ISWA position paper on working conditions for waste collectors

Within this position paper, ISWA will present guidelines regarding issues to consider when planning new collection schemes or further developing existing schemes.

The purpose of the position paper is to help secure a safe and healthy working environment and working conditions for workers collecting the different solid waste fractions as well as reducing health risks and possible work injuries in the different tasks connected to waste collection.

In general this is most effectively obtained by assessing the different risks involved in the collection work, and the paper therefore is mainly about analysing and managing the different risks.

As the economic frames of establishing waste collection schemes will differ greatly between the different geographic regions, the paper is not discussing the economic consequences of the collection systems.

Waste collection is an area of business with a very high rate of work injuries and health impacts. To prevent incidents it is important to plan and execute the waste collection in such a way that risks of incidents are minimized. This can be done by implementing work place assessments (WPAs) as part of a risk management framework, both when planning and changing collection schemes and on a continual basis.

When work incidents have occurred it is important to record and analyze the circumstances to determine the reasons for the accidents that lead to the incidents, so that preventive measures can be taken to prevent future accidents. It is of equal importance to record and monitor ‘near misses’ and analyze accidents that did not result in a major injury; this enables the elimination of risks in the working environment.

The following information detailed below outlines the important elements that must be included when performing a risk assessment for collection workers as well as key elements that ISWA recommends should be included in a work place assessment.

**General alignment with local, national and international legislation or standards**

There are differences in the extent and form of the local legislation in this sector, due among others to geographical and cultural differences. Where appropriate, this paper therefore presents examples from EU legislation.

If there is no national legislation regarding the different elements of the waste collection and transportation schemes, it is advisable to regard the different directives and standards
Overall planning of the waste collection and waste collection equipment – containers and vehicles

ISWA recommends that the relevant standards (CEN or similar) for waste containers are followed; (especially applicable for lifting devices) compliance with standards will ensure a strong base for building and securing that a safe and healthy working environment is available.

To ensure safe packaging and transportation of household wastes it is preferable, that waste is contained (in order of preference) within wheeled containers, sacks or non-wheeled containers. Wheeled containers reduce both the risk of contact with the waste and of ergonomic impacts. Non wheeled containers, although good at protecting collection crew members from stick injuries, are well documented in causing musco-skeletal injuries due to lifting and emptying, when the unit weight is relevant. Sacks (if they have to be used; e.g. organic waste) should have waste that is double wrapped to ensure collection personnel are protected from sharp material. It is recommended that sacks be used only for lightweight materials (e.g. plastics, metals) or only as a liner for other types of receptacles (e.g. when food waste collection is implemented by means of bins or buckets).

Concerning waste vehicles it is advised that the collection vehicle has a high loading system because of the potential risk of dust and airborne micro organisms. The vehicle should be designed to prevent dust from travelling from the inside of the vehicle to the open air. (e.g. by low pressure). The lifting device must fit to the containers. It is preferred to choose lifting devices which fit to various container sizes.

ISWA recommends that the crew should travel inside the cab if the vehicle is in motion and the vehicle should be fitted with low entrance cabs to prevent slips, trips and falls to the crew. Low entrance cabs also help prevent musco-skeletal injuries during alighting of the vehicle.

Naturally, waste can be collected and transported in many different ways – automated transportation systems that limit human contact with the waste being collected and avoid ergonomic incidents. Such systems are recommended (e.g. front and side loaders, roll-on-roll-off, crane systems, underground and vacuum systems).

The organisational and other psychological aspects of the working environment of solid waste collection

Working time
Legislation concerning the daily amount of working time is described in the EU directive on working time (Directive 93/104/EC of 23 November 1993). This directive concerns certain aspects of the organisation of working time, and recent amendments relevant to workers employed in transportation of solid waste. The EU working time directive sets the limits for national legislation on working time, and in some areas this is further emphasized in agreements between the parties on the labour market. The collection of solid waste has to be planned in accordance with such legislation and rules.

In general working in rush hours should be avoided to reduce the incidents of road traffic accidents.

