

COMPARATIVE EVALUATION OF THREE INDUSTRIAL WASTE TREATMENT TECHNOLOGIES USING A TRIPLE BALANCE APPROACH APPLIED TO THREE CHARACTERISTIC COUNTRIES

FINAL REPORT

ANNEXES

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ANNEX 1

Information sources

General

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6.1 Environmental approach

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6.3 Social approach

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ANNEX 2

Description of Projection functions for the Social Balance

Child Labour

According to the SA 8000 standard, child labour can be defined as working children that are not yet 15 years old. This age can be lowered to 14 years if provided for in national legislation. If national legislation sets higher minimum ages these apply. Child labour can be mitigated through policies and procedures to detect, correct and prevent employment of such workers, programmes allowing school attendance and healthy working environments (with specific prerequisites taking into account the juvenile age of these workers).

Child Labour affects the individual in three areas:

- The child may get deprived from *education*.
This reduces chances to freely choose the individuals personal development and eventually can lead to worse chances on the job market in future, thus also affecting more material needs. The fact that education is a major, but not the only factor deciding on an individuals future is considered by assigning only 50% of the possible weight to this area.
- The child may get deprived from *socialisation*.
Lack of socialisation violates the need for social contacts and recognition as well as the possibility to , thus the three uppermost levels of immaterial needs may be violated.
- The child may be exposed to specific health and safety risks.
This is due to the fact that its organism is still developing and progressing towards a state of maximal resilience.

Thus the main condition “Child Labour” was spilt in three sub-conditions for the purpose of this study. Child Labour cannot be condemned categorically since the child’s contribution to family income may allow the family to lead a better life and because employment may actually raise the social status of a child within family and society. If the dangers summarised under the above-mentioned sub-conditions are avoided, general health and safety precautions as well as compensation is according to national and industry standards and child labour is not illegal according to national and international law nor violating generally acknowledged standards, the social impact of child labour absent for the affected individual.

The practice itself though may continue to be a threat to the enterprise due to rejection of such practices by applying western standards, a fact that will be accounted for in the valuation of social impacts in another step of this methodology.

The valuation for each sub-condition is performed separately using specified indicators and weights. To keep the weight of the condition “Child Labour” proportional to the other conditions, the results of the three condition evaluations need to be added and divided by three, resulting in an overall weighting factor of 8.33.

Health & Safety Conditions

The SA 8000 standard with respect for health and safety issues asks for H&S risk identification, prioritisation of measures to mitigate H&S hazards, formulation of health care, accident prevention and emergency plan, appointment of a responsible senior management representative for H&S issues, regular training, procedures for reporting H&S-relevant incidents, and clean and sufficient sanitary facilities (such as potable water, refrigeration possibilities for food storage and clean dormitories if applicable).

The association of this social condition with the need for health, safety and security is fully given, leading to a factor of 8.

Forced Labour

The SA 8000 standard prohibits presence of forced labour, including the practice of lodging of deposits and identity papers.

Forced labour is affecting the ability for self-determination in every respect, prohibits any freedom to choose and does not respect and accept the individuals personal demands, thus impairing the needs to the top three levels of the pyramid and leading to a weighting factor of 7.

The fact that forced labourers are not given proper compensation, housing and sanitary facilities and often are subject to more hazardous working conditions is covered through the conditions “Compensation” and “Health and Safety”. The abjection of forced labour through international conventions and standards and mostly also through national legislation cannot be reflected in the projection function but must be emphasized through appropriate weighting factors (see below).

Discrimination

Discrimination deprives the individual of the opportunity to freely express its will and affiliate to societal entities. Thus the three top-most levels of the pyramid are fully affected if discrimination is taking place, resulting in a weighting factor of 7.

Disciplinary Practices

According to the SA 8000 standard, employees must be able to follow tenets and practices associated with their beliefs and affiliations, may not be subject to special requirements due to affiliation of any distinctive group and must have the possibility to report discriminative action to senior management which in turn must be obliged to take action if such incidents are reported.

In addition to the impairment of the levels mentioned above for discrimination, certain disciplinary practices such as corporal punishment may involve dangers for health and safety. To reflect the fact that objectionable practices not necessarily need to have a physical expression the respective level is weighed by 50% only. In addition, disciplinary practices do not necessarily have to impair an individual's embedding in a social group, thus this level is accounted for by 75% only. This results in a comparatively high weighting factor of 9.

Compensation

The SA 8000 standard requires compensation practices to cover basic needs while providing some discretionary income as well as to cover national legal minimums or industry standard level. Additionally, deductions due to legal requirements must be made and stated, the pay-out must be in a form convenient to the employee and labour-only / false apprenticeship schemes must be banned.

