



LIFE 15 IPE IT 013



# “PrepAIRed”

a target-oriented school pathway  
for education on air-quality

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# What's PrepAIRed

The idea is to propose educational paths able to engage students in the **knowledge** of the different dimensions of the problem, in order to find active solutions and **promote awareness** at the school level on the problem of air quality

**Target:** primary school, secondary school, high school

# PrepAIRed!

## SCOPE and TIME

**7 Regions:** Regioni Emilia Romagna, Piemonte, Lombardia, Veneto, Provincia Autonoma di Trento, Regione Autonoma Friuli Venezia Giulia, Regione Autonoma Valle d'Aosta

**Phase I**, testing: school year 2018/2019

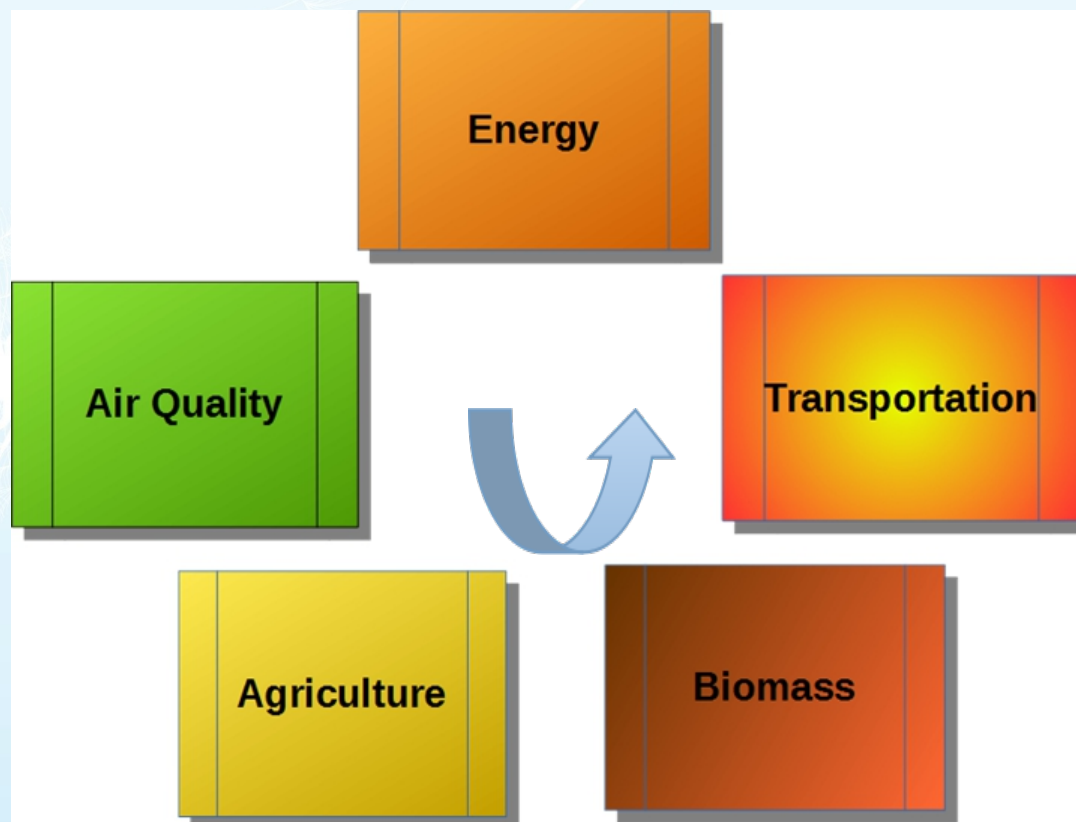
**Phase II**, implementation: school years 2019/2020, 2020/2021, 2021/2022

## Specific Goals

- Promote self awareness and personal interest on the main issue of air quality impacts, monitoring and control in the youth population
- Promote problem solving approach on environmental problems
- Enhance cooperation skills in students to address common air pollution problems
- Promote the vision of air as “common good”
- Promote an active partnership with school as an local actor for the resolution of the wider problem of air quality



## UDA – Unità Didattiche di Apprendimento (training learning units)



# Formal and non-formal education

**Formal education** corresponds to a systematic, organized education model, structured and administered according to a given set of laws and norms, presenting a rather rigid curriculum as regards objectives, content and methodology. It is characterized by a contiguous education process named “presential education”, which necessarily involves the teacher, the students and the institution.

