to ensure greatest net public benefit.

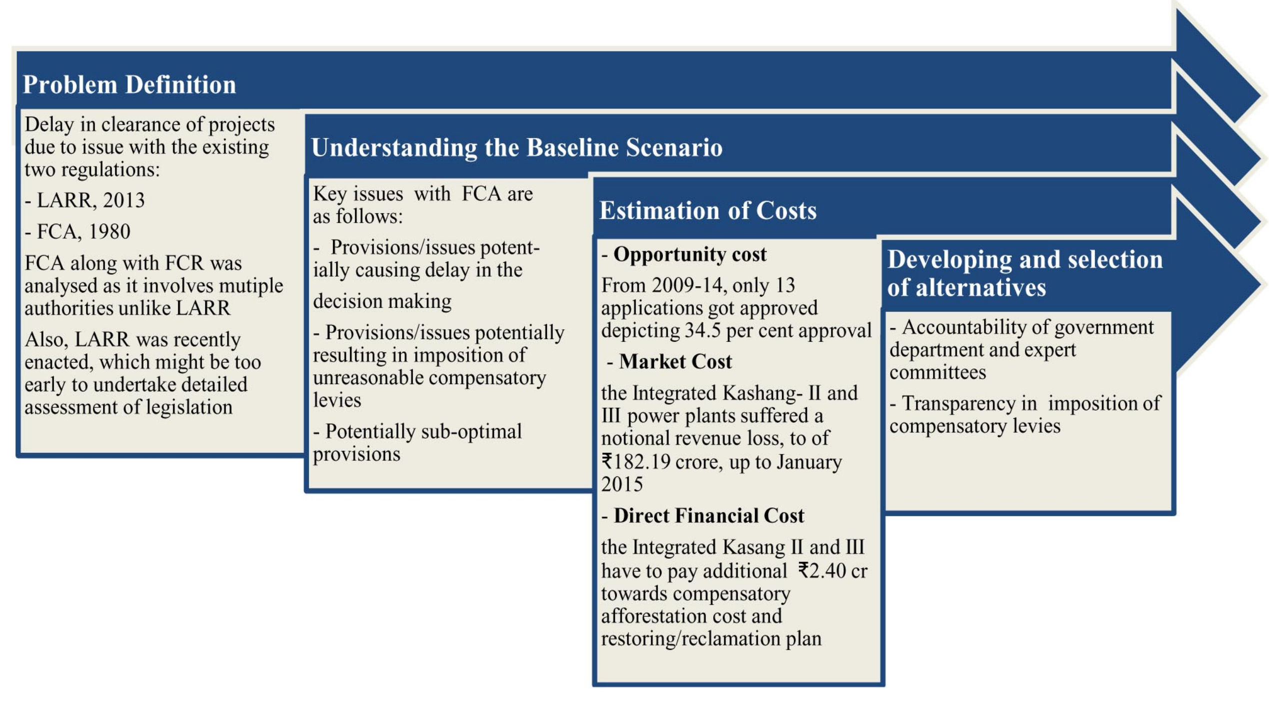
Given the backdrop, CUTS Centre for Competition, Investment & Economic Regulation (CUTS CCIER) had undertaken the project to undertake RIA in select primary laws in hydro sector, followed by advocacy and capacity building activities which have been elaborated (refer Figure 1).

Problem Definition

The first step in RIA involves clear identification of the problem that the proposed regulatory intervention or assessment is intended to address in the existing regulation. The problem definition sets out the objective and scope of RIA exercise and helps identifying relevant stakeholders.

The Government of Himachal Pradesh introduced Hydro Power Policy on Privatisation that offered allotment of large number of hydro projects for execution. However, time-overruns at different stages of development of project reduced the attractiveness of hydro projects among private players. The delay could be about four to five years or more, eventually

Figure 1: Regulatory Impact Assessment Process in Hydro Sector in Himachal Pradesh



leading to cost overruns. The approval percentage for applications for diversion of forest land for non-forest purposes during the last five years was around 34 percent. As per reports, more than ₹6tn (US$100bn) worth of infrastructure projects in India had been stalled as of March 31, 2014 due to delay in securing environmental and forest clearances, land acquisition thereby straining the creaky infrastructure in the country.