Income is the primary key factor for generating welfare in a materialistic sense and the basic condition for other aspects of individual as well as social welfare to develop. Thus compensation issues affect the very basic needs in the Maslow hierarchy, leading to a weighting factor of 16, which in its magnitude also represents the importance of compensatory issues.

Work time regulations

National legislation and industry standards must be observed for work time regulations according to the SA 8000 standard. Maximum working time in any case shall not exceed 48 hours and comprise one day off per week. Also, overtime practices must be regulated and premium rates, a maximum of 12 hours per week and employee and a limitation to exceptional circumstances must be provided for.

Not keeping to these requirements impairs the individuals ability to self-fulfil itself and can deprive it from the ability to spend time outside its working environment, thus reducing the ability to affiliate and interact with its own social environment. In addition, overtime working may pose additional threats to the individuals health. These considerations lead to a weighting factor of 4.

Freedom of association and collective bargaining

According to the SA 8000 standard, employees must either be granted the right to join labour unions or similar associations or be able to form any other form of organisation that enables them to collective bargaining. Representatives of the respective bodies must be granted access to their wards upon demand. Discrimination based on labour union membership shall not occur, although this aspect for the purpose of this report is covered through the discrimination projection function.

While the individual may still be respected and have social recognition, its ability to freely choose and to affiliate is impaired through depriving it from the freedom of association and collective bargaining, thus resulting in a 50% consideration of these respective levels. Indirectly, the inability to bargain collectively resulting from the deprivation of labour union membership results in a comparative disadvantage for the employee with respect to negotiating power, which in turn may result in a reduction of the ability to assert the employee's interest in sufficient compensation and a healthy and safe working environment. Thus the two levels corresponding to these interests were considered by 25%. An overall weighting factor of 9 is resulting from these considerations.

Various

While not part of the SA 8000 standard, some additional aspects were also included in the social assessment in order to reveal business risks arising from social misbehaviour. These include knowledge drain due to a high job rotation rate resulting from unsatisfied employees. Such a condition would mainly result from depriving the employees of self-actualisation and impair their feelings of recognition, understanding and the lack of belongingness to the company values.

Furthermore, rumours or (even false) accusations through external stakeholders indicate that the company is active in a business area with conflicts of interest that result in political pressure and reduce the companies degree of freedom, making business contacts more risky. Such conflicts arise from summarised lack of understanding and acceptance of individuals opinions, be it internally or externally.

These considerations result in an full consideration of the top level and 50% consideration of the two next lower levels, i.e. in a weighting factor of 4.

List of indicators, data requirements and weighing factor

Condition	Sub-Conditions	Indicators	Categorisation	Weight (w _i)	Description
Child Labour – Deprivation of Education	In-house Education	YES: 0 NO:-1		.4	Any worker below 18 years should be trained beyond workplace-specific know-how for free.
	School Attendance	YES: 0 NO:-1		.4	Workers considered as child labourers (i.e. being younger than the legal minimum or in second priority younger than 15 years) should be allowed to attend school. The share of hours of school attendance should be significant in order to count for fulfilment of this condition.
	Age in relation to graduation age of compulsory school	Below: -1 Not below: 0		.2	Individuals that are working at an age that is younger than the age foreseen for finishing the compulsory school have to expect a negative social impact through their lack of education.
Child Labour – Deprivation of Socialisation	Age	Younger Legal Minimum: -1 Not younger: 0		.7	Legal minimums (or in absence of these 15 years) represent the age that is considered in different cultures to be the point where socialisation of children can be replaced by adult ways of socialisation.
	Organised Occupation / Day	Less than 10hrs/day: 0 More than 10hrs/day: -1		.3	According to the SA8000 time used for education, work and transportation should not exceed 10 hours for underaged workers in order to allow them time for socialisation.
Child Labour – Specific H&S exposure	High-risk exposure	YES: -1 No: 0		.8	Persons in high-risk jobs - being in contact with hazardous substances, exposed to heavy lifting, unhealthy working environments, mechanically dangerous process steps – can expect a negative impact on health if they are not fully grown-up, i.e. younger than 20 years. Furthermore, the accident probability is higher.
	Shift-work for underaged workers	YES: -1 NO: 0		.2	Shift-work for persons not fully grown-up has negative impacts on health and development.

