



## Environmental Sustainability Plan (ESP)

### Project Title: “Strengthening of VCSG Uttarakhand University of Horticulture & Forestry, Bharsar” (Innovation Grant)

**Name of the AU:**VCSGUttarakhand University of Horticulture & Forestry, Bharsar, PauriGarhwal, Uttarakhand

**Date of Project Implementation:** 1<sup>st</sup> March, 2020

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S.No.	Proposed Interventions / Activities	Compliances Applicable	Possible Environmental Impacts	Mitigation Measures	Scope for the integration of best practices of environmental sustainability concerns	Resources Required (Budget in Rs Lakhs)
1.	<b>Minor Repair/ Renovation ( Civil Work)</b>	Construction & Demolition waste Management Rules, 2016-Notification	Generation of debris	<ul style="list-style-type: none"> <li>• Debris will be used for land -filling in consultation with PCB.</li> <li>• Following constructional operations shall also be followed:               <ul style="list-style-type: none"> <li>➤ Operations like mixing raw material will be done in areas where students/employees movement is less and workers should use masks, gloves, helmets etc.</li> <li>➤ No Child labour will be allowed.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Land containing debris will be rehabilitated by the plantation of fast growing tree species /shrubs.</li> </ul>	0.50 (Civil work)
2.	<b>Minor Repair/ Renovation / up gradation of modern class rooms ( Electric Work)</b>	Energy Conservation Buildings code (ECBC) (Energy Conservation Act)	Issues of energy utilization	<ul style="list-style-type: none"> <li>• ECBC sets minimum energy standards for commercial buildings having a connected load of 100k W or contract demand of 120KVA an above.</li> <li>• Judicious plan for electrical wiring</li> </ul>	<ul style="list-style-type: none"> <li>• Establishment of roof top solar energy panel /solar street light.</li> <li>• Awareness regarding use of green energy,</li> </ul>	1.50 (Civil Work)

				<ul style="list-style-type: none"> <li>• Use of energy efficient eco –friendly electrical appliances.</li> <li>• Use of Green Energy Sources.</li> <li>• Use of energy efficient lighting such as LED to reduce the non-energy consumption.</li> </ul>	efficient tools through poster, banner etc.	
3.	<b>Hands on Training in Central Instrumentation Laboratory/ other laboratories</b>	1. Hazardous wastes (Management and handling) Rules, 1989 and Amendments Rules 2000 & 2003.	Waste coming from laboratories (chemicals) released into common drainage system will pollute the water and soils.	<ul style="list-style-type: none"> <li>• Construction of separate channel for collection of chemical waste.</li> <li>• Registration with state PCB for collecting the waste from university.</li> </ul>		0.50 (Operational Cost)
		2. Safe Guards in Laboratories	Lack of safe guard poses risk of exposure to toxic/harmful chemicals and accidents	<ul style="list-style-type: none"> <li>• Provision of proper ventilation, lighting, firefighting equipments.</li> <li>• First Aid Kit.</li> <li>• To train all users about firefighting, safety measures in lab etc. through displaying/ poster etc.</li> <li>• Labeling of toxic/poisons/hazardous chemicals as precautionary measures</li> </ul>	<ul style="list-style-type: none"> <li>• ‘Do and Don’t’ instructions in all laboratories.</li> <li>• Training on awareness on best laboratory practices and safety measures.</li> </ul>	
4.	<b>Goods and Equipment smart classroom /placement cells/experiential learning</b>	E-waste (Management & Handling Rules, 2018)	Heavy metal contamination of ground water /soil	<ul style="list-style-type: none"> <li>• E-waste will be channelized /disposed through collection centre /authorized dealer.</li> <li>• Form -2 will be maintained regarding the records of e-waste generated for monitoring by State Pollution Control Board.</li> </ul>	Awareness Programme	0.50 (Operational Cost)
5.	<b>Capacity Building Programme (in Collaboration with Industries and other Universities/R&amp;D Institutions)</b>				<ul style="list-style-type: none"> <li>• Training on energy efficient technology, green energy and role of plantation in environment sustainability.</li> </ul>	1.00 (Human Capacity Building)

*Rajesh Kumar*  
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Signature and Name of Co-PI

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Date : 14/02/2020