Industries including hydro power plants are required to obtain approval for acquiring land/ forest land under The Right to Fair compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 (LARR Act) and Forest Conservation Act, 1980 (FCA) respectively. Literature on assessment and comparison of cost of doing business, suggests comparison of relevant regulations on the basis of three broad indicators, viz. time, costs, and procedures. These two regulations are relevant for the purpose of understanding the baseline scenario and identifying grey areas in these existing regulations.

FCA, 1980

It was introduced to balance the conservation of forests along with sustainable development needs. The Forest Conservation Rules, 2003 (FCR) sets the process for diversion of forest land for non-forest purposes. It provides for a time limit within which a decision on application for diversion must be made by the Central Government. The time and financial costs imposed by the FCA, FCR and other notifications are presumably with the intention that benefits to stakeholders from imposition of such costs would outweigh these costs.

For the purpose of explaining the RIA procedure, FCA along with FCR was analysed. It was so because LARR was enacted recently in 2013, which might have been premature to undertake detailed assessment of the legislation. Also, authorities involved in the FCA were more in number as compared to the LARR Act, 2013. Hence, FCA was considered to be the most appropriate legislation for the purpose of analysing and deriving the most viable alternative solution to the identified lacunae.

Understanding the Baseline Scenario

After having identified the problem, the next step in RIA is identifying the persisting lacunae/ sub-optimal processes (impending delays in obtaining approvals), through interactions with relevant stakeholders, conducting in-depth literature review and analysis of relevant provisions in the selected legislations, in this present scenario of FCA and FCR. The sub-optimal provisions could be broadly compartmentalised into two broad heads, i.e. time costs and unfair compensatory levies.

Issue I: Provisions/issues potentially causing delay in the decision making

- *Accountability provisions of expert committees*

  The FCR has constituted a Forest Advisory Committee (FAC), comprising of three official members and three non-official members, to advice the Central Government with regard to grant of approval for diversion of forest land. Although it is required to meet at least once in a month, no provision exists which requires the FAC to provide sufficient explanation in case it is not able to meet in a particular month. The provisions regulating functioning of regional empowered committees (RECs) also suffer with similar omissions, resulting in absence of accountability proceedings with respect to proceedings at REC.

- *Absence of statutory requirements of periodic capacity review*

  The FCR requires the Divisional Forest Officer (DFO) to examine factual details and feasibility of the proposal, certify maps, and carry out on site-inspections and enumeration of the trees within 30 days, 45 days and 60 days respectively, for proposals involving forest land up to 40 hectares, between 40 and 100 hectares, and above 100 hectares, respectively. However, it might not be feasible for the DFO or the Deputy Commissioner to complete the assigned tasks within the specified time period, unless aided by adequate resources, in terms of manpower and technology. Absence of a periodic capacity review of government departments' assigned to undertake various functions could make it difficult for such departments to comply with the timelines mentioned under the FCR.

- *Ambiguity and frequent changes in policies governing hydel power plants*

  The Forest (Conservation) Amendment Rules, 2014 authorises the regional office of the Central Government to grant in-principle approval to proposals involving forest land up to five hectares, other than proposals relating to mining and encroachments. Consequently, proposal for hydel power projects involving forest land up to five hectares had to be approved by the regional office. However, this position was reversed within an eight month period by the Forest (Conservation) Second Amendment Rules, 2014 which withdrew the powers of regional officers, resulting in ambiguity and uncertainty.

Issue II: Provisions/issues potentially resulting in imposition of unreasonable compensatory levies

- *Absence of accountability provisions for government*

  A contravention or abetment of provisions of Section 2 of FCA is punishable with a simple imprisonment up to 15 days. However, it is not clear if this provision could be extended to contravention of rules, circulars and provisions made under FCA. Also, head of the department can be deemed guilty of such offence, if an offence is committed by a government department however the term '*offence*' is nowhere defined. There seems to be absence of adequate accountability provisions for government officials under the FCA and FCR.