Condition	Sub-Conditions	Indicators	Categorisation	Weight (w _i)	Description
HSS conditions		Accidents involving lost workdays	Days of lost work through accidents per worker * (-1)	.25	Implies that the more serious the accidents are the more work days are lost, but even less serious accidents are included.
		Hygienic facilities in place	YES: 0 NO:-1	.05	Hygienic facilities in place must be sufficient for personal are of workers and adapted to the type of work
		Improvement system for accidents reported	YES: 0 NO: -1	.1	Accidents that are reported automatically initiate the implementation of an improvement process in the management system.
		H&S plan	YES: 0 NO: -1	.1	A health and safety plan listing the recognised problems and stating a programme to improve these conditions should be implemented
		Health risk	% of employees in direct contact with hazardous substances, subject to heavy lifting and unhealthy working climate	.5	The higher the percentage of employees in direct contact with the hazardous substances or subject to heavy lifting or unhealthy working climates (hot, damp, cold etc.) the larger is the risk for these workers health
Forced labour		Forced labour	YES: -1 NO: 0	1	Forced labour should not be accepted. Impounding of wages before payout is also considered as forced labour for the purpose of this analysis.
Discrimination		Ethnic	YES: 0 NO: -1	.05	Is the proportion of ethnic groups similar to the country's proportions?
		Racial2	YES: 0 NO: -1	.05	Is the proportion of racial groups similar to the country's proportions?
		Caste	YES: 0 NO: -1	.05	Is the proportion of castes similar to the country's proportions?
		Sexual – Women representation in management	50% = 0 0% = -1	.1	Number of women on top management level

		Sexual – Pregnancy tests	YES: -1 NO: 0	.05	Are pregnancy tests conducted before employment? Compulsory pregnancy tests should not decide on whether or not a woman is employed
		Sexual orientation	YES: -1 NO: 0	.05	Is sexual orientation an issue upon employment??
		Medical tests required	YES: -1 NO: 0	.05	Are any medical tests, i.e. AIDS tests, required?
		Sexual – Pregnancy Leave	YES: 0 NO: -1	.05	Not granting pregnancy leave can be considered as a hidden discriminatory practice
		Religious and other tenets	YES: 0 NO: -1	.05	Personnel is granted to follow its religious or other affiliations tenets to a reasonable degree
		Anti-discrimination statement	YES: 0 NO: -1	.5	An anti-discrimination statement shows that the company considers the issue of discrimination and provides a lever for action in case of discrimination
Condition	Sub-Conditions	Indicators	Categorisation	Weight (w _i)	Description
Disciplinary Practices		Disciplinary Habits	YES: -1 NO: 0	1	Disciplinary practices applied? None of the following disciplinary habits should be tolerated: Corporal punishment, impounding of wages, transfer to unsafe workplaces, deterioration of working schedules
Compensation		Minimum Wages	% shortfall of legal minimum wage or national subsistence level (for wages above = 0)	.7	Wages above the minimum level are up to the employees to accept or decline
		Working Hours	YES: 0 NO: -1	.1	Excess work and holiday work is compensated separately and to a higher rate for non-management employees
		Insurances	YES: 0 NO: -1	.1	The insurances required by law are paid separately or deducted from the gross wage and paid regularly

		Pension Planning	YES: 0 NO: -1	.1	The company offers a pension plan at least equal to the country standard
Work time regulation		Work time	YES: 0 NO: -1	.5	National maximum work time is not exceeded, not more than 12 hrs. of compulsory working time / day & not more than 48 hours a week
		Week-ends	YES: 0 NO: -1	.25	At least one day per week is work-free
		Holidays	% of legal minimum (legal minimum or larger = 0)	.25	Number of days of paid holiday in relation to the legal (or some other definition) minimum
Condition	Sub-Conditions	Indicators	Categorisation	Weight (w_i)	Description
Freedom of association & collective bargaining		Workers representative	YES: 0 NO: -1	.4	A workers representative that is involved in strategic decision-making is elected and regularly consulted
		Union memberships allowed	YES: 0 NO: -1	.3	The country and the company allow union memberships. If no freedom of association exists on a national level, the company fosters the foundation of an internal association
		Written contracts	YES: 0 NO: -1	.2	Written contracts guarantee better securities for workers in case of disputes, temporary and permanent layoffs
		Access to workers	YES: 0 NO: -1	.1	Union representatives have unrestricted access to employees they represent unless associated with unreasonable risks for process and personal safety & security
Consideration of workers interests		Job Rotation	> industry = -1 < or = industry = 0	.2	Indicator for general satisfaction of workers with working condition, corporate communication, compensation schemes
		Corporate Governance	YES = -1 NO = 0	.8	Reliable sources indicate that some management decisions and management behaviour is not based on what is commonly considered as ethical or industry-standard behaviour