**Non-formal education** is an educative processes endowed with flexible curricula and methodology, capable of adapting to the needs and interests of students, for which time is not a pre-established factor but is contingent upon the student’s work pace. It includes educative processes such as “correspondence learning”, “distance learning” and “open systems” and involves mainly external experts as teachers.

# Lesson Metodologies

**Frontal:** is intended as a classical lesson where professor teaches with low degree of interaction

**Flipped Classroom:** lesson performed though a flipped classroom technique, some basic assignments/materials are given to the students before the lesson that are discussed at the moment of the lesson

**ESL (Episodes of Situated Learning):** lesson perform Episode of Situated Learning as in Rivoltella framework

**Non formal/meeting** with professionals: lesson performed with non formal methods that could provide an external journey or a visit to on-field professionals.

**Cooperative learning:** during the lesson students are engaged in a common task and they are lead to develop problem solving, cooperational and organizative skills  
ype of lessons/techniques: indicate the type of the specific lesson

# UDA structure and school pathways

Each learning unit will be formed by

**Lesson 1:** a flipped classroom lesson

**Lesson 2:** an interactive lesson comprehensive of a non formal meeting with experts

**Lesson 3:** a final interactive lesson in a cooperative learning mode

Involvement of different school level (**primary, secondary I, secondary II**)

Proposed path: 3 modules for each class (**AIR QUALITY + 2 chosen**)

## PrepAIRed - Synoptics

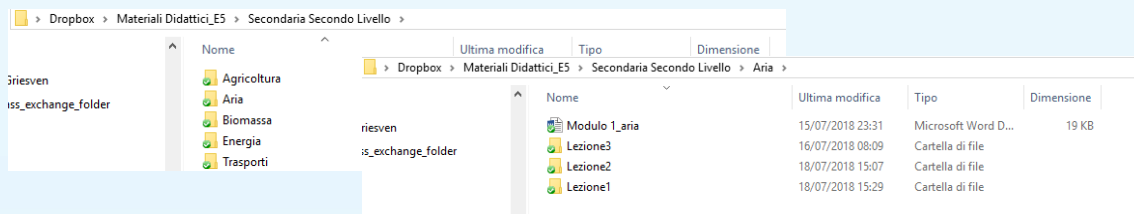


With the contribution of the LIFE Programme of the European Union

**PrepAIRed!**  
Target-Oriented Learning Pathways for educational projects  
on air quality  
Didattica e contenuti delle unità di apprendimento

## Guidelines and methodology for Formal Non-formal methods

Preparazione	Obiettivi	Cosa fa docente	Cosa fa studente	Tecnica	Tool	Output	n. ore
Lezione in classe	Problematizzazione: 1) sollecitare attenzione e interesse 2) dissonanza cognitiva 3) inquadrare il punto di lavoro	Suggerisce video Raccoglie domande e chiarimenti Guida la focalizzazione sul problema	Guarda, ascolta, fa domande, interagisce con i compagni Propone chiavi di lettura del problema	Visione filmato Discussione guidata	Filmato/film	Visione del problema da affrontare	1
Costruzione del framework concettuale e tematico: collegare le cose già studiate nelle materie scolastiche	Sollecita e guida una discussione sui contenuti pregressi promuovendo la creazione di collegamenti Facilita la costruzione di mappe mentali	Partecipa alla discussione confrontandosi con i compagni Propone nessi e strutture mappe Discute e negozia la struttura con i pari		Discussione guidata Lavoro in gruppo	Mappe	Mappe concettuali	1
Guida la costruzione del framework concettuale e tematico: presentare le risorse per l'approfondimento e lo studio	Presenta gli strumenti e le risorse e come funzionano slides, dispense, video, siti con dati etc.	Guarda, ascolta, fa domande, sperimenta le indicazioni		Lezione frontale	Google classroom	Piattaforma on line completa di documenti presentati	1