- *Wide discretionary powers to regulatory authorities*

  The FCR provides that the REC is required to tender its advice in relation to proposals relating to hydel projects involving diversion of forest land up to 40 hectares. There is no statutory provision for either expert committees or Ministry of Environment, Forests and Climate Change (MoEFCC) (either at the RO or HO level) to provide reasons for their decisions. Moreover, while Rule 7(4)(e) of the FCR lists matters which the FAC is required to give due regard to while tendering its advice, no such guidance is provided in case of the REC or MoEFCC. Absence of statutory provisions requiring justification of advice has the potential to result in abuse of discretion and consequently imposition of unreasonable and disproportional costs on the project proponents.

- *Lack of grievance redressal mechanism with respect to compensatory levies imposed*

  There is no provision which allows the project proponent to challenge the compensatory levy imposed or the computation thereof. Section 16(e) of the National Green Tribunal Act, 2010, provides that any person aggrieved by an order or decision made by the state government or other authority under Section 2 of the FCA, may prefer an appeal to the National Green Tribunal (NGT). However, it is not clear if the appellate jurisdiction of NGT extends to hearing appeals against imposition of certain compensatory levies, or computation thereof.

- *Ambiguity in scope of terms 'forest land' and 'reserved forest'*

  The two terms *'forest land'* and *'reserved forest'* are not adequately defined. There is some clarification provided regarding the scope of '*non-forest purpose*'. It remains silent and consequently ambiguous with respect to the scope of the term '*forest land*'. The SC has defined it as any area recorded as forest in the government record irrespective of the ownership. Consequently, lack of statutory definition of the term '*forest land*' and *'reserved forest'* would potentially result in uncertainty as different states could define the term in different ways, complicating the process of obtaining approval for diversion of forest land.

Issue III: Potentially sub-optimal provisions with respect to time period

- *Statutory requirements for duplication of procedure*

  The FCR requires a Conservator of Forests (CF) to examine factual details, feasibility of the proposal and carry out site inspection in case the area of forest land proposed to be diverted is more than 40 hectares. The regional offices of the MoEFCC are required to mandatorily undertake site inspections where forest land proposed to be diverted is more than 100 hectares, consequently, undertaking the same process thrice. This would eventually stall projects and delay in getting approval.

- *Provision of transit time under the FCR*

  The FCR provides that the total time exclusively for transit of a proposal between various authorities at the state government level will not be more than 20 days, over and above the time period specified for processing of proposal by each authority. While the term '*transit time*' is not defined under the FCR, it can be reasonably assumed that such time is being allotted for physical delivery of proposals and other relevant documents.

To sum up, the sub-optimal provisions and issues left uncovered in these statutes, have the potential to impose varied unintended and unreasonable time and financial costs on the project proponents and eventually on consumers.

Estimation of Costs

The next step in RIA is to undertake a notional estimation of additional costs of the as-is/ prevailing scenario, on multiple relevant stakeholders.

FCA, 1980

During a period of five years (2009-2014), 81 hydel based power plants in Himanchal Pradesh, both private and public sector enterprises were involved in the process of obtaining approval for diversion of forest land for non-forest purposes.

Opportunity Cost

From the perspective of clearing hydro projects applications, opportunity cost includes the interest gain on the amount stuck with the respective departments over long period of time to get clearances/approvals. In five years (2009-

