Exam Content Outline

The ISSP certification exams are based upon the Job Task Analysis that was derived from ISSP's competency research project conducted in 2010 and generated through a multi-stakeholder process in 2013. The diagram to the right illustrates the six core competency areas required of the job of a "sustainability practitioner." At the center is a fundamental understanding of the issues, principles and concepts related to sustainability. The ISSP Sustainability Associate (ISSP-SA) Certification focuses on this core competency. The ISSP Certified Sustainability Professional (ISSP-CSP) must demonstrate knowledge and related experience in the other five categories in addition to the core conceptual knowledge area.

Each of the six competencies is further broken into specific related job tasks. These tasks and the associated knowledge required to perform them comprises the exam content outline. While not a comprehensive study guide, it does convey to certification applicants the knowledge areas covered on the exam portion of the certification scheme.

NOTE: The resources provided here do not represent an exhaustive list of the references or sources needed to gain the necessary knowledge or competencies nor do their study guarantee successful completion of the ISSP certification exam.

Sustainability Strategy and Management

| 1 | **Core Sustainability Concepts**
Demonstrated familiarity with the core issues, trends, concepts and frameworks of sustainability. |

Job Task	Related knowledge and competencies
1.1 Explain ideas, concepts and importance of sustainability to various audiences	- Demonstrate familiarity with global and local, economic and scientific issues, by describing key trends, impacts and perspectives relevant to sustainability. For example defining sustainable development, Limits to Growth theory, LOHAS trends, I=PxAxT equation, steady state or circular economy models. - Explain sustainability frameworks and principles such as the Triple Bottom Line, - Identify issues of social justice and social impacts - Explain and apply systems thinking. - Summarize historically significant events related to sustainability such as Brundtland Commission, Kyoto Protocol, Agenda 21, the various COP's - Describe current trends in and interplay among various sustainability issues such as waste, water, pollution, social impact, etc. - Explain the importance of sustainable practice and how it can contribute to social, environmental, and business objectives
1.2 Choose and customizing appropriate third-party sustainability resources	- List applicable regulatory trends and policies as they relate to sustainability (e.g. whistle blower, Sarbanes-Oxley, ESA, RoHS, WEEE, EuP, Montreal Protocol, IPCC). - Demonstrate expertise in GHG inventorying and its relationship in areas such as buildings, transportation, and materials. - Define sustainability claims, eco-labels and certifications such as EPEAT, Energy Star, LEED, etc. - Describe key aspects of the landscape and architecture/hierarchy of global institutions, frameworks and standards relevant to the organization, its sustainability issues and its stakeholders. For example, GRI, Earth Charter, Hannover Principles, and Kyoto Protocol - Identify relevant trends, technologies, approaches related to common sustainability initiatives (e.g. energy reduction and production, life cycle assessment, life cycle costing, bioremediation, GEMI, CDP, etc.)

Resources for Core Sustainability Concepts

- ISSP Glossary of Sustainability Terms
- Meadows, D (2008). Thinking in Systems, A Primer. Chelsea Green: VT
- Global Issues website - http://www.globalissues.org/issue/168/environmental-issues

- Cook, D (2004). The Natural Step, Green Books Ltd: UK
- Hawkin, P., Lovins, A., Lovins, H. (1999). Natural Capitalism, Little Brown and Company: NY
- UN Millennium Development Goals - http://www.un.org/millenniumgoals/
- UN Millennium Eco Assessment - http://www.unep.org/maweb/en/index.aspx

2	**Stakeholder Engagement** Skills and knowledge related to collaboratively working with stakeholders to forward a mutually satisfactory beneficial agenda