Dropbox > Materiali Didattici\_E5 > Secondaria Secondo Livello >

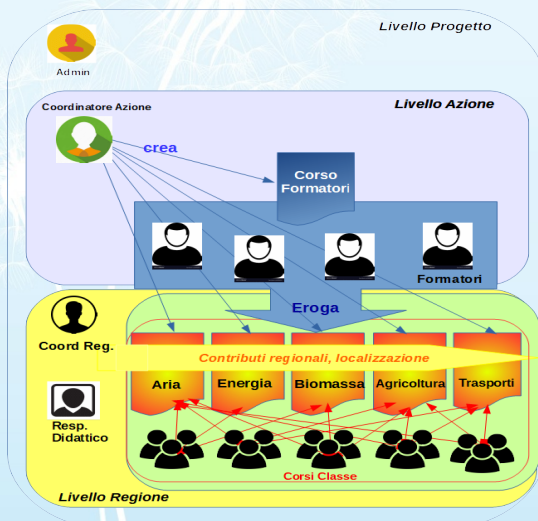
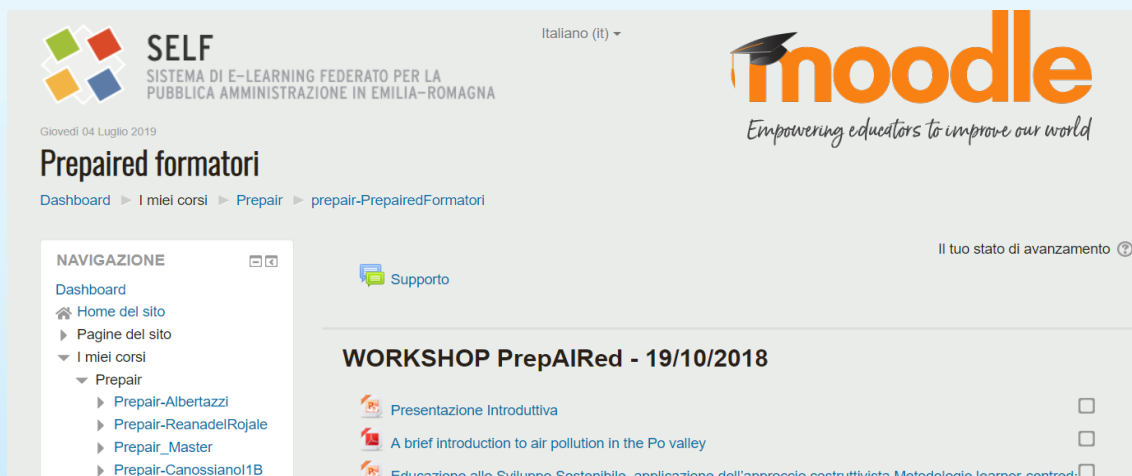
Nome: Agricoltura, Aria, Biomassa, Energia, Trasporti

Ultima modifica: 15/07/2018 23:31, 16/07/2018 08:09, 18/07/2018 15:07, 18/07/2018 15:29

Tipo: Microsoft Word D..., Cartella di file, Cartella di file

Dimensione: 19 KB

## TEACHING MATERIALS

SELF  
SISTEMA DI E-LEARNING FEDERATO PER LA PUBBLICA AMMINISTRAZIONE IN EMILIA-ROMAGNA

Giovedì 04 Luglio 2019

**Prepared formatori**

Dashboard > I miei corsi > Prepair > prepair-PreparedFormatori

NAVIGAZIONE: Dashboard, Home del sito, Pagine del sito, I miei corsi, Prepair (Prepair-Albertazzi, Prepair-ReanadelRojale, Prepair\_Master, Prepair-Canossianol1B)

Supporto

Il tuo stato di avanzamento







**WORKSHOP PrepAIRed - 19/10/2018**

- Presentazione Introduttiva
- A brief introduction to air pollution in the Po valley
- Educazione allo Sviluppo Sostenibile. applicazione dell'approccio costruttivista. Metodologie learner-centred




## E-learning platform(+manual)

# PrepAIRed! - Teaching Materials









## VIDEO - WORKSHOP PrepAIRed! 19/10/2018

-  Introduzione - Domenico Vito, FLA ☐
-  A brief introduction to air pollution in the Po valley - Prof Antonio Ballarin Denti, FLA ☐
-  L'educazione ambientale nelle scuole. L'esperienza di ARPA Lombardia ☐
-  Educazione allo Sviluppo Sostenibile, applicazione dell'approccio costruttivista, "Metodologie learner-centred:" Flipped Classroom, EAS ☐
-  PrepAIRed! su SELF-Piattaforma e-learning ☐
-  Laboratorio Progettuale ☐




