

Development of master curricula for natural disasters risk management in Western Balkan countries

NatRisk



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14. 2018.

Project number: 573806-EPP-1-2016-1-RS-EPPKA2-CBHE-JP

"This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein"

Development of master curricula for natural disasters risk management in Western
Balkan countries

NatRisk project

WELCOME TO THE UNIVERSITY OF DEFENCE IN BELGRADE



**TRAINING FOR CITIZENS AND PUBLIC SECTOR
“NATURAL DISASTER RISK MANAGEMENT”
14th June 2018**

Project number: 573806-EPP-1-2016-1-RS-EPPKA2-CBHE-JP

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Development of master curricula for natural disasters risk management in Western Balkan countries

NatRisk projekat Razvoj master kurikuluma za upravljanje rizicima od prirodnih katastrofa u zemljama Zapadnog Balkana

Rade Slavkovi
Vojna akademija, Univerzitet odbrane



Obuka za upravljanje rizicima u slu aju PK/ 14. jun 2018.

Project number: 573806-EPP-1-2016-1-RS-EPPKA2-CBHE-JP

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Prirodne nepogode

Prirodne nepogode uzrokuju **direktno** značajne gubitke ljudskih života, unaznačaju razvoj društva i ekonomski razvoj, smanjuju prinose poljoprivrednih proizvoda, uništavaju domove i drugu infrastrukturu i **indirektno** povećavaju cenu hrane.

Ne možemo ih izbjeći, ali ih možemo prevencijom učiniti da ne postanu katastrofe.

Između 2002. i 2014. godine prirodne katastrofe su u Evropskoj Uniji dovele do ekonomskog gubitka od preko 100 milijardi evra. Više od 1,5 milijardi ljudi bilo je pogođeno različitim vrstama katastrofa, a ukupni ekonomski gubitak bio je veći od 1,3 triliona dolara (Sendai Framework for Disaster Risk Reduction 2015-2030).



poplava



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Motivacija

Upravljanje prirodnim katastrofama postalo je najveći i globalni izazov i nezaobilazni zahtev za održivi razvoj i postavljeno je kao cilj i u Europe 2020 (3. cilj klimatske promene) i u 2030 agendi održivog razvoja Ujedinjenih Nacija (“13. cilj Preduzimanje hitnih mera u borbi protiv klimatskih promena i njihovog uticaja”).

Zemlje Zapadnog Balkana treba pre svega da razvijaju novo ili unapređuju postojeće obrazovanje u ovoj oblasti, da podižu tehnički kapacitet i ostvare stvaranje efikasnijih sistema za bolji odgovor kada dođe do prirodnih katastrofa.

Osnovne informacije

Broj ugovora	573806-EPP-1-2016-1-RS-EPPKA2-CBHE-JP
Akronim projekta	NatRisk
Naziv projekta	<i>Development of master curricula for natural disasters risk management in Western Balkan countries</i>
Trajanje projekta	15. oktobar 2016. - 14. oktobar 2019.
Program	ERASMUS+ – Call for Proposals EAC/A04/2015
Budžet projekta	1,245,746.00 €
Koordinator	Univerzitet u Nišu, Srbija Univerzitetski trg 2, 18000 Niš, Srbija
Vebsajt projekta	www.natrisk.ni.ac.rs
E-mail projekta	natriskuni@gmail.com

Opšti cilj projekta

Obrazovanje eksperata za prevenciju i upravljanje prirodnim katastrofama u regionu Zapadnog Balkana na osnovu nacionalnih i politika Evropske Unije.

Specifi ni ciljevi

- **Identifikacija prirodnih katastrofa** kojima treba upravljati u regionu Zapadnog Balkana **i svih aspekata prevencije i posledica** kako bi se definisale konkretne kompetencije budu ih stru njaka
- **Razvoj i implementacija novih naprednih master kurikuluma u oblasti upravljanja rizicima od prirodnih katastrofa** u skladu sa bolonjskim zahtevima i nacionalnim standardima za akreditaciju
- **Razvoj treninga** za javni sektor i gra anstvo za reagovanje u slu aju razli itih prirodnih katastrofa

Konzorcijum

EU partneri



University of Natural Resources and Life Sciences, Vienna
(Austrija)



Middlesex University Higher Education Corporation (Velika
Britanija)



University of Messina (Italija)



Óbuda University (Maarska)



