

# Service Industries

## Introduction

This Environmental and Social Risk Briefing (ESRB) covers selected sub-sectors of the Service Industry (i.e. those that can have appreciable environmental and social “footprints”) including industrial health care, telecommunications and tourism. Dry Cleaning has been included in the Chemical and Pharmaceutical ESRB due to the intensive use of chemicals in the process.

## Service Industry

The Service Industry is large and diverse and in recent decades has become an increasingly important part of the economy. Issues relating to the construction of new infrastructure and the environmental and social effects that can result are dealt with Infrastructure ESRB.

The following sections present an overview of each of the above cited industry sub-sectors including brief descriptions of the range of activities that are undertaken as part of normal business within the sub-sector.

## Healthcare

The healthcare sector includes public hospitals and ambulance trusts, private hospitals, nursing homes, care homes, medical practices (e.g. doctors and dentists) and other human health activities, such as blood banks and medical

laboratories and all the services typically offered by these institutions / facilities.

The health care sector performs a number of functions that are common to other industry sectors including transportation, laundry, food services, building cleaning, heating / cooling and photographic processing. Many of these support services have traditionally been performed by internally healthcare organisations but increasingly are being contracted out to subcontracted service providers.

Activities unique to the healthcare industry include generation and disposal of infectious wastes, medical waste incineration, equipment sterilization, use of mercury containing equipment, x-ray diagnosis, nuclear medicine, pharmaceutical usage and disposal and drinking water fluoridation. The industry has considerable leverage upstream on its suppliers, which is important in managing risks from the use of goods commonly used including mercury-containing products, polyvinyl chloride plastics, latex gloves and syringe needles.

In regards environmental management, of greatest concern in the healthcare sector is the management of wastes and especially clinical wastes. The management of aqueous and atmospheric emissions is however, also important as is minimisation of energy and resource consumption.

## Clinical Waste and Disposal

Medical waste or “clinical” waste refers to biological products, which are classified as infectious or biohazardous and that can spread infectious disease. Clinical waste is generated in the diagnosis, treatment or immunization of human beings or animals in research or in the production or testing of biologicals.

The UK Health and Safety Commission’s Health Service Advisory Committee (HSAC) has classified clinical waste into the following Groups:

- ♦ **Group A:** All human tissue, including blood (whether infected or not), animal carcasses and tissue from veterinary centres, hospitals or laboratories and all related swabs and dressings.

Waste materials, where the assessment indicates a risk to staff handling them, for example from infectious material disease cases.

Soiled surgical dressings, swabs and other soiled waste from treatment areas.

- ♦ **Group B:** Discarded syringe needles, cartridges, broken glass and any other contaminated disposable sharp instruments or items.

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- ♦ **Group C:** Microbiological cultures and potentially infected waste from pathology departments (laboratory and post mortem rooms) and other clinical or research laboratories.
- ♦ **Group D:** Certain pharmaceutical products and clinical wastes.
- ♦ **Group E:** Items used to dispose of urine, faeces and other bodily secretions or excretions assessed as not falling within Group A. This includes used disposable bedpans or bedpan liners, incontinence pads, stoma bags and urine containers.

Historically, clinical wastes have been incinerated on-site at the healthcare facility particularly where larger facilities are concerned. Smaller facilities typically transferred their wastes to larger ones for disposal.

Hospital waste incinerators have the potential to release dioxins, mercury, lead, cadmium and other carcinogens such as formaldehyde, benzene and vinyl chloride into the atmosphere because of the wide variety of materials used and disposed of in using this method. Further, many older hospital incinerator installations are not equipped with appropriate pollution control devices (e.g. scrubbers).

Due to the environmental impacts associated with incineration of clinical wastes, the practice is now being largely phased out and new waste treatment

methods such as microwaving and autoclaving are being introduced as means to sterilising clinical waste such that it can be disposed of in landfills. Clinical wastes represent approximately 25% of the waste output of a healthcare / hospital facility. The remaining 85% of the waste is not hazardous.

## *Wastewater*

Wastewater generated in healthcare facilities can be contaminated. A number of studies of mercury loadings at wastewater utilities have identified discharges of dental amalgam - waste from dental operations - as a large mercury source. Mercury spills from mercury containing equipment also often end up in sewage systems. Water discharges from medical waste incinerators and autoclaves are similarly high in mercury content.

Wastewater is also generated as a result of standard cleaning and disinfecting of healthcare facilities and may be contaminated as a result of coming into contact with hazardous substances.

## *Energy Consumption*

Average size healthcare facilities are the second highest energy consumers among commercial building types. This consumption rate is twice as high as office buildings and follows only food service facilities. A number of factors contribute to this - high electricity usage by medical equipment; high air exchange rates to minimise airborne

infections; year-round "24/7" operations; inclusion of cafeterias with cooking equipment in healthcare facilities; and high volume laundering facilities.

## *Telecommunications Industry*

The telecommunications industry provides the delivery of voice, data, graphics and video by a variety of different media pathways. Wireline telephone communication is steadily being replaced by wireless technology in the market place. Wireless telecommunication transmits voice, graphics and data by sending signals via networks of radio towers. The signal is received via an antenna, which transfers the data into a wireline network.

