



Stakeholders' Survey for CLIMASP Competences

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Executive Summary

The CLIMASP project initiative is designed to develop, implement and assess interdisciplinary minor programs at the higher education level that aspire to meet the needs of climate change education and sustainability policy. The climate change topic should shift from a single disciplinary orientation focused on natural sciences to a science, educational, economic and sociological orientation. From this viewpoint, climate change requires educated individuals who are able to bridge the isolated academic fields in order to develop sustainable alternatives and to facilitate policy choices toward a path of ecologically sound and socially equitable solutions.

Competence development in sustainability and climate change adaptation is very essential. Development of competencies associated with CLIMASP focus on generic and disciplinary ones. Generic competencies for students graduating from the CLIMASP programme, besides

disciplinary competences. With competence we mean the integrated set of knowledge, skills and attitudes which are conditional for effective performance. For example, to become sustainability literate, an accountant may have to understand and be able to apply environmental or sustainability accounting and non-financial risk management techniques. A chartered engineer may be expected to know about the existence of this type of accounting practice and have an idea of how it can help in cost-benefit analysis of any project.

A matrix has been developed based on both desk-top research and the on-going multi-stakeholder survey. The CLIMASP competencies matrix was used to help identify the sustainability competencies for any of the three CLIMASP concentration areas, whether designing a new course, or adapting an existing one. Establishing relevant climate change and sustainability policy (CLIMASP) competencies for a course is an important step on the route to writing learning objectives, outcomes and select learning experiences, content and methods. There was need to identify exactly what a successful CLIMASP competent graduate will be able to do as a result of the revised courses. To begin with, those involved started to reflect what knowledge, skills, attributes and competences from the CLIMASP Competence Matrix are included in their course. Then, they started to think what of them are needed to be integrated.

Stakeholders' Survey

One of the main objectives of the CLIMASP was to engage various stakeholders from different expertise, interests, and perspectives and involve them in identifying the competences that are needed to address climate change programs. The survey questions that were distributed among the participating stakeholders aimed at gathering information about their interdisciplinary perspectives of the impacts of climate change in Jordan and the specific needs of the country, economy, governance, and education. The questions dealt with the stakeholders' responsibilities and involvement, policies, and the role of higher education institutions and media. The questions generated new challenges, such as: how can we cope with the impacts of climate change (adaptation), and how can we limit future climate change (mitigation). Each partner (University or NGO) had to distribute the survey questions among 40 stakeholders to fill and complete before April 15th, 2014.

The stakeholders included:

1- Government Officials representing:

- The Environmental Police Department.
- Water Authority of Jordan / Laboratories and Quality Sector.
- Ministry of Health/ Environmental Health Directorate.
- Ministry of Water & Irrigation/ Advisor for Technical Affairs
- Ministry of Energy & Mineral Resources
- Ministry of Water & Irrigation/ Climate Change Directorate
- Ministry of Water & Irrigation/ Jordan Valley Authority (JVA)

2- Faculty Members from PCs Universities

3- NGOs

- Jordan Environment Society.
- Edama - Society of Energy, Water, and Environment.

- Jordan Engineers Association.
- National Center for Agricultural Research and Extension.
- Royal Scientific Society
- Synergy Consulting Group
- Jordan Greeners

Methodology and Template Used

This is a template which is based on a thorough literature review on studies on climate change with special reference to the MENA region that will be used for collecting data from stakeholders. It is advised that the template will be used individually for every person representing an organisation. At the end, the individual responses will be summarised in one template. In each partner university in Egypt, Jordan and Lebanon 20-30 individuals representing key stakeholders will be asked to answer the questions either through interviewing and/or e-mail survey. The NGOs partners should also run the same survey within their own circles and domain.