Job Task	Related knowledge and competencies
2.1 Identify, map and prioritize stakeholders and their primary interests or concerns	- Define stakeholder and the critical attributes that relate to your organization using tools and models like the stakeholder influence and importance matrix and stakeholder influence diagram - Define the importance and utility of engaging stakeholders in your sustainability efforts - List the critical steps or activities involved in facilitating stakeholder groups - Identify driving forces behind stakeholder motivations - Prioritize stakeholder needs and concerns - Identify ethical frameworks and filters for stakeholder interaction
2.2 Develop a strategy and means of engaging with each stakeholder	- Analyze and evaluate key person(s) within each stakeholder group - Define the stages of stakeholder engagement. - Create stakeholder engagement assessment matrix: classify stakeholders as: unaware, resistant, neutral, supportive, leading - Identify points of leverage with stakeholder groups - Select appropriate organizational planning techniques and strategies appropriate for each stakeholder - Access, engage, and include stakeholders, influencers, and trusted advisors in dialogue - Advise employees of stakeholder identities and needs - Create stakeholder register: identification information (name, organization, etc.), assessment information (major requirements, expectations, potential influence on project, etc.), stakeholder classification (internal/ external, supporter/neutral/resistor). - Describe strategies for behaviour change management

2.3 Implement and institutionalize procedures for engaging and communicating with internal stakeholders (e.g. senior management, functional leads, line employees)	- Discuss company sustainability opportunities in communications - Build consensus and support among diverse stakeholders - Describe strategies for engaging with hostile stakeholders - Explain the relevant of sustainability to all employees to give them guidance around opportunities for them in their jobs.
2.4 Implement procedures for engaging and communicating with external stakeholders (e.g. suppliers, industry partners, NGO's community members)	- Describe suitable approaches and considerations for managing multi-stakeholder engagements - Build consensus and describe strategies for engaging with hostile stakeholders
2.5 Build relationships across organizational functions	- Create sub-groups of engaged employees - Build and nurture leadership and support from key stakeholders - Enlist support of employees and functional leads.
2.6 Prepare communications with input from key stakeholders	- Produce and control communications, create communications plan, identify communication methods applying current models for effective communication

Resources for Stakeholder Engagement

- Atkisson, A. (2008). ISIS Agreement, Earthscan: London
- Zadek, S., (2007), The civil corporation (2nd ed.), Earthscan, London.
- Andriof, J., S. Waddock, B. Husted and S. Sutherland (2002). Unfolding stakeholder thinking: Theory, responsibility and engagement, Greenleaf, Sheffield.
- United Nations Environment Programme (2005). From Words to Action: The Stakeholder Engagement Manual. Volume 2: The Practitioner's Handbook on Stakeholder Engagement. http://www.accountability.org/about-us/publications/the-stakeholder.html
- Business for Social Sustainability (BSR), (November 2011). Stakeholder Mapping, http://gsvc.org/wp-content/uploads/2014/11/Stakeholders-Identification-and-Mapping.pdf
- McKenzie-Mohr, D and Smith, W (1999) Fostering Sustainable Behavior, Gabriola Island, BC: New Society Publishers
- Doppelt, Bob (2010). Leading Change Toward Sustainability, Sheffield, UK: Greenleaf Publishing, p249
- Husted, B., J.S. Waddock and S. Sutherland, 2003, Unfolding stakeholder thinking 2: Relationships, communication, reporting and performance, Greenleaf, Sheffield.
- A Guide to the Project Management Body of Knowledge (PMBOK GUIDE) 5th edition, Project Management Institute, ISBN 978-1-935589-67-9

3	**Plan Sustainability Strategies**
	Create a comprehensive, long-term and inclusive approach to the systematic implementation of sustainability vision and initiatives

Job Task	Related knowledge and competencies
3.1 Develop a high level, long- term sustainability road map	- Describe strategic frameworks and planning models (e.g., backcasting, SWOT) and approaches to implementing them - Identify key contributors to the planning process - Relate sustainability vision to core purpose and define a sustainable version of the organization - Establish base line metrics or baseline performance - Apply appropriate tools (e.g. impacts assessment, resource flow diagrams) to identify critical aspects and impacts; inputs and outputs - Distinguish between a sustainability framework and common sustainability standards. - Describe different approaches to developing a plan for an organization (e.g. ADDIE model, hierarchy of competencies
3.2 Articulate the business case for sustainability	- Identify business aspects that benefit financially from the application of sustainability principles and practices - Distinguish between Green and Sustainable practices - Short term return vs long term return - Define the relationship between risk and sustainability - Articulate how sustainability links to business strategy - Identify an organization's key priorities and risks and communicate in business language - Conduct a cost benefit analysis - Recognize and account for externalities - Conduct life cycle costing - Present business case to senior management & obtain approval - Developing an understanding of the context for the organization to which sustainability will be applied
3.3 Articulate a long term vision of sustainability for the organization and a strategy to achieve it	- Identify critical aspects of a sustainability plan that must be met. Distinguish between what is necessary to be sustainable from what is currently feasible - Overcome constraints of current thinking; establish BHAG's - Identify alignment of producer and consumer