Wireless carriers are deploying several new technologies that allow faster data transmission and thereby improved internet access that makes them competitive with wireline carriers. Once the speeds of connection and transmission are equal, one could expect to see the phasing out of wireline operations.

Cable and programme distribution is another sector of the telecommunications industry. This sector of this industry provides television and other services on a subscription or fee basis. These cable programs are distributed by way of fibre optic and coaxial cable networks, which are installed at shallow depths underground or laid on

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the seabed. Direct Broadcasting Satellite (DBS) operators constitute a growing segment of the pay television industry. DBS operators transmit programming from orbiting satellites to customers' receivers, known as "mini-dishes".

Changes in technology and regulation now allow cable television providers to compete directly with telephone companies. With the reduction of signal interference cable operators have been able to increase the capacity of the signal distribution and improve data compression enabling video on demand and high-speed Internet access.

The telecommunications industry continually needs to erect more radio masts to improve their wireless coverage around the world. This can lead to issues regarding land acquisition, right of way alignment and environmental issues associated with access roads construction and tower erection. Other environmental issues include visual impact.

Telecommunications companies own large fleets of vehicles used to service and maintain equipment. Substantial consumption of fossil fuels with the attendant CO<sub>2</sub> emissions results in greenhouse gas emissions, and potential contribution to climate change.

Resellers of telecommunications services are another sector of this industry. Resellers lease transmission facilities, such as telephone lines or

space on a satellite and then resell the service to other customers.

## *Tourism*

International tourism is the world's largest export earner. Tourism has also become one of the world's most important sources of employment. It stimulates enormous investment in infrastructure and it provides governments with substantial tax revenues.

## *Hotels and Leisure Facilities*

The hotel industry is extremely diverse. It includes high-end luxury hotels and lodges to camping and semi-permanent caravan parks, golf courses, water sports facilities, entertainment venues and theme parks. Establishments vary greatly in size and in the services they provide but usually include overnight accommodation to cater for tourists and business travellers, restaurant and retail outlets, sports and leisure facilities such as health and beauty salons, gyms, swimming pools and water sports equipment / facilities. Larger scale facilities also often provide space and facilities for business and commercial events such as conferences, workshops and residential training courses.

Tourism infrastructure and development often involves the construction of large complexes of buildings and facilities in locations that will attract visitors such as areas of outstanding natural

beauty or sensitivity (e.g. beachfronts, conservation areas or important cultural monuments or sites) and therefore, can result in significant impacts.

Tourism can generate significant local employment opportunities however it is often the case that positions are for un-skilled and semi-skilled workers, with most skilled jobs being filled by expatriates. Where employment opportunities do exist for local people, it is often seasonal which may leave communities without work or with limited earning capacity during the off-season.

When tourist resorts are built in remote or poorer regions local people may be tempted to leave their villages or farms on the basis of hoping to secure employment or income from the resort. Where small local businesses centres are created near to resort complexes, shantytowns often develop with the attendant problems of begging, hawking, prostitution and alcohol / drug use. In addition, tourism fashions change rapidly in terms of popular tourist destinations creating a "boom and bust" affect for host communities in economies largely dependent on tourism incomes.

Various transportation types (e.g. air, ships, coach and cars) are required to transfer the large numbers of tourists to resorts and take them on tours in the local area. This increased local traffic will have an impact on road safety and the long-

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term maintenance of roads, which often are not sealed. The pollution effects of these emissions to air (i.e. CO<sub>2</sub> and dust), particularly in areas of outstanding natural beauty, conservation areas and fragile ecosystems, can be significant.

Air transport is acknowledged as one of the areas where greenhouse gas emissions are increasing rapidly because of the increase in affordable flights to all and economic penalties might be imposed by governments to try to compensate for these emissions.

Hotels can be a symbol of wealth, which can be perceived as bypassing the local economy and conspicuous consumption of resources in areas where surrounding communities do not enjoy a high quality of life. From this perspective they can be a stimulus for resentment and ill feeling towards patrons.

Cruise ships are another type of tourism that has a different set of issues to those of resorts. The major issues associated with these operations

include disposal of waste at sea, ballast water managements and hull fouling. Ship related accidents also typically result in oil spills.

## *Ecotourism*

Ecotourism is becoming popular in some of the most beautiful and fragile areas of the world. The definition is however, somewhat misleading as ecotourism includes everything from a small rainforest lodges where revenues are more likely go to support the local community to luxury remote resorts, which exploit high volumes of natural resources and do not necessarily involve local communities in the operations.

There is no certification or international regulatory body that monitors and controls the Ecotourism. The term can therefore create a false sense of security in some regions, as over time many of the problems associated with traditional mass tourism still apply. Further, ecotourism businesses are often owned or controlled by outside interests meaning that economic benefits do not

necessarily get used for the protection of local areas or to support local populations.

## *Associated Facilities*

Hotels often include golf courses and entertainment parks in order to attract high-end or luxury tourist markets. In the case of golf courses, the land take required is substantial and construction involves moving large volumes of sand and topsoil, which can accelerate soil erosion and increase wind-borne dust. IN terms of maintenance golf courses require extremely high volumes of water for irrigation. Further, golf courses often include complex high-quality landscaping in which alien (non-native) plant species can be used for their aesthetic appeal. Such species may pose a threat if they spread to nearby areas as they may out compete native species.