THEMATIC AREA	Target Stakeholder(s) (Place the name/s and organisation)	PRIORITY ISSUES (What are the main issues or problems facing each of the thematic areas in the first column?)	TRAINING NEEDS (What are the key training needs needed to tackle the issues identified in each thematic area?)
Climate Change Adaptation			
Climate change: Awareness of main causes and consequences			
Disaster risk management			
Managing water resources			
Managing energy resources			
Management of biodiversity and ecosystems			
Agriculture, rural livelihoods and living conditions			
Urban livelihoods and living conditions			

Sustainable tourism industry and management			
Gender roles and relations			
Human health			
Marine and coastal environment			
Infrastructure and the built environment			
Geographic Information Systems (GIS)			
THEMATIC AREA	Target Stakeholder	PRIORITY ISSUES	TRAINING NEEDS
Climate Change Mitigation			
Green House Gas emissions			
Waste and pollution management			
Hydrology and water resources monitoring			
Climate change advocacy			
Carbon footprint analysis			
Meteorological engineering			
Carbon trading systems			
Environmental impact assessment and environmental compliance			

Corporate social responsibility			
Social and economic rights			
Renewable energy			
Mitigation finance			
CROSS-CUTTING INTERVENTIONS			
THEMATIC AREA	Target Stakeholder	PRIORITY ISSUES	TRAINING NEEDS
Incorporating climate change into policies, strategic plans, laws, budgets, and project planning			
Communicating and raising public awareness			
Improving understanding of climate change science			
Adapting by building resilience			
Climate change negotiations			
Challenges and barriers to optimising synergies			
Integrating adaptation measures into national planning			
Reducing vulnerability of poor and disadvantaged populations			

RESULTS

The Priority Issues or problems facing thematic areas were:

- Pollution
- Greenhouse effect
- Ozone layer depletion
- High cost of fossil fuel
- Importance of biodiversity
- Water harvesting
- Impact on Crops production
- Impact of fertilizers and pesticides

For Adaptation, the main issues or problems identified by the interviewees were the following:

- Lack of awareness of climate change
- Lack of knowledge of the means on how to decrease its effects
- Lack of knowledge on how to deal with climate change effects
- Misuse of water resources, no feeling of responsibility.
- High prices of energy. No alternatives
- No conservation of biodiversity
- Establishing projects that destroy the environmental systems
- Water shortage for irrigation
- Limited agricultural land
- Migration from the villages to the cities, no attractions in the villages. (Urbanization)
- Developing and improving the tourist areas.
- Misuse of water resources
- Infrastructure not sturdy
- Lack of awareness of climate change
- Managing energy resources
- Gender roles
- Food Resources affected by severe climate change and draught (Lack of food policies)
- Inflation and low income
- Scarcity of water and the presence of a gap between demand and supply
- Limited resources and high cost of electricity production
- Limited use of GIS system
- The lack of knowledge of the toxicity of wastes and the lack of categorization of wastes
- Weak monitoring of factories, and the lack of application of safety procedures
- Lack of preparation for disasters
- Impact of climate change on cities & tourism & coastal environment
- Measure GHG emissions

- Lack of knowledge of carbon trading system/how to establish a carbon trading system
- Agriculture hazards: high cost of agricultural needs, establishment of residential neighborhoods on agricultural lands, water needs
- Impact of tourism on natural resources
- The infrastructure of industrial buildings and their pollutants
- Lack of well-established infrastructure in vulnerable areas
- Protection of wildlife habitat, water, soil quality for preserving the variety of plants, animals, and microorganisms.
- Lack of knowledge among hotel employees of eco-friendly green hotel practices.
- Encouraging the establishment of women's cultural societies
- Climate change has a direct impact on honey bee the behaviour, physiology and distribution, as well as on the evolution of their interaction with diseases. Conservation measures are needed to prevent the loss of this rich genetic diversity of honey bees and to preserve ecotypes that are so valuable for world biodiversity.

The key training needs suggested by the interviewee to tackle the issues/problems:

- TV and Radio awareness programs
- Training workshops
- Environmental impact laws
- Educating people on climate change and its effects on all living organisms and the environment
- More measures and means have to be taken to reduce the effects
- Training workshops on water use
- Training on the use of alternative energy resources
- Conservation of Biodiversity
- Training on how to carry out small businesses.
- Benefiting from the experiences of the Developed countries
- Field Survey studies needed
- Lectures, workshops conducted on all levels
- Setting standards that stress the importance of the issue
- Liability insurance for climate change on properties
- Using renewable energy resources
- Establishing a center for women's studies
- Finding ways to provide food resources
- Traffic department control
- Directory of specifications control. Recycling and Reusing
- Ministry of water management of water losses
- Role of Environment societies.
- Ministry of Environment and Municipalities control of EIA procedures
- Urban municipalities need to play a leading role in the management and planning of the built environment, and to preserve the green land.