Technical University of Crete, Chania (Grčka)

Konzorcijum

Partneri sa Zapadnog Balkana



Univerzitet u Nišu



Kriminalisti ko-policijska akademija



Univerzitet u Prištini sa sedištem u Kosovskoj Mitrovici



Univerzitet u Sarajevu



Policijska akademija u Banja Luci



Visoka tehni ka škola strukovnih studija iz Uroševca sa
sedištem u Leposavi u



Univerzitet odbrane

Konzorcijum

Pridruženi partner



Republi ki hidrometerološki zavod Srbije

Realizacija projekta

- **Identifikacija i analiza problema i potreba u oblasti upravljanja rizicima od prirodnih katastrofa u zemljama Zapadnog Balkana**, upoznavanje sa dobrim praksama u Evropskoj Uniji, određivanje neusaglašenosti u ovoj oblasti u Evropskoj Uniji i na Zapadnom Balkanu.
- **Razvoj master kurikuluma** sa svim neophodnim elementima u saglasnosti sa Europe 2020 strategijom, ET 2020, standardima i uputstvima za osiguranje kvaliteta i zahtevima Bolonje i trening nastavnog osoblja; nadogradnja nastavnog okruženja.
- **Razvoj edukativnih treninga** za građanstvo i javni sektor.
- **Implementacija master kurikuluma zajedno sa studentskim praksama i mobilnostima studenata i nastavnika.**