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## Key Sector Risks and Headline Issues

In the service sector there are some critical issues of particular public concern that may result in reputation issues or credit risk to a lender or an investor, these include:

### Health sector

- ◆ Hazardous waste from the health care sector – adequate and safe management and disposal
- ◆ Costs of waste management - e.g. changes in legislation surrounding waste disposal, especially hazardous waste
- ◆ Occupational health and safety – injuries and illness from contaminated materials, sharps contained in the waste, spread of infections
- ◆ Liabilities – compensating injuries to employees, patients and public

### Telecommunication

- ◆ Health and safety and environmental risks – pylons and handsets: EMF public risk perception
- ◆ Recycling of handsets – speed of innovation and technology development - environmental degradation associated with build up of non-biodegradable materials and obsolete equipment
- ◆ Irreversible physical and or visual impacts on critical habitats or land by pylons, transmission towers and manufacturing plants
- ◆ Road safety – accidents involving public / other road users potentially resulting in fatalities;
- ◆ Revenue transparency - bribery and corruption particularly if manufacturing sites, or outsourcing to developing economies and states with weak governance structures;

### Tourism

- ◆ Degradation and overuse of natural resources e.g. water for swimming pools and irrigation in water scarce regions
- ◆ Ecological damage to protected or fragile environments from traffic and transportation, construction etc e.g. corals, virgin forests, savannah ecosystems
- ◆ Air / water / soil pollution caused by construction activities
- ◆ Non-compliance with environmental/construction permits and regulations – visual impacts of new or unfinished developments

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- ◆ Socio-cultural impacts on host communities e.g. diluted local cultural traditions, impacts to local cultural/archaeological heritage, increase in public nuisance and petty and serious crime e.g. sex tourism
- ◆ Local social and economic impacts e.g. accentuated poverty gap and negative perception of facilities for high income foreign tourists in poor host communities
- ◆ Revenue transparency and good governance e.g. predominantly foreign-owned developments and revenues exported outside host country/communities

The following tables detail potential environmental and social risks associated with industry processes and appropriate control measures. These may include **Environmental and Social Management Plans** and may form part of a wider **Environmental Social Management System**.

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## Environmental Risks

Activity	Environmental	
	Risks	Controls
<b>Health Care</b>		
	<ul style="list-style-type: none"> <li>◆ <b>Liquid/solid waste (production and disposal)</b> - hazardous and non hazardous and clinical waste management:               <ul style="list-style-type: none"> <li>- Disposal of needles and other sharps</li> <li>- Disposal of biological waste matter - attracts vermin and releases odour</li> <li>- Cross infections from contaminated biological waste</li> </ul> </li> <li>◆ <b>Liquid/solid waste (production and disposal)</b> - storage and handling of non-hazardous and hazardous wastes and wastewater</li> <li>◆ <b>Atmospheric emissions:</b> (from on-site incinerators and generators):               <ul style="list-style-type: none"> <li>- Pollutants (VOC, NOX, SOX, PM10, CO, CO2, etc)</li> <li>- Greenhouse gas production e.g. chlorofluorocarbons (CFCs) and Hydrochlorofluorocarbons (HCFCs), 'perc'</li> <li>- Dust and noise</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>◆ <b>Hazardous materials storage, transport and containment</b> -               <ul style="list-style-type: none"> <li>- Label and store toxic and hazardous materials in secure, bunded areas</li> <li>- Improvement and regular third party audits of chemicals storage facilities</li> </ul> </li> <li>◆ <b>Hazardous waste transport, storage and handling plans</b> -               <ul style="list-style-type: none"> <li>- Implementation of hazardous waste management systems including regular audits of the waste facilities and waste collection</li> <li>- Installation of on-site incinerator for biological waste</li> </ul> </li> <li>◆ <b>Waste management</b> - responsible waste management</li> <li>◆ <b>Use of Best Available Technique Not Entailing Excessive Cost (BATNEEC)</b> e.g. control of emissions of emissions from incinerators and handling, transport and disposal of residual waste and appropriate discharge of wastewater</li> </ul>
<b>Telecommunications</b>		
	<ul style="list-style-type: none"> <li>◆ <b>Waste (production and disposal)</b> – disposal of handsets and telecommunications equipment</li> <li>◆ <b>Landscape scarring and visual impact</b> - e.g. hedgerow removal for mast and pylon erection</li> <li>◆ <b>Impact on terrestrial and aquatic ecology</b> - land / sea bed disturbance, for mast and pylon erection</li> <li>◆ <b>Public nuisance</b> - analogue TV and radio interference</li> <li>◆ <b>Atmospheric emissions:</b> (from large vehicle fleets are likely to be substantial):               <ul style="list-style-type: none"> <li>- Pollutants (VOC, NOX, SOX, PM10, CO, CO2, etc)</li> <li>- Greenhouse gas production</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>◆ <b>Waste management</b> - responsible waste management e.g. handset/components recycling</li> <li>◆ <b>Minimise facility footprint</b> - limit disturbance to land and access routes - e.g. siting of pylons</li> <li>◆ <b>Conduct public consultation and increase consumer awareness of:</b> <ul style="list-style-type: none"> <li>- Location of masts and pylons</li> <li>- Education on responsible disposal of handsets</li> </ul> </li> <li>◆ <b>Emissions management</b> - ensure vehicles are properly maintained to manufacturers specifications and switch to cleaner fuel vehicles if feasible</li> </ul>