Table 1: Accountability of Government Department and Expert Committees

Particulars	Baseline	Alternative 1	Alternative 2
Description	No accountability provisions	• Public disclosure of non-compliance with statutory provisions, reasons for non-compliance and measures to prevent he same in future • Disclosure of reasons and delays in recommendations/ decisions	• Accountability of government department and expert committees
Costs		*Substantial increase in costs* • Salary Cost: [₹9,00, 000*1 + ₹5, 40, 000*1 + ₹48, 00, 000 + ₹42,00,000] = ₹1,04,40,000 (excluding other incentives) • Significant physical and ICT infrastructure costs *Substantial increase in benefits:* • Early access to free electricity by state government	*Substantial increase in costs:* • Annual basic remuneration cost - ₹1.08 cr. (excluding other incentives) • Significant physical and ICT infrastructure costs *Substantial increase in benefits:* • Early access to free electricity
Estimated impact on project proponents/ consumers	*Costs:* • Inordinate delays and imposition of unreasonable costs	*Reasonable reduction in costs:* • Reasonable improvement expected in environment governance, and consequent reduction in delays and imposition of unreasonable costs, owing to increase in public disclosure	*Reasonable reduction in costs:* • Reasonable improvement expected in environment governance and consequent reduction in delays an imposition of unreasonable costs, owing to presence of a grievance redressal mechanism
Estimated impact on society/ forests	*Costs:* • Imposition of disproportionate costs	*Reasonable reduction in costs:* • Reasonable improvement is expected in quality of environment clearance process, and consequent imposition of proportionate costs on stakeholders, owing to increase in public disclosure	No change

Recommendation

It can be inferred from the above table that the benefit under alternative 1 surpasses alternative 2. Therefore, it was recommended that **Alternative 1**, i.e. public disclosure at all levels, while imposing substantial costs on the government, is expected to significantly improve environment governance, by benefitting all categories of stakeholders

14), 13 applications got approved depicting 34.5 per cent approval. In case of in-principle approval, the delay for forest land involved up to 5 ha, 5-40 ha, 40-100 ha and above 100 ha was 37 days, 205 days, 68 days and 287 days respectively. In case of final approval, forest land involved up to 5 ha, 5-40 ha, 40-100 ha and above 100 ha delay noted was 164 days, 28 days, 730 days respectively. For instance, applications from companies, such as Himachal Pradesh Power Corporation Limited (HPPCL) for its power plants Integrated Kashang II and III were delayed for 352 days and 679 days which resulted in an estimated loss at commissioning of approximately ₹2,36,340 and ₹8,14,860 per day, respectively.

Further, the Integrated Kashang II and III power plants were envisaged to be commissioned in December 2013. However, owing to delay of more than 350 days in grant of approval for diversion of forest land, amongst other factors which might be present, it has not yet been commissioned. Consequently, the company has suffered a notional revenue loss, to the tune of ₹182.19 crore, up to January 2015.

Table 2: Transparency in Imposition of Compensatory Levies

Particulars	**Baseline**	**Alternative 1**	**Alternative 2**
Description	• No transparency provision	• Independent panel of experts to approve compensatory levies	• Setting up of state level grievance redressal cell for project proponents
Costs		*Reasonable increase in costs:* • Annual basic remuneration cost - ₹1.26 crore (excluding other incentives) • Significant physical and ICT infrastructure costs *Reasonable increase in benefits:* • Reduction in cost of assess to electricity	*Substantial increase in costs:* • Annual basic remuneration cost - ₹6.96 crore (excluding other incentives) • Significant physical and ICT infrastructure costs
Estimated impact on project proponents/ consumers	*Costs:* • Imposition of unreasonable/ unjustifiable compensatory levies	*Reasonable reduction in costs:* • Possibility of review of compensatory levy by independent panel is expected to rationalise and thus reduce costs	*Reasonable increase in benefits:* • Reduction in cost of assess to electricity *Reasonable reduction in costs:* • Possibility of approaching grievance redress cell in case of imposition of unreasonable compensatory levy is expected to rationalise and thus reduce costs
Estimated impact on society/ forests	*Costs:* • Imposition of disproportionate compensatory levies	*Reasonable reduction in costs:* • Possibility of review of compensatory levy by independent panel is expected to ensure proportionality between costs and damage to forests	No change

Recommendation

From Table 2, it can be observed that a comparison between the two alternatives clearly depicts alternative 1 surpassing alternative 2. Hence, it was recommended that **Alternative 1**, i.e. establishment of independent panel of experts to review compensatory levies.