## WEBINAR - E tools per l'apprendimento

-  E-tools per l'apprendimento
-  Phet Colorado: Effetto Serra
-  Phet Colorado: Energia Concetti base
-  Phet colorado: Ghiacciai
-  Come usare Google Tour Builder in classe

## MATERIALE DIDATTICO - MODULO 1

-  PrepAIRed! - MOD1 -Qualità dell'aria - LINEE GUIDA SECONDARIE SECONDO GRADO ☐
-  PrepAIRed! - MOD1 -Qualità dell'aria - LINEE GUIDA Primarie\_ Secondarie\_Primo\_GRADO ☐
-  Ambientiamoci ☐
-  Supporto NOI E L ARIA - PRIMARIA E SECONDARIA PRIMO GRADO ☐
-  Ambientiamoci -Per scuola PRIMARIA ☐
-  PrepAIRed\_U1\_1\_superiori ☒
-  The Climate Collage ☐
-  Report Valutazione Modulo 1 ☐

## MATERIALE DIDATTICO - MODULO 2

-  PrepAIRed! - MOD2 -Energia - LINEE GUIDA Primarie\_ Secondarie\_Primo\_GRADO File Modifica titolo ☐
-  PrepAIRed! - MOD2 -Energia - LINEE GUIDA \_ Secondarie\_Secondo\_GRADO ☐
-  Prepared\_ENERGIA\_MODULO 2\_Lez U2\_1.parte1 ☐
-  Prepared\_ENERGIA\_MODULO 2\_Lez U2\_1.parte2 ☐





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# PrepAIRed! 2018/2019

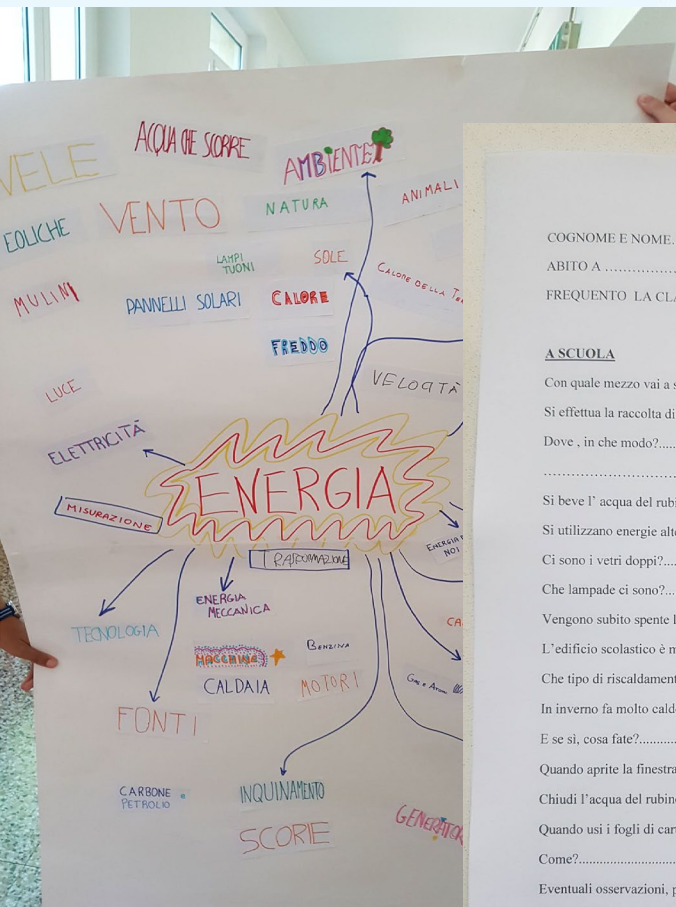
## Testing Phase

**TOT: 15 school involved on the Po Basin**

*1 class X Educational Level X Region*



# PrepAIRed! 2018/2019



COGNOME E NOME .....

ABITO A .....

FREQUENTO LA CLASSE .....

A SCUOLA

Con quale mezzo vai a scuola? .....

Si effettua la raccolta differenziata? .....

Dove, in che modo? .....

Si beve l'acqua del rubinetto? .....

Si utilizzano energie alternative? .....

Ci sono i vetri doppi? .....

Che lampade ci sono? .....