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Activity	Environmental	
	Risks	Controls
	- Dust and noise	
<b>Tourism</b>		
	<ul style="list-style-type: none"> <li>♦ <b>Atmospheric emissions:</b> (e.g. coaches, charter flight airlines, mopeds and air vehicle fleets are likely to be substantial):               <ul style="list-style-type: none"> <li>- Pollutants (VOC, NOX, SOX, PM10, CO, CO2, etc) - waste discharge to the worlds oceans from cruise ships</li> <li>- Greenhouse gas production - substantial fuel consumption from the various types of transport</li> <li>- Dust and noise</li> </ul> </li> <li>♦ <b>Habitat depletion, fragmentation and degradation</b> - resulting in land disturbance, land instability and soil erosion associated with new builds</li> <li>♦ <b>Impact on terrestrial and aquatic ecology</b> - e.g. corals and marine biodiversity in coastal resorts from diving boats</li> <li>♦ <b>Pressure on natural resources</b> - high energy and water consumption</li> <li>♦ <b>Employee health and safety</b></li> <li>♦ <b>Community health and safety</b> - (e.g. increased traffic volume (especially hire cars and tourist transport; speed boat accidents)</li> <li>♦ <b>Liquid/Solid waste (production and disposal)</b> – high volume of waste including storage, disposal and transportation (e.g. litter in destinations with high volumes of annual visitors)</li> <li>♦ <b>Disruption and pollution of surface water (hydrological) and ground water (hydrogeological) systems and flows</b></li> <li>♦ <b>Landscape scarring and visual impact</b> - e.g. permits to build facilities and buildings 'not in keeping' with</li> </ul>	<ul style="list-style-type: none"> <li>♦ <b>Environmental impact assessment and public consultation</b> - new build hotels and leisure complexes to mitigate impacts and disruption during construction and operation</li> <li>♦ <b>Use of Best Available Technique Not Entailing Excessive Cost (BATNEEC)</b> in facility design</li> <li>♦ <b>Minimize facility footprint</b> - appropriate measures for ensuring sustainable resource management (e.g. water and energy use)</li> <li>♦ <b>Waste and hazardous materials transport, storage and handling plans</b> <ul style="list-style-type: none"> <li>- Implementation of waste management systems including regular audits of the waste facilities and waste collection</li> </ul> </li> <li>♦ <b>Sustainable land use (land clearing) and biodiversity protection</b> - create protected / conservation areas (e.g. marine parks to mitigate and or offset damage to natural/marine ecosystem)</li> <li>♦ <b>Minimise facility footprint</b> <ul style="list-style-type: none"> <li>- Limit disturbance to land and property site selection for new builds</li> <li>- Set and enforce restrictions on volume of visitors through building permits and or transportation networks e.g. limit no of rooms / beds</li> <li>- Set and enforce restrictions on types of building / facility (e.g. through planning permission building permits)</li> </ul> </li> <li>♦ <b>Transport management plans</b> - traffic management measures (e.g. traffic calming / pedestrian zones / parking restrictions)</li> <li>♦ <b>Emissions management</b> - ensure vehicles are properly maintained to manufacturers specifications and switch to cleaner fuel vehicles if feasible</li> </ul>



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Activity	Environmental	
	Risks	Controls
	surroundings (especially in countries little or no regulation or enforcement of building restriction	♦ <b>Waste management</b> - bilge washing should not be done at sea but at appropriate facilities in port

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## Social Risks

Activity	Social	
	Risks	Controls
<b>Health Care</b>		
	<p><b>Employee health and safety -</b></p> <ul style="list-style-type: none"> <li>- Poor employment and labour standards,</li> <li>- Dangerous employee conditions including health and safety, exposure to chemicals</li> <li>- Musculoskeletal injuries</li> <li>- Work related stress</li> <li>- Containment of contagious infections and diseases</li> <li>- Injuries from sharp items in waste and from unskilled use</li> <li>- Radiation from x-ray machines</li> </ul> <ul style="list-style-type: none"> <li>♦ <b>Communicable diseases</b> - Contaminated blood in transfusions and blood testing – e.g. HIV/AIDS risks</li> <li>♦ <b>Landscape scarring and visual impact</b> – decomposition of biological waste</li> <li>♦ <b>Public nuisance</b> - odour (e.g. from materials during prolonged waste storage) and noise and other disturbance from emergency operations at health care facilities</li> <li>♦ <b>Community health and safety</b> - transport accidents, emissions/discharges (aqueous and gaseous), noise</li> <li>♦ <b>Illegal and unethical trade in human organs and body parts</b> - particularly in less developed regions</li> <li>♦ <b>Community health and safety -</b> <ul style="list-style-type: none"> <li>- Reputation risk / boycotting due to unavailable access to affordable health care and facilities in less developed countries,</li> <li>- Animal testing in health care research facilities and hospitals</li> <li>- Human rights violations (i.e. pharmaceutical testing on</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>♦ <b>Employee health and safety management systems</b> <ul style="list-style-type: none"> <li>- Adjust employees working hours/conditions, temporary and long term</li> <li>- Introduce a occupational health system</li> <li>- Information about occupational ill health</li> <li>- Risk assessment and safety instructions for all employees</li> <li>- Specialised ongoing training and risk assessment programs for health care facility cleaning staff (e.g. in disinfectant use and containment of communicable diseases)</li> </ul> </li> <li>♦ <b>Waste management plan -</b> <ul style="list-style-type: none"> <li>- Waste management and safe handling, collection, storage and disposal of clinical waste</li> <li>- Responsible and secure storage of medicines and equipment and management of expired medicines and surplus instruments</li> </ul> </li> <li>♦ <b>Emissions management</b> - odour control</li> <li>♦ <b>Emergency preparedness and spill prevention plans</b> - appropriate emergency procedures, community awareness and preparedness in the event of accidents involving hazardous substances or disease outbreak</li> <li>♦ <b>Partnering with and supporting host governments -</b> <ul style="list-style-type: none"> <li>- Encourage revenue transparency and good governance</li> <li>- Compliance with national / regional / local regulations</li> </ul> </li> </ul>