Table 3: Transparency in Imposition of Compensatory Levies			
Particulars	**Baseline**	**Alternative 1**	**Alternative 2**
Description	• State governments have no power to reject Central Government-promoted proposals	• State governments to have power to reject Central Government-promoted proposals	• Constitution of independent expert committee to review all proposals
Costs			*Substantial increase in costs:* • Annual basic remuneration cost - ₹2.07crore (excluding other incentives) • Significant physical and ICT infrastructure costs
Estimated impact on project proponents/ consumers	*Benefits:* • Favourable playing field with only central government having the opportunity to reject proposals promoted by central government entities	*Reasonable reduction in benefits:* • Doing away of uneven playing field	*Reasonable reduction in benefits:* • Doing away of uneven playing field
Estimated impact on state government project proponents	*Costs:* • Uneven playing field between Central and state government project proponents	*Reasonable reduction in costs:* • Doing away of uneven playing field	*Reasonable reduction in costs:* • Doing away of uneven playing field
Estimated impact on private sector project proponents	*Costs:* • Uneven playing field between private sector and public sector project proponents	No Change	Reasonable reduction in costs: • Doing away of uneven playing field
Estimated impact on society/ forests	*Costs:* • Sub-optimal quality of projects, and sub-optimal forest clearance process	*Reasonable reduction in costs:* • Limited improvement in competition, quality of project proposals and forest clearance process	*Substantial reduction in costs:* • Improvement in competition, quality of project proposals and forest clearance process

Recommendation

It is recommended that **Alternative 2,** i.e. establishment of independent committee of experts to review all proposals, as benefits are expected to outweigh its costs.

Market Cost

Market costs are imposed on various stakeholders in the market, such as non-defaulting borrowers, depositors, taxpayers, consumers etc. It was revealed during stakeholder consultations that the hydro-electric plants operating in the state of Himachal Pradesh are required to supply 12 percent free power to Government of Himachal Pradesh. Owing to the delay in commissioning of power plants, the state was losing out on such free power.

Direct Financial Cost

Direct financial costs include regulatory charges such as fees, levies and fines, in addition to the litigation cost. A project proponent is required to pay several compensatory levies, as condition precedent for the grant of final approval. These levies include cost of creation and maintenance of compensatory afforestation, net present value, cost of implementation of catchment area treatment (CAT) plan or wildlife conservation plan, etc.

Initially, the CAT plan amount was kept as per actual requirements, around one percent of the project cost, and a government notification subsequently increased the minimum CAT plan amount to 2.5 percent of the project size. In addition, the CAT plan amount was required to deposited upfront, as against the practice of depositing the amount in instalments.

This adversely impacted the financial condition, projections, and consequently feasibility of the projects. The expenditure for establishment of hydro-electric projects was met generally by borrowing to the tune of 70 percent of the project cost at interest of around 13 percent. Owing to the requirement to deposit higher CAT plan amount upfront, the borrowing cost increased exponentially. The state government failed to consider several factors such as number of hydro-electric projects established and planned in the catchment area while prescribing a minimum CAT plan amount.

In addition to CAT plan amount, the power producers are required to pay varied levies. For instance, the Integrated Kasang II and III have to pay additional ₹24,033,354 towards compensatory afforestation cost and restoring/reclamation plan.

Developing and Selection of Alternatives

Developing and selection of alternatives using the tools, like cost benefit analysis is the final step in RIA. The following section attempts to provide alternatives to certain existing deficient provisions of FCR, thereby suggesting certain new provisions to ensure that the purpose of FCR is achieved. Costs and benefits of such alternatives will also be estimated.

Conclusion

With the above mentioned evidence, it can be understood that there has been improper implementation of provisions of FCA and FCR, causing delay and complexity in clearing applications to establish a hydel-based power plant. While the proposed recommendations are expected to impose substantial costs on government, these are expected to be outweighed by projected benefits, such as significant improvement in forest governance process, including ensuring transparency, accountability and reasoned decisions.

Finally, conducting RIA is expected to substantially reduce delays in environment clearance process and rationalise the costs imposed on different stakeholders. Hence, the alternatives suggested above are recommended for adoption.

This Briefing Paper is written by Suchismita Pati, Research Assistant, CUTS Centre for Competition, Investment & Economic Regulation (CUTS CCIER) as part of the project entitled, 'Facilitating the Adoption of Regulatory Impact Assessment Framework in India' with support from the Asian Development Bank, Indian Resident Mission.