

## WP1: Global Strategy

### Task 1.1 Strategy Development

Formulating a global strategy for transition from Herbicide based to non-herbicide-based vegetation control for railway track area.

The transition from herbicide based to non-herbicide-based vegetation control for the railway track area constitutes a great challenge for the railways, since herbicide-based methods – with Glyphosate as the most important active substance – are currently by far the most widely used and cost efficient as well as the most effective methods of vegetation control and all promising alternative methods still have to be professionalized and adapted to the railway track area. Nevertheless, looking at the high political and public pressure on the use of Glyphosate, the expiration of the Glyphosate license at EU level in December 2022 and the high probability of a Glyphosate phase-out as well as the severe restrictions or even total prohibition for the use of other chemical herbicides on certain surfaces including sensitive areas, this transition strategy has to be developed now in order to prepare the railways for these developments.

The global transition strategy for vegetation control will be developed focusing on seven principles:

- 1) Optimization of current use of herbicide-based methods with strong focus on application techniques for road-rail vehicles and small equipment,
- 2) Development and fast implementation of method combinations (herbicide-based combined with non-herbicides-based methods or combination of complementary non-herbicides-based methods) in order to further reduce the amounts of herbicides required and also herbicide dependency as well as to optimize alternative methods,
- 3) Support professionalization of alternative methods with high future potential for railways (organic acids, hot water, wet steam and electro weeding) or other innovative methods and boost adaptation to the specific requirements of the railway track area,
- 4) Integration of the relevant methods and application techniques into a new holistic approach and regime for vegetation control of the railway track supported by powerful IT tools,

- 5) Classification of track quality requirements in terms of vegetation, depending on type of track and use-specifications,
- 6) Preventive methods like the use of specific materials like asphalt, concrete, plastic sheets ... which can offer an alternative especially for safety paths will also be taken into consideration.
- 7) Follow up of the types of restrictions which are legally imposed or specified in exemptions in the different member states (total interdiction, only on the ballast bed or on the safety paths, ...)

This Integrated Vegetation Management (IVM) can be characterized as a systemic approach combining different methods of vegetation control and application technologies and also include hybrid methods. The concrete selection of a method or combination of methods for track areas will depend on the specific conditions (type of track/ railway line, topography, geography, geology, meteorological conditions, vegetation type, presence of sensible areas like water catchment or Natura 2000, etc.) of the concerned area. The global strategy should be future-proof in terms of legislation and regulation (on EU and national level).

The Global transition strategy will be developed within the framework of a consensus-oriented consultation process with the UIC SLU experts.

*Output: UIC-Strategy Paper*

*Date of delivery: Mai/June 2019*

## Task 1.2 Parameters needed

Within this task the parameters needed for an IVM - Integrated Vegetation Management – approach - will be identified and documented. A solid basis for deriving relevant parameters is the multi-dimensional assessment tool developed within the Herbie project. Further parameters will be needed of course e. g. type of track and use specifications (speed,...) . In addition, constructional measures should also be taken into account as one part of an IVM.

*Output: Parameter lists*

*Date of delivery: September 2019*