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Activity	Social	
	Risks	Controls
	vulnerable groups)	
<b>Telecommunications</b>		
	<ul style="list-style-type: none"> <li>♦ <b>Community health and safety</b> - transport accidents, emissions/discharges (aqueous and gaseous), noise, dust and vibrations</li> <li>♦ <b>Public nuisance</b> -e.g. background 'feedback' noise and visual impact of pylons and or satellite dishes, concerns related to social uses of mobile phone and internet (e.g. internet pornography, text message spamming)</li> <li>♦ <b>Community health and safety</b> - perception of health risk from EMF and radiation from mobile phones</li> <li>♦ <b>Site security and vandalism</b> - security of network coverage during emergencies</li> <li>♦ <b>Employee health and safety</b> - employment and Labour standards - Human rights of workers in handset and micro-chip / circuit board manufacturing facilities in developing countries (e.g. child labour, repetitive manual work, long hours)</li> <li>♦ <b>Macro economic impact</b> - "boom and bust" effect of major outsourcing contracts to customer call centres in developing countries</li> <li>♦ <b>Reputation risk related to poor customer service</b> - loss of customer base due to of major outsourcing contracts to customer call centres in developing countries</li> <li>♦ <b>Community health and safety</b> - transport accidents and road safety e.g. - accidents involving public / other road users potentially resulting in fatalities</li> </ul>	<ul style="list-style-type: none"> <li>♦ <b>Environmental and social impact assessment</b> - major network installations of pylons, cables and satellite dishes</li> <li>♦ <b>Emergency preparedness and spill response plans</b> - management and training measures in place to secure network coverage in periods of high volume calls</li> <li>♦ <b>Risk assessments</b> - call centre outsourcing</li> <li>♦ <b>Employee training</b> - ensure high standard of employee customer service training in outsourced customer service call centres</li> <li>♦ <b>Community/stakeholder relations management</b> - - Management of interface between local communities and project through stakeholder identification and consultation (including governmental/national/regional/local consultation) - Consumer and customer awareness campaigns on EMF and health risks associated with mobile phone use as well as issues around social nuisance from mobile phone and internet use - Enforce strict driver skills standards and implement driver and road safety behaviour training including night time noise restrictions, traffic calming), language and cultural awareness campaign for visitors</li> </ul>
<b>Tourism</b>		