	- Design transmaterialization strategies - Distinguish between vision, goals, strategy, indicators - Identify key benefits that will attract employees to participate
3.4 Create an overarching project framework to support the higher level framework, that can be operationalized and implemented	- Design cyclical process for managing a sustainability plan - Identify existing organizational systems that could be leveraged to create a SMS (e.g. HR, strategic planning, budgeting, training)
3.5 Identify material issues and the relevant key indicators, specific metrics and targets	- Devise SMART metrics - Calculate baseline data - Identify obstacles to measuring long term impacts, externalities, etc. - identify the most common metrics shared across industries and regions - Familiarity with Balanced Score Card and its application to TBL metrics - Explain life cycle costing principles - Identify material issues and apply prioritization techniques - Understand how to determine and create baselines for key indicators - Appropriately design/choose TBL metrics. Distinguish between and appropriately apply leading and lagging indicators; Qualitative and quantitative metrics - Understand the processes, key terms, standards and approaches to conducting greenhouse gas inventories and audits - Identify the relationship to and application of emerging accounting practices.
3.6 Identify the critical components of an SMS	- Define the PDCA cycle - Identify the key attributes of an SMS (e.g., cyclical/iterative) - Understand that implementation is an embedding process and the key elements are training, communication, SOP's and documentation - Check - monitor progress and system so need metrics and audit process and implement a corrective action mechanism - Act - top level strategic and regular revisiting of the whole plan and process - Plan and understand importance of the Management Review

Resources for Planning Sustainability Strategies

- UNESCO (2014) UNESCO Roadmap for Implementing the GAP on ESD.
- The Natural Step backcasting process
- Hitchcock, D and Willard M. The step by step Guide to Sustainability Planning
  Willard, B. The New Sustainability Advantage, Sustainability Champion's Guidebook
- Deming, E
  ISO standards 14000, 26000
  Blackburn, W. The Sustainability Handbook
- Wackernagle, Ecological Footprint
- Kaplan and Norton, The Balanced Score Card

4	**Implement Sustainability Strategies** Managing the ongoing activities related to successful integration and fulfilment of sustainability goals

Job Task	Related knowledge and competencies
4.1 Establish effective support and governance structures for the implementation of sustainability strategies and initiatives	- Understand governance models, processes, decision frameworks
4.2 Implement an SMS in alignment with accepted standards and protocols	- Understanding of the benefits of standardized SMS's - Familiarity with continuous improvement standards and protocols (e.g. ISO series of standards) - Apply PDCA model and strategies
4.3 Integrate sustainability principles into organizational functions, policies and practices	- Define the phases of implementation of sustainability - Change management theory; strategies and barriers to change - Describe the basic approach to life cycle assessment
4.4 Manage complex projects	- Define the different process groups of a project (Initiating, Planning, Executing, Monitoring and Controlling, Closing). - Classify the project into the project management knowledge areas (integration, scope, time, cost, quality, human resource, communication, risk, procurement, stakeholder). - Analyze and select the appropriate process model components (Inputs, Tools & Techniques, Outputs). - Manage the project per project requirements and plan.

4.5 Communicate sustainability plans and concepts and choose strategies for buy-in from all members and levels of an organization	- Plan Communications: who needs it ; when is it needed; where should it be stored; what format; how to retrieve it; any barriers to overcome such as language, time zones, cultural, etc.
	- Familiarity with the strategies and concepts of community based social marketing
	- Communications Management Plan:
	- Wilhelm, K, Making Sustainability Stick
	- Manage Communications: Determine and limit who will communicate with whom and who will receive what information
	- Control communications: the process of monitoring and controlling communications throughout the entire project life cycle to ensure the information needs of the project stakeholders are met.
	- Ensure optimal information flow among all communication participants, at any moment in time.
	- Analyze Communication dimensions:
	    o Interactive and technology based
	    o Internal and external
	    o Formal and informal
	    o Vertical and horizontal
	    o Push and pull communications