Vengono subito spente le luci quando si esce? .....

L'edificio scolastico è munito di cavi solari? .....

Che tipo di riscaldamento c'è? .....

In inverno fa molto caldo in classe? .....

E se sì, cosa fate? .....

Quando apri la finestra per cambiare l'aria? .....

Chiudi l'acqua del rubinetto dopo aver bevuto? .....

Quando usi i fogli di carta cerchi di riutilzarli? .....

Come? .....

Eventuali osservazioni, proposte: .....

## MISURIAMO L'INQUINAMENTO DELL'ARIA CHE RESPIRIAMO CON UN ESPERIMENTO



**L'ARIA**

**L'ATMOSFERA**

**COMPOSIZIONE DELL'ARIA**

LEGENDA:

- AZOTO
- OSSIGENO
- ALTRO

**ESPERIMENTO:**

1. Prendi un bicchiere di acqua e un pezzo di carta.

2. Metti la carta in acqua e lascia che si inzuppi.

3. Prendi un foglio di carta e fallo seccare.

4. Osserva il foglio e nota i colori che si sono formati.

5. Confronta i colori con quelli che hai visto in classe.

# PrepAIRed! 2018/2019



Primary school Andersen, Cerasolo (RN)

11/07/2019 – Prepair 1° Mid-term conference



# PrepAIRed! 2018/2019



Primary School Andersen  
Cerasolo (RN)

11/07/2019 – Prepair 1° Mid-term conference

## PrepAIRed! 2018/2019

# SALVIAMO IL MONDO DALL'INQUINAMENTO DELL'ARIA



Primary School Tricesimo, Reana del Rojale (UD)

11/07/2019 – Prepair 1° Mid-term conference

## PrepAIRed! 2018/2019

# REPORT USCITA SUL CAMPO

Benedetta Gallo-Lara Gatti-Giorgia M



Primary and secondary school Frassati , Seveso (MB)

11/07/2019 – Prepair 1° Mid-term conference



# Evaluation procedure

## **Evaluation and Content Calibration**

Each evaluation has an evaluation and conten calibration phase

### **Goals of the Evaluation Phase**

1. consider the effectiveness in the classes in which to apply
2. respect the efficiency of the action
3. consider the sustainability of the action
4. Monitor the progress of the actions
5. adjust and calibrate the action based on the results obtained

# Evaluation procedure

## 3 levels

### Multiactor evaluation

#### Level 1: Project

The action will be evaluated with respect to the achievement of the project objectives and its effectiveness, efficiency and sustainability

**Tool:** indicator

#### Level 2: Teachers

The action will be evaluated by educators with respect to content and methodology

**Tool:** questionnaire to educators, feedback received

#### Level 3: Students

The action will be evaluated on the effect obtained on the students

**Tool:** virtual quiz evaluation **game during the last focus group**



# Evaluation procedure

## Evaluation Steps

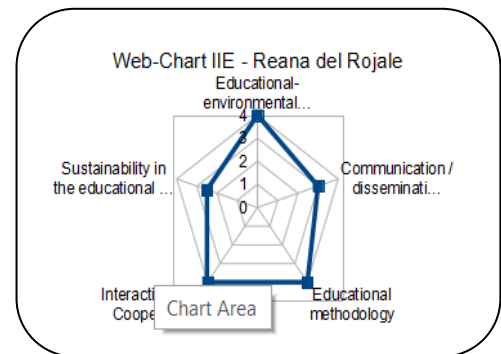


1. Complete the "**Identity Card**" of the class, attaching if possible a representative photo of the class
2. Fill in the **Final assessment indicators form**
3. Provide **feedback from the students**, through a discussion based on the classroom based on satisfaction, ask them to cast a grade from 1 to 5 or put themselves in a more or less tight circle based on the positive or negative assessment)
4. Answer the **final evaluation questionnaire** dedicated to you on the course