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Activity	Social	
	Risks	Controls
	<ul style="list-style-type: none"> <li>♦ <b>Community health and safety</b> - transport accidents, emissions/discharges (aqueous and gaseous), noise, dust and vibrations and increases in petty and serious crime e.g. theft, assaults, sex trade and prostitution</li> <li>♦ <b>Public nuisance</b> - disturbance and nuisance from increased noise and traffic volume, emissions and air quality (e.g. high volume traffic and mass transport (coaches, charter flight airlines, mopeds))</li> <li>♦ <b>Disruption of social / community cohesion</b> <ul style="list-style-type: none"> <li>- Breakdown of social networks and structures</li> <li>- Socio-cultural tensions between local and foreign workforce Influx and outflow of migrants/ temporary workers and attraction of seasonal residents to project area</li> </ul> </li> <li>♦ <b>Communicable diseases</b> – spread of diseases by visitors to local / foreign populations (e.g. STDs from sex industry; avian flu)</li> <li>♦ <b>Land acquisition - displacement</b> - loss of land leading to poverty, social disruption, migration, loss of traditional lands and cultural property, involuntary resettlement requiring relocation and compensation claims</li> <li>♦ <b>Loss of livelihoods - economic displacement</b> - job competition, conflict between local and foreign workers - impact of imported staff for tourist seasons, loss of income (e.g. land depreciation),</li> <li>♦ <b>Employee health and safety</b> – Employment and Labour standards <ul style="list-style-type: none"> <li>- Poor labour standards and working conditions - child labour</li> </ul> </li> <li>♦ <b>Cultural / archaeological heritage</b> - artisanal fishing</li> </ul>	<ul style="list-style-type: none"> <li>♦ <b>Community health and safety plans</b> - <ul style="list-style-type: none"> <li>- Vaccinations, communicable diseases awareness campaigns, drop-in health clinics for tourists)</li> <li>- Catering – food preparation standards need to be rigorous as bacterial infections spread very quickly in resorts, particularly in hot climates</li> </ul> </li> <li>♦ <b>Human resources policies</b> <ul style="list-style-type: none"> <li>- Maximization of local employment</li> <li>- Train and develop local people to the level required to enable them to fill skilled positions</li> </ul> </li> <li>♦ <b>Community investment and development</b> - community investment (both long and short term) e.g. health care facilities, micro-finance initiatives and access to employment and support of local public/community services (e.g. waste collection, police and security by litter and crime awareness campaigns)</li> <li>♦ <b>Sustainable resource management</b> – measures to ensure sustainable resource use and management (e.g. electricity, water generators, desalination plants)</li> <li>♦ <b>Partnering with and supporting host governments</b> <ul style="list-style-type: none"> <li>- Encourage revenue transparency and good governance</li> <li>- Compliance with national / regional / local regulations</li> </ul> </li> <li>♦ <b>Resettlement and relocation management</b> - including proper compensation, restoration of livelihoods and living standards developed based on socioeconomic studies</li> <li>♦ <b>Social / community baseline assessment</b> - establish community profiles (e.g. livelihoods and employment) in project area, through detailed social baseline assessments to inform mitigation measures and the development of long term agreed community investment/development</li> </ul>

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Activity	Social	
	Risks	Controls
	<p>rights, traditional livelihoods cultural heritage, inheritance - indigenous customs and sites of cultural or religious value</p> <ul style="list-style-type: none"> <li>♦ <b>Local economy</b> - local procurement and business, unregulated trade, impacts on prices e.g. boom and bust effect between high and low season</li> <li>♦ <b>Host country governance, national economy and revenue transparency</b> - National economy and revenue transparency, sustainable growth and inflation, bribery, corruption and extortion</li> <li>♦ <b>Strain on infrastructure and public nuisance</b> - Strain on transport networks and infrastructure including ability of social services' capacity to absorb new / foreign populations (supply and demand) - water resources, power, health, education, housing</li> </ul>	<ul style="list-style-type: none"> <li>♦ <b>Community/stakeholder relations management</b> <ul style="list-style-type: none"> <li>- Management of interface between local communities and outsiders through stakeholder identification and consultation (including governmental/national/regional/local stakeholders).</li> <li>- Management of community tensions, grievances and concerns through transparent formal grievance mechanism</li> <li>- Cross-cultural community awareness training for project contractors</li> </ul> </li> </ul>

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## Key considerations

1. Has the company been in business for a long time?
2. What is the environmental/social compliance track record of the company? (Association with a company with a poor compliance record can give rise to potential reputation risk).
3. What procedures and/or resources exist to manage environmental and social risks (e.g. an environmental management system or personnel with specific responsibilities for risk mitigation)? Are these considered adequate?
4. Is the site in a protected or conservation area e.g. world heritage site/area of outstanding natural beauty, or is it known for rare or protected species of animals/plants? Is the site home to indigenous populations engaged in subsistence activities?
5. How does the company deal with biodiversity protection?
6. Has the customer planned for all the necessary provisions to protect/rehabilitate the site?
7. Are there any onerous conditions attached to the building consents and authorisations? Has the company made the necessary provisions to meet these conditions?
8. How does the company tackle the issue of employee/community/public health and safety?
9. What wastes are/will be produced and how are they disposed of?

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## Regulation and Best Practice

Permits, consents and licences are likely to be required for mining and metals operations, the specifics of which will depend on the jurisdictional framework in the geographical location of a given project. In developing regions, weaker governance structures may mean that there is less stringent implementation of local controls and regulations or indeed there may be no controls at all. In such cases international environmental and social standards and Industry Best Practice should ideally be adhered to by the project proponent as a demonstration of best practice.

In the case of almost all large-scale new build, expansion and development projects an Environmental and Social Impact Assessment (ESIA) will be required particularly where project debt financing is being sought. A comprehensive ESIA undertaken to international standards allows both the project sponsor and the investors to assess the full range of potential environmental and social impacts related to a project development, operation and decommissioning. Part of the ESIA process is to design appropriate mitigation measures and to set a framework for monitoring the performance of these measures on a long-term basis. This limits and controls compliance and remediation costs as well as long term credit and reputation risks.

For smaller scale projects and operations a full ESIA may not be required. Focused studies on particular issues of concern may however, be helpful in identifying potential environmental and social risks associated with certain project activities.

The table below lists key international standards and publicly available best practice reference materials relevant to the service industry.