NatRisk vebsajt

www.natrisk.ni.ac.rs



Co-funded by the Erasmus+ Programme of the European Union



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ABOUT

CONSORTIUM

ACTIVITIES

NEWS

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GALLERY

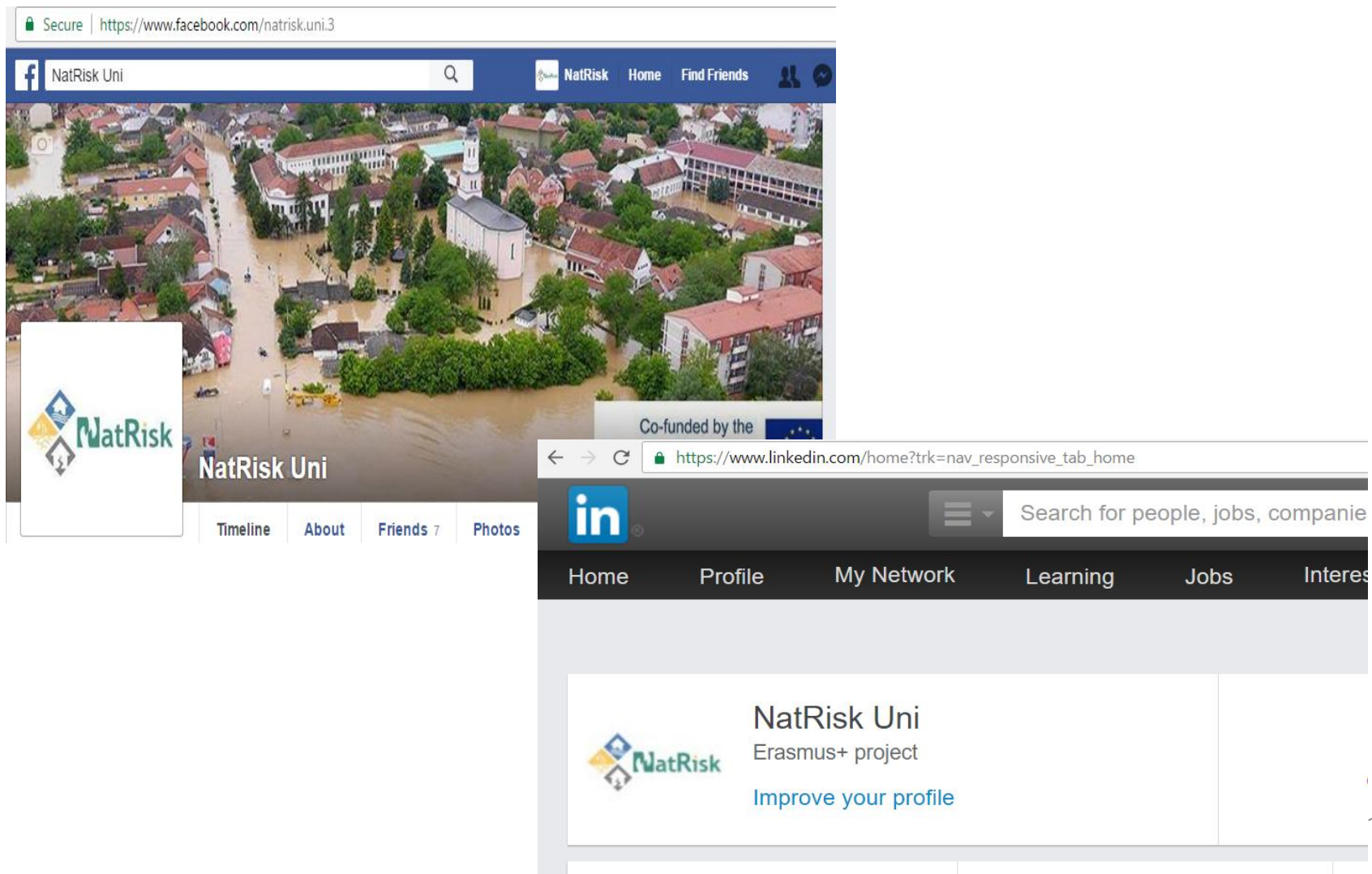
PROJECT MANAGEMENT



NatRisk

Development of master curricula for natural disasters risk management in Western Balkan countries

Društvene mreže

A composite image showing two social media profiles for "NatRisk Uni". The top profile is a Facebook page, displaying a cover photo of a flooded town with a church and a search bar with "NatRisk Uni" entered. The bottom profile is a LinkedIn page, showing the company name "NatRisk Uni", the description "Erasmus+ project", and a link to "Improve your profile". Both profiles feature the NatRisk logo. The LinkedIn page also shows navigation tabs like "Home", "Profile", "My Network", "Learning", "Jobs", and "Interests".

NatRisk

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E-mail: talijan.miroslav@gmail.com

Rade Slavkovi , zamenik rukovodioca projekta za VA

E-mail: bjor4s@gmail.com



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(UNID, Serbia)

14. 2018.

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, 2009.

- Хијерархијски је највиши и најзначајнији стратегијски документ у области националне безбедности и одбране
- Дефинише основе безбедносног организовања на највишем државном нивоу
- Утврђује опште оквире за заштиту националних интереса
- Одређује националне и безбедносне интересе и циљеве
- Идентификује унутрашње и спољне изазове, ризике и претње
- Основ је за уређење функције безбедности, кроз делатности на свим нивоима организовања друштва
- Чини програмски основ за операционализацију стратешких опредељења државе у изводним стратешким документима