**D2: Evaluation Report**

# Evaluation report

GENERAL DATA	
<b>Name of the school</b>	Reana Del Rojale
<b>Region/Province</b>	Friuli Venezia Giulia
<b>Class</b>	II
<b>Section</b>	E
<b>Educational Level</b>	Secondary First level
<b>Reference teacher</b>	Maria Bejhat
<b>Number of students</b>	20
<b>Background</b>	The PrepAIRed! Path has been inserted into the school laboratory "Occhio all'ambiente".
<b>Modules of PrepAIRed!</b>	Mod 1 - Air Quality Mod 3 - Transport Mod 4 - Agriculture
<b>General Description of the PrepAIRed! School Path</b>	
<p>The path has been done into the school lab "Occhio all'ambiente".</p> <p>Into the air quality module a lesson with a non-formal educator (ARPA - FVG).</p> <p>Into the transport module an activity on home to school transport has been done (es Pedibus).</p> <p>They collectively participated to some e-learning activities</p>	

SCHOOL PATH EXPERIENCE EVALUATION	
A. QUALITY EVALUATION	
<b>Quality Index of the Class</b>	<b>IQ PE : 36</b> <b>Graphical:</b> 
<b>Comments</b>	The path has been done with a good degree of involvement and activation of the students. The dissemination and communication part can be improved. The good practices has been done mostly internally
B. STUDENT FEEDBACK	
<b>Feedack</b>	<b>A. Medium Quiz Vote (if applicable)</b>  <b>Quiz - MOD 1- Air Quality</b> Participants 14/20 Average score 8,43  <b>Quiz 1 - MOD 2 - ENERGY</b> Participants 5/20 Survey mode  <b>B. Final Feedback</b> After a final discussion at the the end of the school path students

# Evaluation -Trento Meeting 17/18 June 2018



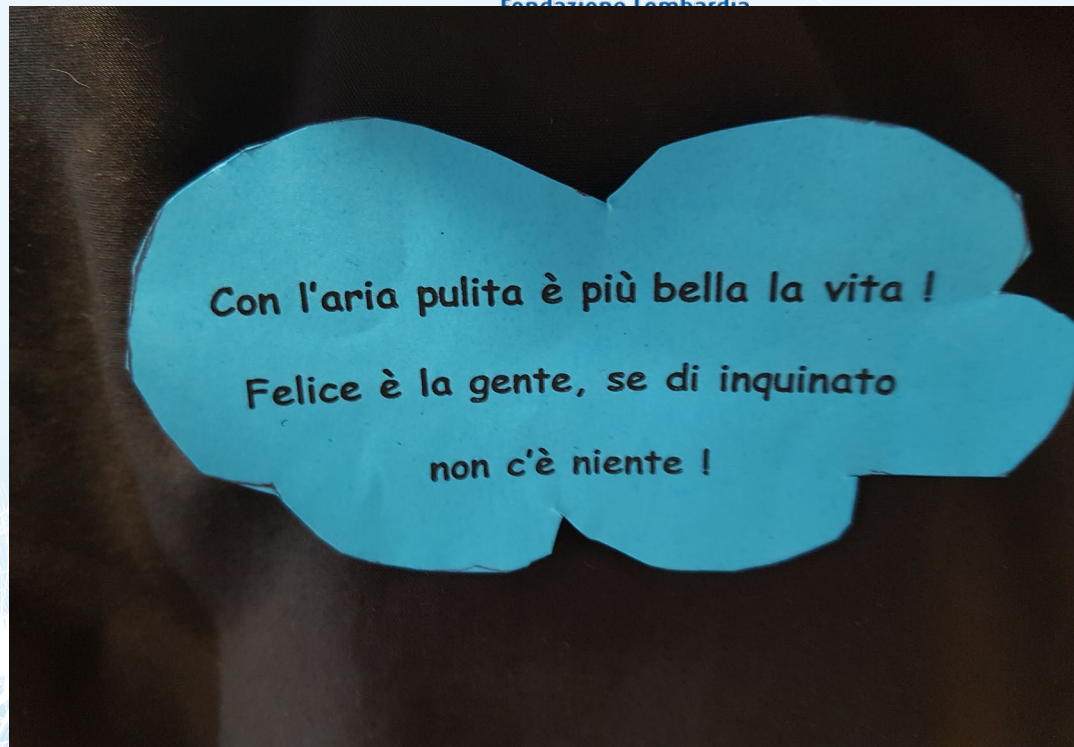
- Report Editing (D2: 15 Minutes, 1 for each Class
- **Feedback Evaluation** and **Action Steering**
- Preparation for the **2019/2020 edition**

11/07/2019 – Prepair 1° Mid-term conference



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**ARSO ENVIRONMENT**  
Slovenian Environment Agency