Source	Agency / Body
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Source	Agency / Body
Multilateral	<p>IFC Performance Standards  <a href="http://www.ifc.org/ifcext/enviro.nsf/Content/PerformanceStandards">http://www.ifc.org/ifcext/enviro.nsf/Content/PerformanceStandards</a></p> <p>World Bank Group Pollution Prevention and Abatement Handbook  <a href="http://lnweb18.worldbank.org/ESSD/envext.nsf/51ByDocName/PollutionPreventionandAbatementHandbook">http://lnweb18.worldbank.org/ESSD/envext.nsf/51ByDocName/PollutionPreventionandAbatementHandbook</a></p> <p>World Bank Group: Energy Sector Management Assistance Program  <a href="http://wbln0018.worldbank.org/esmap/site.nsf">http://wbln0018.worldbank.org/esmap/site.nsf</a></p> <p>Greenhouse gas Protocol Initiative (a tool that can be used to determine the emissions of your specific project/industry) from the World Business Council for Sustainable Development  <a href="http://www.ghgprotocol.org/templates/GHG5/layout.asp?type=p&amp;MenuId=OTAx&amp;doOpen=1&amp;ClickMenu=No">http://www.ghgprotocol.org/templates/GHG5/layout.asp?type=p&amp;MenuId=OTAx&amp;doOpen=1&amp;ClickMenu=No</a></p> <p>Intergovernmental Panel on Climate Change 'IPCC Special Report on Carbon dioxide Capture and Storage'  <a href="http://arch.rivm.nl/env/int/ipcc/pages_media/SRCCS-final/IPCCSpecialReportonCarbondioxideCaptureandStorage.htm">http://arch.rivm.nl/env/int/ipcc/pages_media/SRCCS-final/IPCCSpecialReportonCarbondioxideCaptureandStorage.htm</a></p> <p>Stockholm Convention on Persistent Organic Pollutants  <a href="http://www.pops.int/">http://www.pops.int/</a></p> <p>UNESCO Conference on Indigenous People and  <a href="http://portal.unesco.org/sc_nat/ev.php?URL_ID=3854&amp;URL_DO=DO_TOPIC&amp;URL_SECTION=201&amp;reload=1092045126">http://portal.unesco.org/sc_nat/ev.php?URL_ID=3854&amp;URL_DO=DO_TOPIC&amp;URL_SECTION=201&amp;reload=1092045126</a></p> <p>EU Directive for Waste Management  <a href="http://www.wbcd.org/Plugins/DocSearch/details.asp?ObjectId=MTg4OTE">http://www.wbcd.org/Plugins/DocSearch/details.asp?ObjectId=MTg4OTE</a></p> <p>The International Finance Corporation has a fund GEF grants support projects related to biodiversity, climate change, international waters, land degradation, the ozone layer, and persistent organic pollutants.  <a href="http://www.ifc.org/ifcext/enviro.nsf/Content/GEF">http://www.ifc.org/ifcext/enviro.nsf/Content/GEF</a></p> <p>EU Policies: Integrated Pollution prevention and control.  <a href="http://europa.eu/scadplus/leg/en/lvb/l28045.htm">http://europa.eu/scadplus/leg/en/lvb/l28045.htm</a></p> <p>International Labour Organization: Mandate  <a href="http://www.ilo.org/public/english/about/index.htm">http://www.ilo.org/public/english/about/index.htm</a></p> <p>ILO's Lists of Subjects Standards have been decided upon-  <a href="http://www.ilo.org/ilolex/english/subjectE.htm">http://www.ilo.org/ilolex/english/subjectE.htm</a></p> <p>Agenda 21, Chapter 20  On Environmentally Sound Management of Hazardous Wastes. Including Prevention of Illegal International Traffic in Hazardous Wastes  <a href="http://www.un.org/esa/sustdev/documents/agenda21/english/agenda21chapter20.htm">http://www.un.org/esa/sustdev/documents/agenda21/english/agenda21chapter20.htm</a></p> <p>Basel Convention  The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal was adopted in 1989 and entered into force on 5 May 1992.</p>



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Source	Agency / Body
Multilateral	<p>Security Issues and Human Rights  <a href="http://www.voluntaryprinciples.org/principles/private.php">http://www.voluntaryprinciples.org/principles/private.php</a>            Agenda 21  <a href="http://www.un.org/esa/sustdev/documents/agenda21/index.htm">http://www.un.org/esa/sustdev/documents/agenda21/index.htm</a>            Agenda 21, Chapter 21            Environmentally Sound Management of Solid Wastes and Sewage-related Issues.  <a href="http://www.un.org/esa/sustdev/documents/agenda21/english/agenda21chapter21.htm">http://www.un.org/esa/sustdev/documents/agenda21/english/agenda21chapter21.htm</a>  <a href="http://www.basel.int/about.html">http://www.basel.int/about.html</a>  <a href="#">Aarhus convention</a>            Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters  <a href="#">Stockholm Convention on Persistent Organic Pollutants (POPs)</a>  <a href="#">United Nations</a>            Convention on Climate Change            OECD            waste decisions            UNEP            International Declaration on Cleaner Production            World Tourism Organization  <a href="http://www.world-tourism.org/frameset/frame_sustainable.html">http://www.world-tourism.org/frameset/frame_sustainable.html</a>            World Bank Handbook for estimating the socio-economic and environmental effects of disasters  <a href="http://siteresources.worldbank.org/INTDISMGMT/Resources/tourism.pdf">http://siteresources.worldbank.org/INTDISMGMT/Resources/tourism.pdf</a>            World Bank Tourism and Sustainable Development  <a href="http://info.worldbank.org/etools/docs/library/107771/SD_Communication/epublish/zip_files/biodiversity_russia2003/pdf/TourismandSDMarkandya.pdf">http://info.worldbank.org/etools/docs/library/107771/SD_Communication/epublish/zip_files/biodiversity_russia2003/pdf/TourismandSDMarkandya.pdf</a>            The Code of Conduct for the Protection of Children from Sexual Exploitation in Travel and Tourism  <a href="http://www.thecode.org/dokument/images/downloads/code_summary_english_4.pdf">http://www.thecode.org/dokument/images/downloads/code_summary_english_4.pdf</a>            International Telecommunication Union an international NGO separate but equal to United Nations.  <a href="http://www.itu.int/org">www.itu.int/org</a></p>