For Mitigation, the main issues or problems identified by the interviewees were the following:

- Lack of Awareness of Green House emissions
- Waste and pollution management

- Water Resources monitoring
- Environmental Impact Assessment
- Lack of water Resources
- To decrease pollution
- Sustainable tourism industry
- Preservation of marine and coastal environment
- (GIS)
- Lack of scientific knowledge and awareness among employees who work sewage stations
- Lack of expertise in dealing with risks
- Greenhouse Gas Emissions
- Waste pollution Management
- Water Resources Monitoring
- Climate Change Advocacy
- Compliance with Environmental Impact Assessment
- Management of infrastructure and built environment

Determining CLIMASP Competencies

Appendix: A

Worksheet FOCUS GROUP KEY SECTOR: <i>Economics and Business</i>				
Observed and potential climate changes in the country	Observed and potential effects attributed to climate change or climate-related phenomena	What is being done to address the observed and potential effects of climate change	Recommendations	What competences are required to tackle climate change effects
1- Marine biology impacting fishing economy 2- Increasing rains on shores impacting shoreline agriculture and brining fertilizers to the lake 3- Losing water due to increased evaporation 4- Using more energy and electricity to cool 5- Increase in deficit 6- Rain destroys the roads	1- Marine biology impacting fishing economy 2- Some crops cannot be produced reducing variety the alternative crops destroys the soil reducing production reducing water 3- Supply chain must change and prices increase reducing discretionary spending 4- Increased pressure on prices and utilities 5- Impacting the integrity of artefacts and tourism 6- Reducing shorelines impacting tourism	1- Desert air-conditions 2- NGO initiatives encouraging innovation and development 3- CSR by national and international companies 4- ESD 5- International Donors and interested Egyptian partners 6- Importing car emissions and efficiency 7- A significant lack of attention regarding Climate Change by the government 8- Renewable energies on a micro scale	1- Insulation (NGO) 2- Integrated public policy 3- Expanding use of NGVs across Egypt 4- Increasing use of solar panels 5- Decent environment friendly transportation 6- Discourage use of chemical fertilizers in sensitive areas 7- Inclusive public police 8- Using treated water for turning the desert into green areas 9- Transferring a portion of utility revenues towards environment protection 10- Integrated development agencies	1- Skilled HR 2- Creativity\ innovation 3- Inter disciplinary knowledge\ action 4- Efficient services reducing the needs for physical goods 5- Competent curricula addressing ESD 6- Education based on learning by doing 7- An non- corrupt media 8- An understanding of social media

			effort	
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Opportunities:

- 1- A populace interested in a healthy life style
- 2- Making closer relation unit on climate change

Worksheet FOCUS GROUP KEY SECTOR: <i>Science and Technology</i>				
Observed and potential climate changes in the country	Observed and potential effects attributed to climate change or climate-related phenomena	What is being done to address the observed and potential effects of climate change	Recommendations	What competences are required to tackle climate change effects
<ul style="list-style-type: none"> 1- Natural greenhouse effect which is divided in to natural and human (manmade) 2- Human effect includes co2 emissions and GHG2 (concen) 	<ul style="list-style-type: none"> 1- Biodiversity which affects the marine life and coral reefs flora 2- Energy consumption 3- Precipitation. Rain fall changes, desert droughts and effects on the Nile river 4- Agriculture productivity quality decreased and food security 5- SLR Erosion water salt intr. – Delta\ Costal zones 	<ul style="list-style-type: none"> 1- Observation system – weather & sea level rise 2- Institutional 3- Policy 	<ul style="list-style-type: none"> 1- Integration between all initiatives 	<ul style="list-style-type: none"> 1- Education 2- Awareness 3- research