Д. Козомара

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Д. Козомарца

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Д. Козомара

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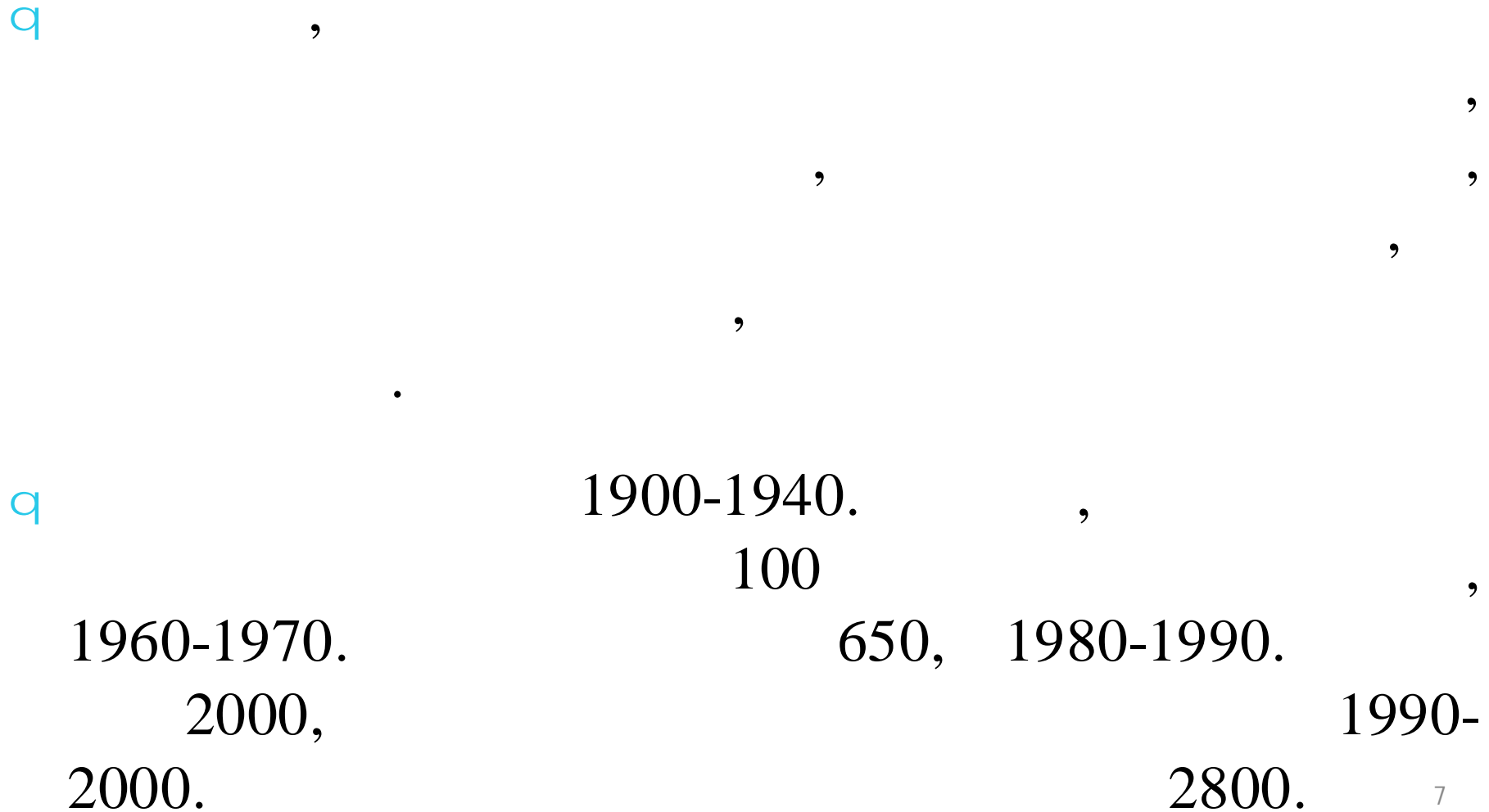
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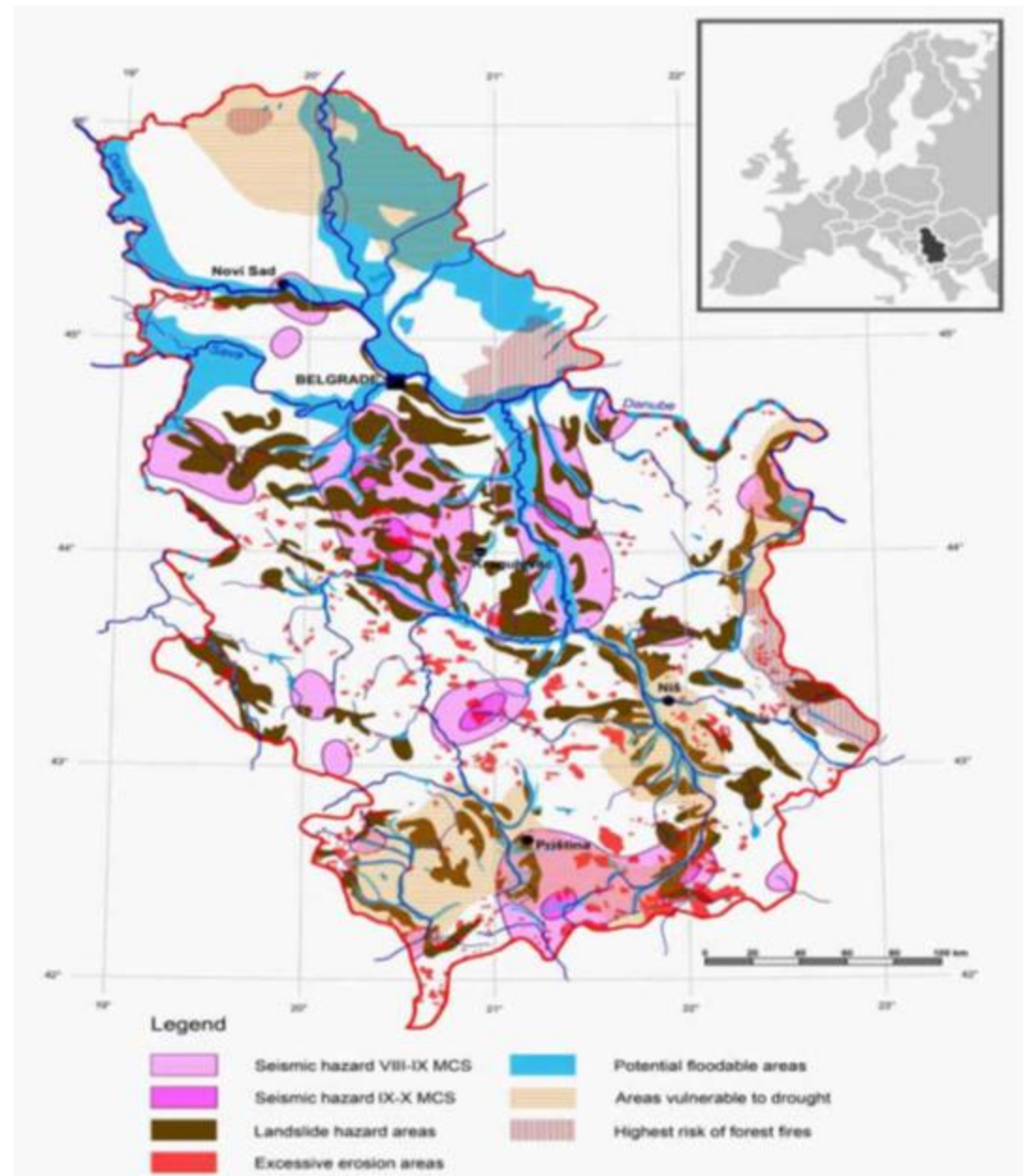
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