**Job rotation**

ISWA recommends schemes which rotate the loader and the driver as an example which reduces the strain on the single worker.

**Education and training**

Regardless of the waste type or collection method that is employed all those personnel responsible for collecting and transporting waste must be fully trained in all practical (any pushing, pulling, lifting or moving) aspects of their role and that of others working alongside them. Health and safety education and training is crucial as is the methodology of collecting – to ensure full understanding of the hazards and risks involved. Continued education and training is important for all vehicle operators, to ensure safe and efficient operation. Workers handling the hazardous waste fraction should be trained as per international legislation determined according to the ADR convention.

**The physical, chemical and ergonomic aspects of the working environment of waste collection**

**Contact with the waste**

ISWA recommends waste collection is planned in such a way, that workers do not need to touch the waste directly. This can be done by securing waste in containers, so workers only handle waste that is properly contained. At the same time it is important that fluorescent vests/jackets, gloves, dust-mask, shovel and broom or other relevant personal protection items like these are worn and/or used by the worker.

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1 Like the necessary rest periods etc  
2 Convention on land based transportation of hazardous wastes
**Vibrations and other physical impacts**

It is advised that haulage vehicles are equipped and maintained with proper suspension, and vibrations of the human body are minimized.

Noise from the vehicle should not be higher than national legislation permits. If there is no physical barrier to limit excess noise at source, it will be necessary to provide hearing guards/earplugs.

The work clothing and shoes should be effective and able to ensure that the worker is properly protected in case of accidents like dropped burdens. It is also important to ensure that clothes provide visibility of the worker when operating in poor light or poor visibility.

**Dust and bio-aerosols**

It must be ensured wherever practically possible, that collection workers are not exposed to dust or micro organisms. This is best done by providing vehicles and containers as mentioned above, and making personal protection equipment (like gloves, masks, etc) available and ensure they are used.

Another important issue here is the information provided to the users of the waste collection systems (householders, trade customers); it is essential such information contains guidelines for proper wrapping and packaging of waste placed in the containers. The use of paper or biodegradable bags to include biowaste may be important in this respect.

**Ergonomics**

The safest way to manually transport waste from house/kerbside to collection vehicle is to use bins on wheels. National legislation may provide limits for the weights regarding push and pull of wheeled bins and carrying burdens for non-wheeled containers. ISWA recommends that such limits are respected. For loads that are carried ISWA recommends, that the average weight does not exceed the limits defined in national legislation if such exists (e.g. national legislation in Denmark the lifting limit when the load is held at shoulder height and away from the body is 11kg, in the UK this is 5kg).

Container size, shape and design should be relevant to the waste arising. Wheeled containers must fit the conditions of the access road according to surface and gradient of the road and should not exceed 1, 1 m3.

It is important that waste collectors are trained in the manual handling of containers and carrying burdens, as mentioned in the education and training section previously.
Health checks

Since waste collection is a job that can have a high impact on health, regular health checks can be useful – especially in less developed countries where systems are still impacting heavily on health.

Key elements for improving working conditions for waste collectors

As can be seen in the previous sections, there are a number of factors that interrelate. Because of this it is difficult to prioritize the importance of the different elements in a collection scheme, as many are due to local circumstances. Some of the most important issues include:

- Collection is planned in accordance with national and local legislation
- Collection is planned to eliminate risks and health impacts
- Personal protective equipment is available and used by all workers
- Waste is moved in a way to eliminate ergonomic impact
- Eliminating collection workers contact with the waste via automated systems
- Monitoring of incidents and near misses

Health and safety is a very important element of working conditions for waste collectors, due to the physical nature of the role. Economic issues have to be borne in mind when making decisions about collection and recycling schemes but they should not jeopardise health and safety or risk management elements.

If a risk assessment is carried out and covers most - if not all of the elements discussed within this paper - and implementation is acted upon via work placement assessments, health and safety within this industry should be greatly improved.

ISWA’s goal is to ensure that waste management becomes a safe and healthy industry for all workers and this paper outlines the route for collection workers and their managers to follow.

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