4.6 Launch and support teams and work groups	- Launch and charter teams - Build commitment among team members - Facilitate groups through decision making - Hold teams accountable for results - Lead teams through the stages of team development - List the critical steps in building consensus in groups
4.7 Drive innovation, improvement and continuous learning	- Innovation Theory - motivators for adoption, barriers to adoption, etc. - Familiarity with product stewardship, LCA's - Understanding of the theory of double loop learning
4.8 Distribute communication and determine process for gathering feedback	- Ensure two-way communication and assure line manager acceptance

Resources for Implementing Sustainability Strategies

- A Guide to the Project Management Body of Knowledge (PMBOK GUIDE) 5th edition, Project Management Institute, ISBN 978-1-935589-67-9
- Duckworth, A. and Moore, R (2010). Social Responsibility: Failure Mode Effects and Analysis, CRC Press http://www.crcpress.com/product/isbn/9781439803721
- Whiteley, A., 1995, Managing change: a core-values approach, Macmillan Education, Australia.
- Benn, S., D. Dunphy and A. Griffiths, Organizational Change for Corporate Sustainability (3rd ed.), Routledge, New York.
- US Environmental Protection Agency
- Kotter, John (1996). Leading Change, Harvard Business School Press: Cambridge
- See Husted, B., J.S. Waddock and S. Sutherland, 2003, Unfolding stakeholder thinking 2: Relationships, communication, reporting and performance, Greenleaf, Sheffield.
- Fleischer, D. GREEN TEAMS: Engaging Employees in Sustainability, GreenBiz.com
- Available at http://www.neefusa.org/pdf/greenbiz-reports-GreenTeams.pdf
- GMIC Guide to Forming a Green Team, Green Meeting Industry Council
- McKenzie-Mohr, Doug and Smith, William (1999). Fostering Sustainable Behavior, Gabriola Island, BC: New Society Publishers.
- Willard, B The New Sustainability Advantage
- McDonnough, W. and Braungart M. (2002). Cradle to Cradle, New Point Press: NY
- Doppelt, B. ((2010). Leading Change Toward Sustainability, Greenleaf Publishing: Sheffield, UK
- Rogers E., Diffusion of Innovation
- Wilhelm, K (2014). Making Sustainability Stick, Pearson Education: New Jersey
- Hitchcock, D. and Willard, M (2015). The Business Guide to Sustainability, Taylor and Francis: London

5	**Evaluate and Report Sustainability Efforts**
	Collect, analyze and report the results of sustainability metrics

Job Task	Related knowledge and competencies
5.1 Conduct an impact assessment of organizational or community inputs, operations, outputs and stakeholder relationships	- Apply impacts assessment models and strategies - Perform cost-benefit analysis & employee motivational studies - Manage supply chains

5.2 Design, implement and maintain data systems for collecting accurate, timely and reliable data (maximally integrated with other data collection systems of the organization).	- Conduct validity & reliability studies based on data compiled from comparable organizations. - Design TBL dashboards with leading, lagging, qualitative and quantitative metrics - Determine materiality of metrics and reporting requirements - Perform and review greenhouse gas inventories and audits - Apply prevailing standards for measuring and managing social, environmental and economic impacts.
5.3 Analyze data and draw conclusions about progress.	- Apply concepts of materiality, transparency, context, completeness to measures and reports - Selecting, interpreting and reporting on sustainability key performance indicators
5.4 Gather data, case studies, examples, and logically compile and order them	- Prepare defensible, readable and accessible reports - Demonstrate understanding of widely accepted reporting formats like CDP, GRI, SASB, IIRC

Resources for Evaluating and Reporting Sustainability Efforts

- CDP
- GRI
- IIRC
- SASB

6 Adjust plans
Continuously review efforts and adjust to meet emerging needs and opportunities

Job Task	Related knowledge and competencies
6.1 Maintain and continuously refine management systems	- Conduct regular reviews of SMS, plans, strategic priorities, threats and opportunities - Perform annual SWOT & cost-benefit analysis
6.2 Prioritize action based on context, analysis and set targets	- Use accredited project management concepts - Recognize and incorporate new and emerging opportunities that have the potential to enhance uptake of sustainability initiatives

Resources for Adjusting Plans