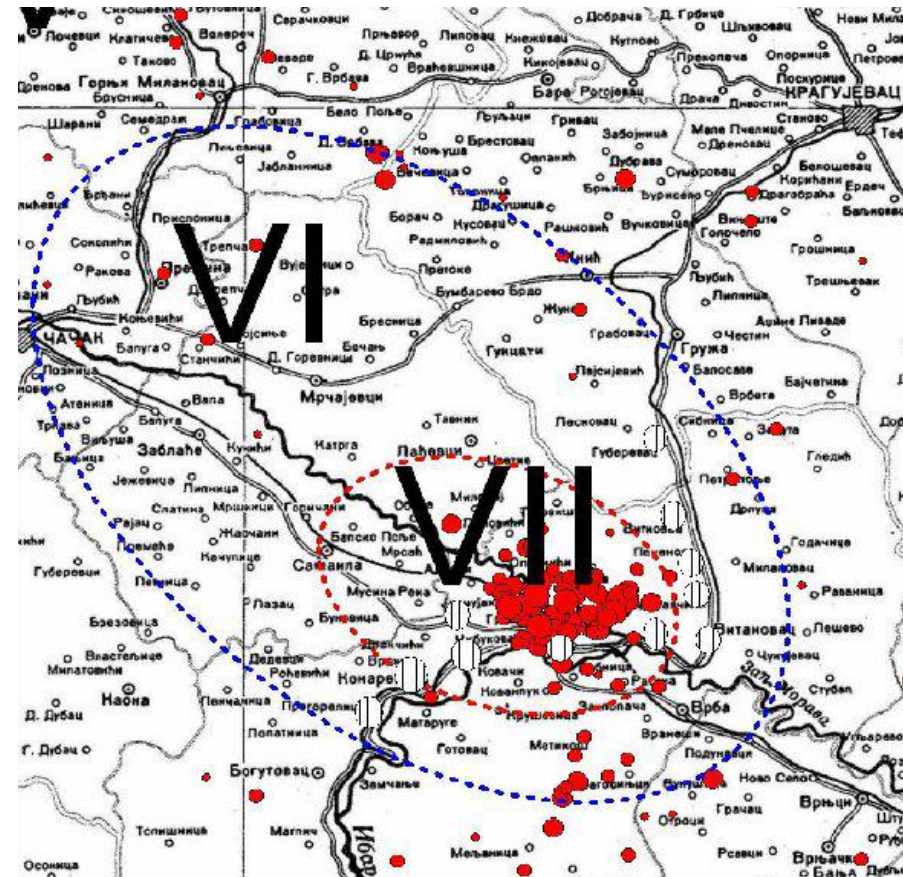
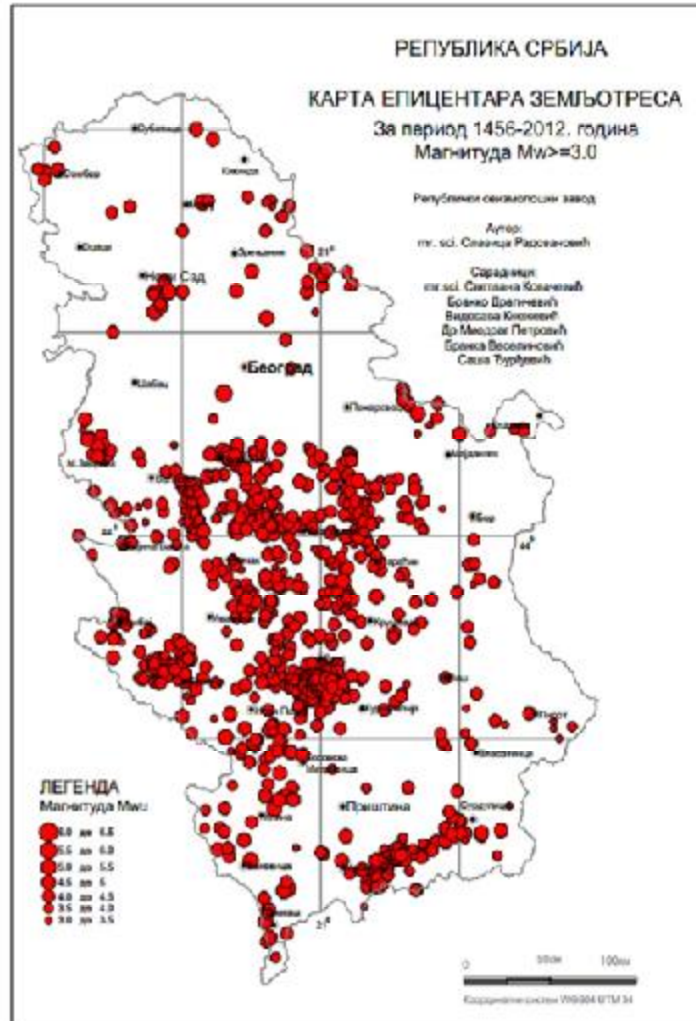
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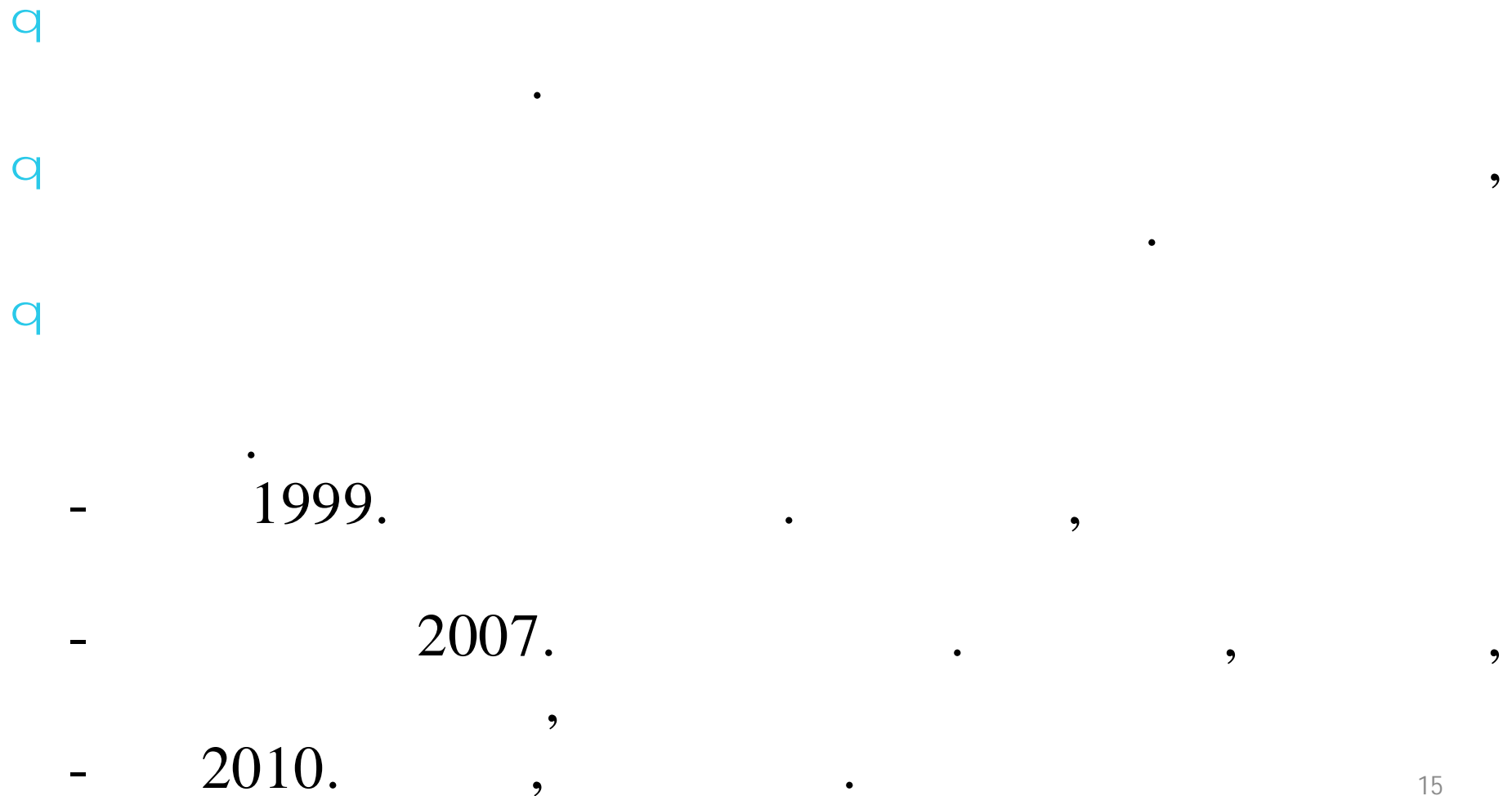