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Government	<p>Environment Agency UK Monitoring Guidance notes for emission levels <a href="http://www.environment-agency.gov.uk/business/444217/444661/444671/466158/monitoring/?version=1&amp;lang=e">http://www.environment-agency.gov.uk/business/444217/444661/444671/466158/monitoring/?version=1&amp;lang=e</a></p> <p>Health and Safety Executive Noise Regulations (complete) <a href="http://www.hse.gov.uk/noise/regulations.htm">http://www.hse.gov.uk/noise/regulations.htm</a></p> <p>Health and Safety Executive Guidance for Employers for the Control of Noise at Work Regulations 2005 <a href="http://www.hse.gov.uk/pubns/indg362.pdf">http://www.hse.gov.uk/pubns/indg362.pdf</a></p> <p>Air Quality Criteria for Particulate Matter Environmental Protection Agency United States Government <a href="http://cfpub2.epa.gov/ncea/cfm/recorddisplay.cfm?deid=87903">http://cfpub2.epa.gov/ncea/cfm/recorddisplay.cfm?deid=87903</a></p> <p>Environment Canada Convention on Biological Diversity <a href="http://www.ec.gc.ca/international/multilat/biodiv_e.htm - act">http://www.ec.gc.ca/international/multilat/biodiv_e.htm - act</a></p> <p>Health Canada Guidelines on Noise in the Workplace <a href="http://www.hc-sc.gc.ca/ewh-semt/pubs/noise-bruit/insider7/index_e.html">http://www.hc-sc.gc.ca/ewh-semt/pubs/noise-bruit/insider7/index_e.html</a></p> <p>Traffic Noise Information and Recommendations <a href="http://www.hc-sc.gc.ca/ewh-semt/pubs/noise-bruit/insider8/index_e.html">http://www.hc-sc.gc.ca/ewh-semt/pubs/noise-bruit/insider8/index_e.html</a></p> <p>Canada Labour Code Federal Law and Regulations <a href="http://www.hrsdc.gc.ca/asp/gateway.asp?hr=/en/lp/lo/fll/part2/index-fll.shtml&amp;hs=oxs">http://www.hrsdc.gc.ca/asp/gateway.asp?hr=/en/lp/lo/fll/part2/index-fll.shtml&amp;hs=oxs</a></p> <p>Animal welfare act <a href="http://www.nal.usad.gov">www.nal.usad.gov</a></p> <p>European Union's Directive 867609/EEC on the protection of Animals used for Experimental and other Scientific purposes</p> <p>Bureau of Labour Statistics Hotel Industry Facts and Figures <a href="http://www.bls.gov/oco/cg/cgs036.htm - addinfo">http://www.bls.gov/oco/cg/cgs036.htm - addinfo</a></p> <p>Bureau of Labour Statistics Hotel Industry Facts and Figures <a href="http://www.bls.gov/oco/cg/cgs036.htm - addinfo">http://www.bls.gov/oco/cg/cgs036.htm - addinfo</a></p> <p>Office of Public Sector Information <a href="http://www.opsi.gov.uk/si/si2000/20000730.htm">http://www.opsi.gov.uk/si/si2000/20000730.htm</a></p> <p>Office of Communications <a href="http://www.ofcom.org.uk/">http://www.ofcom.org.uk/</a></p>
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Industry Association	<p>State collation for remediation for dry cleaners <a href="http://www.drycleancoalition.org/">http://www.drycleancoalition.org/</a></p> <p>Health and safety Executive <a href="http://www.hse.gov.uk">www.hse.gov.uk</a></p> <p>International Solid Waste Association <a href="http://www.iswa.org">http://www.iswa.org</a></p> <p>Waste Industry Safety and Health Forum (WISH)</p> <p>The United States Occupational Safety and Health Administration (OSHA)</p> <p>The Regional Waste Management Task Force (RWMTF)</p> <p>World Travel and Tourism Council <a href="http://www.wttc.org/">http://www.wttc.org/</a></p> <p>Tour Operators' Initiative for Sustainable Tourism Development <a href="http://www.uneptie.org/pc/tourism/private_sector/toinitiative.htm">http://www.uneptie.org/pc/tourism/private_sector/toinitiative.htm</a></p> <p>Alliance for Telecommunications Industry Solutions <a href="http://www.atis.org/">http://www.atis.org/</a></p>
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