Appendix: C

KNOWLEDGE (Concepts, theories, processes)	SKILLS (Tools, methodologies, dynamics)	ATTRIBUTES (Innate abilities)	CLIMASP CORE COMPETENCES
Mitigation and adaptation Disaster risk management Mainstreaming adaptation Economics of climate change Gender and climate change Value chains and market access Science, impacts & scenarios Fairness and climate change justice Strategic planning Integrated assessment Vulnerability assessment Legislation, regulations and compliance Environmental awareness Environmental management Green products/design Green growth Renewable energy technologies Mainstreaming and planning Spatial decision tools Conflict resolution Occupational health and safety issues Water management and recycling Carbon footprint/monitoring Heritage impact assessment	Systems thinking Agency Anticipatory adaptation Validation and testing Dealing with uncertainty Contextualising Prioritising Monitoring Reporting Anticipating risk Reducing vulnerability Building resilience Risk assessment Scenario analysis and planning Monitoring and evaluation Impact assessment Futures thinking Local knowledge Risk prediction Critical thinking Crisis management Emergency psychology Risk assessment Risk management Emergency management Anticipating effects Integrated assessment	Optimism Openness to novelty and change Global mind-set/consciousness Accountability Fairness Justice Change agent Open-minded Proactive Organised Decisive Democratic Responsible Empathy Gender-sensitive Perspective Co-responsibility Systematic Focussed Confident Transparency Representivity Solidarity Ecocentrism Corporate compliance Being vs. having Deep ecology	<ol style="list-style-type: none"> 1. Analyze the effects of climate change from both male and female perspectives 2. Understand historical community reactions to and coping strategies for climatic hazards. 3. Compare and prioritise the most critical local climatic hazards. 4. Identify the most likely impacts of local climatic hazards. 5. Identify and categorise local livelihood assets and resources. 6. Assess the intensity of impact of climatic hazards on livelihood resources. 7. Compare and contrast the impacts of major climatic hazards on livelihoods of the community. 8. Differentiate vulnerability to climatic hazards across different sectors and social groups.

