

## RISK ASSESSMENT

Ozone and Heat – 02 July 2015

Date of the signal	Date of the meeting	Signal provider	Present	Method
01/07/2015	02/07/2015	IRCEL, AZG	<b>Permanent members :</b> Laurence Nick, Sophie Quoilin  <b>Specific experts:</b> Alec Devries, Bart Bautmans, Dirk Degroof, Edith Poot, Frans Fierens, Frédéric Defays, Heleen vandenbergh, Katrien Tersago, Kristl Matton, Luc Tsachoua, Nathalie Bossuyt, Olivier Brasseur, Ozlem Bozkurt, Pascal Mailier, Philip Maetz, Yvette Meganck  <b>Excused / Out-of-Office :</b> Alex Dewalque, Benoit De Bast, Bertrand Van den Steen, Brigitte Bouton, Carole Schirvel, Karen Van Campenhout, Karin Cormann, Martine Delhaye, Romuald Arbe, Sophie Lokietek, Stéphanie Jacquinet, Valeska Laisnez, Yseult Navez	Meeting + email consultation
Date of update	Closing date			

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## RATIONALE FOR RA

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### Description of the signal under assessment

Under prediction conditions of extreme heat (> 30 °C) until Saturday 4<sup>th</sup> of July, and prediction of crossing the Ozone information threshold of 180 µg/m<sup>3</sup> (close to the alarm threshold), the AZG (Agentschap Zorg and Gezondheid) contacted the RAG on Wednesday 1<sup>st</sup> of July in order to ask for a risk assessment regarding the potential impact of these meteorological conditions from a health perspective, asking to consider early implementation of the alert phase.

## BACKGROUND INFORMATION

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### Description of the context

With measure of alert threshold for ozone of 240 µg/m<sup>3</sup> in two places in Belgium and considering the high temperature (minima and maxima) for three consecutive days we will probably reach alert phase 3 tomorrow Friday 3<sup>rd</sup> July.

[http://www.irceline.be/nl/smog/ozon\\_hitte/ozon-hitte-02-07-2015/view](http://www.irceline.be/nl/smog/ozon_hitte/ozon-hitte-02-07-2015/view)

As defined by regional plans for heat waves and ozone peaks, the RAG has to meet in order to advise health authorities on the following aspects:

1. Alert phase activation
2. Implementation of additional measures

## RISK ASSESSMENT

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Considering the current high temperature and ozone concentration;

Considering the prediction from IRCELINE and KMI/IRM for the three coming days;

Considering the number of large scale events taking place during the coming weekend, as well as quite a lot of small scale events;

Considering the potential impact of these environmental conditions on health and more specifically on some vulnerable people;

the RAG recommends health authorities to take some additional measures beside those already taken in phase 2 (information to the public, the health professionals - Hospital, psychiatric care facilities, facilities for home care and residential care for the elderly have already been contacted by the regional authorities...).

## RECOMMENDATIONS FROM THE RAG

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### ALERT PHASE ACTIVATION

The criteria for alert phase could be reached tomorrow Friday 3<sup>rd</sup> of July. Nevertheless the RAG propose to reinforce the measures but not to declare yet the alert phase since the event should be limited up to Sunday only. This will allow the Regions to reinforce the actions they already took what will be more efficient as they already have folders, FAQ, ...

This advice will be revised if the event become longer or in case of any kind of additional elements having an impact on health or if the heat wave could have an impact on other aspects (mobility, water, electricity, ...).

If the RMG decides to activate the alert phase, the coordination of the additional measures will be done by the Federal level.

### IMMEDIATE MEASURES

#### **Regional authorities must reinforce the existing measures for the general population:**

1. Maintain attention of the general population and people responsible for persons at increased risk on personal protective measures like
  - drink more than usual, preferably water
  - avoid alcoholic beverages and drinks with high sugar content
  - help babies, young children and people with high care needs to drink sufficiently
  - stay inside, especially people affected by respiratory and cardio-vascular diseases
  - stay at cool places and cool your body (shower, bath, swimming pool)
  - get enough rest and avoid extensive physical activity
  - protect yourself from the sun by using sunscreen and a hat
  - close shutters and curtains during the day and ventilate home during the night,
  - in case of heat stroke, breathing problems or exhaustion, contact you physician, ...by sensitizing the general population through the distribution of a common message from all health authorities.
2. Ask the media to broadcast this message several times a day until Sunday 5<sup>th</sup> July.
3. Ministers should recommend to governors and mayors to activate their local plan and check these specific aspects:
  - make cooler rooms available so as to allow people to refresh a few hours a day;
  - organise visits to some isolated people by social services;
  - to communicate a phone number on which isolated elderly people could fall back if they need assistance.