<p>Energy efficiency behaviour Policies and regulation Technology and innovation Consumer habits Anticipation and monitoring Climate change policy Climate change adaptation Risk assessment Climate variability Weather and climate Migration & climate change Climate change communication Gender-sensitive response to climate change Gender & climate change Sustainable consumption and production Sustainable communities Sustainable construction Biodiversity and climate change Green economy Green economics Green jobs Climate change and health Strategic planning and climate change Role of international institutions Environmental economics Environmental law Environment and governance Economics and growth Environmental awareness</p>	<p>Costing and valuation Mainstreaming (Integrating) Maladaptation (action or process) Global dynamics Multicriteria analysis Vulnerability assessment Managing uncertainty Adaptation assessment Estimating adaptation costs Adaptive capacity Climate Risk Management (CRM) Life cycle assessment (LCA) Dealing with complexity and uncertainty Critical, systemic and futures thinking Spatial planning systems Strategic environmental assessment Climate scenarios Disaster risk management Vulnerability indicators Integrated coastal planning Scenario planning Adaptive management Project management Resolve ethical dilemmas Action-oriented Motivate and manage change Stakeholder engagement Carbon management Mapping gender impacts</p>	<p>social responsibility Justice Intergenerational equity Stewardship Social & ecological justice Environmental justice Human wellbeing Social cohesion Tolerance Virtue Basic human needs Human rights Interdependency Sense of urgency Interspecies equity Ecological integrity Ecological sustainability Needs vs. wants Social & economic justice Gender equality Health care Inclusive participation Nonviolence & peace Economic welfare Fairness Social and economic justice Respect and care for the community Respect for diversity Holistic</p>	<p>9. Gain an overview and quantify climatic hazard risk and resilience capacity of local communities. 10. Identify and assess the effectiveness of the current coping mechanisms practiced by communities to secure and improve their livelihoods and conserve ecosystem biodiversity in the context of climate change. 11. Analyse effectiveness of existing coping and adaptation strategies against the severity of climatic hazards. 12. Explore the institutional context in which the community operates and identify appropriate institutional partners for adaptation. 13. Develop urgent and immediate short term and long term adaptation priorities for district, regional and national level planning. 14. Demonstrate knowledge of the relevant professional, legal and ethical obligations to develop and share information about climate change effects</p>
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<p>Environmental ethics Conflict & natural disasters and humanitarian responses Low carbon development Urban and rural environment Conflict over natural resources. Multilateral environmental agreements Vulnerability risk assessment Forecasting and scenario planning Spatial decision tools Mainstreaming adaptation Climate change and rural livelihoods Climate change and urban development Biodiversity, ecosystems and resilience to climate change Water resources and climate change Social learning processes GIS: geographic information systems Climate change: Science, impacts & scenarios Integrated coastal planning Role of land use planning Urbanization's role in climate change Climate change implications for integrated coastal planning The wickedness of coastal planning</p>	<p>Problem solving Communicating Connecting Leadership Decision-making Team management Ecological footprinting SWOT analysis Discourse Debating Advocating Awareness and advocacy raising Monitor, reporting and reviewing carbon lifecycle analysis/costing Carbon literacy for procurement Adaptive management Critical media literacy Decision making and communication Strategic planning Adaptive learning and self-reflection; Networked learning</p>		<p>on health. 15. Demonstrate knowledge of how to access local, national and international information about climate change effects on health, relevant to adapting health services 16. Shows how to use information about climate change effects on health to improve decisions about health services delivery 17. Demonstrate knowledge of how to access local, national and international information about climate change effects on health, relevant to adapting health services. 18. Show how to use information about climate change effects on health to improve decisions about health services delivery. 19. Initiate and participates in collaborative learning opportunities with health and environmental professionals active in climate change management. 20. Demonstrate application of this knowledge to adapt and improve health services delivery. 21. Identifying and nurturing</p>
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<p>Fairness and climate change justice</p> <p>Sustainable development and resilience</p> <p>Adaptation and governance</p> <p>Freshwater trends at the global level</p> <p>Future climate change scenarios</p> <p>Changing approaches to water management</p> <p>Integrated Water Resources Management</p> <p>Resilience in water management</p> <p>Integrated adaptive water management</p> <p>Biodiversity, protected areas and climate change</p> <p>Global biodiversity picture</p> <p>Issues and principles of coastal governance for adaptation</p> <p>Mitigation/adaptation relationships and warming</p> <p>Synergies, trade-offs and mainstreaming</p> <p>Urban systems adapting to climate change</p>			<p>collaborative partnerships either within an organisation or in the wider community to create common purpose to resolve systemic problems.</p> <p>22. Questioning business as usual can threaten our ideals, values, beliefs, business strategies and technical understanding and is not necessarily what everyone wants to hear.</p> <p>23. Dealing with values and ‘big picture’ sustainability is outside the comfort zone of many people in the workplace.</p> <p>24. Understanding sources of risk and insecurity, their impacts on livelihoods and application to building resilience (to climate and natural resource shocks, food and nutrition insecurity, political economy and in fragile contexts).</p> <p>25. Knowledge and application of natural resource-based livelihoods (including agricultural services, value chains, adaptation and mitigation to climate change in agriculture and natural resource management).</p> <p>26. Understanding dynamics of</p>