## **Regional authorities must reinforce the existing measures for specific events:**

Ministers should recommend to Governors and Mayors to inform :

Organisers of big mass gathering events who should in any case be well prepared for heat conditions and normally have a comprehensive plan at hand, elaborated in collaboration with the municipality and the federal health inspectors.

Organisers of small-scale events who should also been sensitized, since usually no extensive heat plans are prepared in this context.

It is recommended to mayors to check with the organisers of small and big mass gathering events if the following measures have been taken:

- inform the participants (using flyers, messages on screens, banners or web pages) on the health risks and protective measures;
- provide enough drinking water;
- provide enough shade and/or cooling (airconditioning / misting water);
- issue message to discourage alcohol and certain drugs use;
- provide measures for spectators and persons in a queue;
- adapt the menu and follow safe food handling processes;
- increase the hygiene in public restrooms;
- evaluate the need for more first-aid stations;
- emergency plan covering also risk due to heat which should include a procedure to benefit support from Civil Protection if necessary;

At this time, it is not recommended to cancel these events.

## **Additional measures for health care system**

At this moment there are no indications of increased admissions of emergency departments. Emergency plans in hospitals do exist in order to face such situations.

### **MID-TERM RECOMMENDATIONS**

## **Revision of the criteria and/or thresholds**

### ***1.a Revision of existing criteria***

At this moment the protocol foresees that both temperature and ozone thresholds need to be exceeded to reach the alert phase. There is agreement that, in case of prolonged periods of very high temperatures and / or raised ozone levels, this by itself might also suffice as a criterium for a heat alarm. Therefore not only ozone and temperature thresholds should be taken into account when deciding on measures but also the duration of the increased levels should be considered. The present criteria will be maintained for the current risk assessment, but additional criteria will be proposed and discussed in the NEHAP group in a later phase.

#### ***Proposal: mid-term action***

- ***The present criteria will be maintained for the current risk assessment, but additional criteria will be proposed and discussed in the NEHAP group in a later phase.***

### ***1.b Additional criteria***

Currently alert is defined on meteorological and ozone concentration criteria only. Indicator of the impact of high temperature on health could be also introduced as criteria.

Currently the impact is done by mortality monitoring. However the irreducible delay in receiving data is too long (1 to 3 weeks) in order to be used as a rapid alert system. Other data sources could be used like emergency wards admissions.

#### ***Proposal: mid-term action***

- ***Discussion on use of impact indicators on health could be also discussed in the NEHAP group in a later phase***
- ***UREG data would enable to monitor in a more valid way and should be made available therefore.***

### **Measures to limit ozone concentration**

Once the ozone levels are high, there are no short term measures to reduce them. Peaks can only be avoided by means of long term measures on a European scale.

#### ***Proposal: mid-term action***

***Authorities should include in the plan anticipatory measures in order to reduce ozone concentration.***

## SYNTHESIS OF THE CHECK LIST

**Table 1: Results of the assessment of a public health event**

Question	Score	Description / arguments
<b>RAG assessment</b>		
1 Cause known?	Yes	Through ongoing temperature and ozone monitoring.
2 Unexpected/unusual	Unusual	Unusual but expected : action plans do exist at regional levels.
3 Severity	Medium to high	Medium, mainly for some specific groups like babies, young children, people with chronic diseases or underlying conditions, elderly people and socially isolated people. But could turn into high if no additional measures are taken because heat wave and high ozone concentration are associated with increase of the mortality.
4 Dissemination	/	
5 Risk of (inter)national spread	/	
<b>Optional questions to RAG</b>		
6 Routes of introduction	/	
7 Severe impact in Belgium		Need additional data sources information like UREG data in order to detect, in real time, severity of the event.  Mortality monitoring, later available, is useful before and after the event, to describe the risk and evaluate events.
<b>RMG assessment</b>		
A International restriction	/	
B Political sensitiveness	Yes	Neighbouring countries are already taking additional measures like opening public cooler areas to vulnerable people.  Additional measures have to be immediately taken in Belgium at least until Sunday 5th July

## REFERENCES

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[www.irceline.be/nl/smog/pdf/ozon-informatiebericht-01-07-2015/view](http://www.irceline.be/nl/smog/pdf/ozon-informatiebericht-01-07-2015/view)

<http://www.irceline.be/fr/smog/pdf/bulletin-ozone-01-07-2015/view>

<http://www.irceline.be/fr/smog/ozone-bulletin-dalerte-du-jeudi-2-juillet>

[www.irceline.be/nl/smog/pdf/ozn20150702.pdf/view](http://www.irceline.be/nl/smog/pdf/ozn20150702.pdf/view)

Walloon Region : “[Plan wallon forte chaleur et pics d'ozone](#)”,

<http://socialsante.wallonie.be/?q=plan-wallon-forte-chaleur-pics-ozone>

<http://www.zorg-en-gezondheid.be/hittealarm/>