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			<p>change in and between rural and urban areas and resource-based livelihoods and likely trajectories.</p> <p>27. Knowledge and application of analytical tools, ways of working and evidence, innovation and learning.</p> <p>28. Compare local problems with problems elsewhere and to gain adaptation ideas from this comparison.</p> <p>29. Anticipate possible future environmental change and identify possible development consequences.</p> <p>30. Analyse and evaluate complex and sometimes competing environment and development issues and integrate these into practical, balanced and sustainable solutions.</p> <p>31. Evaluating the risks that climate change poses to economic development and evaluating potential adaptations that address risks to economic development</p> <p>32. Be able to give local examples of the effects of climate change on agriculture and how producers might help adapt to</p>
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			<p>climate change.</p> <p>33. Evaluating the risks that climate change poses to public health and quality of life and evaluating potential adaptations that address risks to public health and quality of life.</p> <p>34. Determine what happens with climatic variations, which components are most vulnerable and how they are affected.</p> <p>35. Knowledge and understanding of tools and mechanisms for achieving sustainable development and green growth.</p> <p>36. Build linkages between poverty reduction, MDGs, macroeconomic policies, environment, energy, climate change and sustainable development.</p> <p>37. Able to carefully and systematically examine research to judge its trustworthiness and its value and relevance in a particular context and other potential sources of evidence.</p> <p>38. Able to interpret, use and</p>
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			<p>present data and evidence in defining policy and practice.</p> <p>39. Able to design, commission and manage evaluations including rigorous impact evaluations.</p> <p>40. Assess and monitor impacts of climate variability and climate change on agriculture, forestry and fisheries and the livelihoods that rely on these sectors, taking into account socio-economic scenarios and drivers of change in agricultural sectors per major eco-region.</p> <p>41. Conduct integrated climate change vulnerability assessments for agriculture, forestry, and fisheries systems and associated livelihoods.</p> <p>42. Develop and disseminate guidelines, methodologies and tools for collection, processing and analysis of climate change-related data and information, and strengthen databases for use in impact and vulnerability assessments and adaptation.</p> <p>43. Communicate information and promote equitable access of</p>
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			<p>rural people and institutions to information related to impacts of climate variability and change and adaptation in the agriculture, forestry and fisheries sectors from global to local levels, and vice versa through appropriate channels.</p> <p>44. Document, evaluate and disseminate successful experiences in sustainable natural resources management, agriculture and food production and gender and rights-based adaptation strategies and practices.</p> <p>45. Advocate at the regional and international level for a stronger recognition of the challenges to and potential of agriculture, forestry and fisheries sectors in climate change adaptation frameworks and financing mechanisms, and ensure that main stakeholders, including indigenous people and vulnerable groups, have a voice in advocacy.</p> <p>46. Integrate climate change adaptation into national and sub-national agriculture,</p>
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			<p>forestry and fisheries sector policies and plans, land use and water policies, food security programmes, legal frameworks and investment priorities, and ensure appropriate representation of the sectors in climate change and disaster risk management policies and strategies.</p> <p>47. Strengthen dialogue and networks and develop multi-stakeholder partnerships for adaptation across public and private sectors, non-governmental organizations and communities at all levels.</p> <p>48. Strengthen community- and locally-based mechanisms (e.g. forest-user groups, agricultural and fisheries cooperatives, community networks and media) for management and delivery of services for agriculture, forestry and fisheries and to facilitate locally appropriate adaptation measures, including community-based adaptation.</p> <p>49. Reinforce national and regional capacities for plant,</p>
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			<p>forest and animal health and food safety and improve monitoring and control of variations in pests, diseases and food safety, related to climate change.</p> <p>50. Strengthen food value chains and, in particular, improve small-scale producers' access to markets to increase resilience of food systems.</p> <p>51. Explain how climate change impacts health and health inequalities within a model of the wider determinants of health</p> <p>52. Define the relationship between adaptation and mitigation and the health co-benefits of each</p> <p>53. Demonstrate advocacy skills for more efficient participation of the health sector in addressing climate change mitigation and adaptation</p> <p>54. Understand the links between sustainability, carbon, climate change and health.</p> <p>55. Explain how climate change impacts health and health inequalities within a model of the wider determinants of</p>
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			<p>health.</p> <p>56. Define the relationship between adaptation and mitigation and the health co-benefits of each.</p> <p>57. Understand the concept of ‘footprinting’, for example, the ‘carbon footprint’ and ‘ecological footprint’ of individuals and organizations; the different methods of footprinting; and the advantages and disadvantages of each.</p> <p>58. Understand models for the psychology of people’s response to the environment and models for why people and organizations do and do not take action to mitigate and adapt to climate change.</p> <p>59. Analyse how decisions can be made that reduce the impact of health care on climate change.</p> <p>60. Demonstrate advocacy skills for more efficient participation of the health sector in addressing climate change mitigation and adaptation</p> <p>61. Use systems and ‘futures’ thinking allows us to better appreciate the natural and</p>
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			<p>social systems that come together and interact in the built environment.</p> <p>62. Use techniques for resolving or avoiding conflict in an ethical manner and know where to get help if ethical dilemmas arise.</p> <p>63. Understanding of environmental management systems and tools, risk assessment and due diligence in the public and private sector (e.g. EMS, ESN, SEA etc)</p> <p>64. Knowledge and understanding of relationship between poverty, environment, climate change, economics and social issues.</p> <p>65. Ability to translate scientific climate information into policy and practical guidance</p> <p>66. Articulating what good climate resilient development actually look like.</p> <p>67. Develop students' understanding of the natural carbon cycle.</p> <p>68. Investigate the causes of climate change.</p> <p>69. Explore solutions to problems that cause climate change.</p>
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			<p>70. Quantify the school's carbon footprint.</p> <p>71. Identify ways to reduce the school's carbon footprint.</p> <p>72. Design and conduct a carbon-reduction action project.</p> <p>73. Describe and put into effect relevant processes, tools and practices employed for adaptation planning.</p> <p>74. Analyse climate change scenarios in the context of planning for sustainable development.</p> <p>75. Comprehend the opportunities for planners and the social, economic and ecological risks of climate change.</p> <p>76. Demonstrate capacities for self-reflection and self-evaluation as integral aspects of the adaptive learning cycle.</p> <p>77. Develop skills to plan and engage collaboratively with a diverse range of stakeholders.</p> <p>78. Develop skills to facilitate stakeholder engagement and conflict resolution.</p> <p>79. Identify vulnerable populations and ecosystems and developing plans to enhance their resilience.</p>
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			<p>80. Become familiar with the basic terminology and core concepts of climate change adaptation planning.</p> <p>81. Interpret and apply such knowledge in planning adaptation to climate change impacts.</p> <p>82. Describe the relationship between human activities and climate change.</p> <p>83. Analyze and compare carbon-producing resources.</p> <p>84. Assess the impact of human activities and carbon production on the environment.</p> <p>85. Propose solutions to climate change issues.</p> <p>86. Collect, interpret and present information.</p> <p>87. Communicate about strategies to confront climate change to a variety of audiences, including other students, parents and the local community.</p> <p>88. Work cooperatively with others.</p> <p>89. Identify the links between local and global climate change and sustainability policy contexts.</p>
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			<p>90. Make judgements for climate change policy making scenarios for local, national and regional impacts</p> <p>91. Analyse methods of ensuring local participation in climate change adaptation.</p> <p>92. Develop a solid understanding of generic climate change adaptation/mitigation issues.</p> <p>93. Appreciate the importance and practical characteristics of adaptive approaches.</p> <p>94. Describe and compare anthropogenic and natural factors responsible for climate change at different timeframes.</p> <p>95. Draw on active teaching and learning approaches to empower learner, young people and civic engagement.</p> <p>96. Relate climate change and sustainability policy to a range of curricular areas in formal, non formal and informal education.</p> <p>97. Provide a sound understanding of climate change risks and their relevance to participants' organisations</p> <p>98. Describe how to identify and</p>
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			<p>overcome potential barriers to adaptive action including through knowledge transfer and exchange and capacity building.</p> <p>99. Understand how human actions are contributing to global environmental change.</p> <p>100. Contribute to the debate on global environmental change and societal adaptation strategies; to become an informed citizen and decision maker.</p> <p>101. Describe and interpret the evolution of Earth's climate system to communicate, analyse and explain the past and possible future effects of global climate change on Earth's inhabitants. Interpret information, knowledge and policy about climate change from a range of sources and perspectives.</p> <p>102. Think about problems holistically and through the 'lense' of climate change understand principles of sustainable development.</p> <p>103. Comprehend the significance of the climate</p>
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			<p>change problem locally and globally.</p> <p>104. Interpret information about impacts and vulnerabilities specific to the locality, region or sector students are expected to work in.</p>
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