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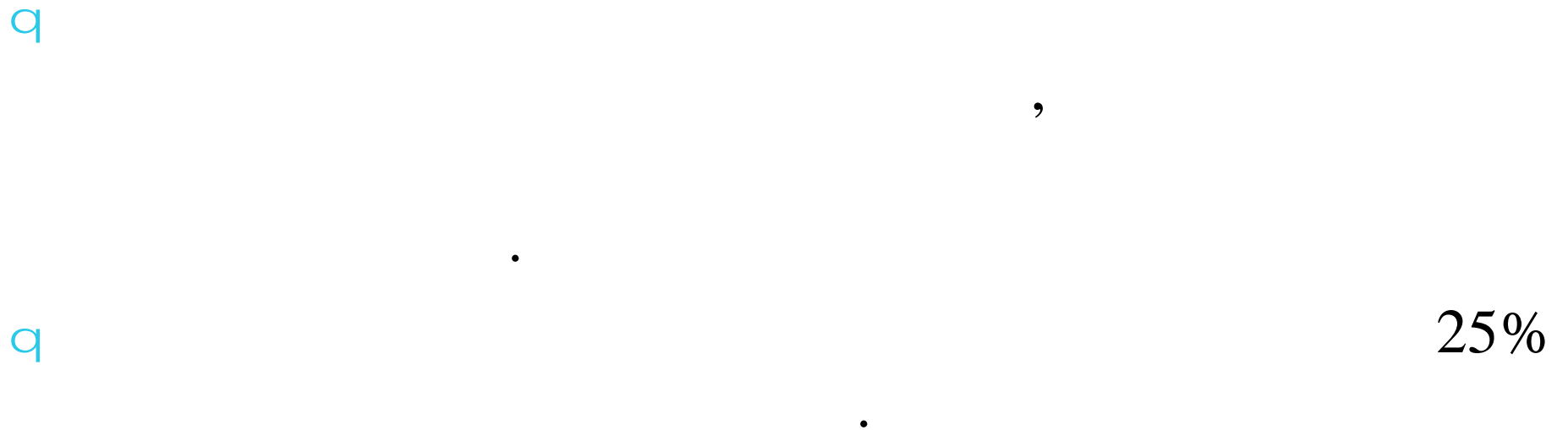
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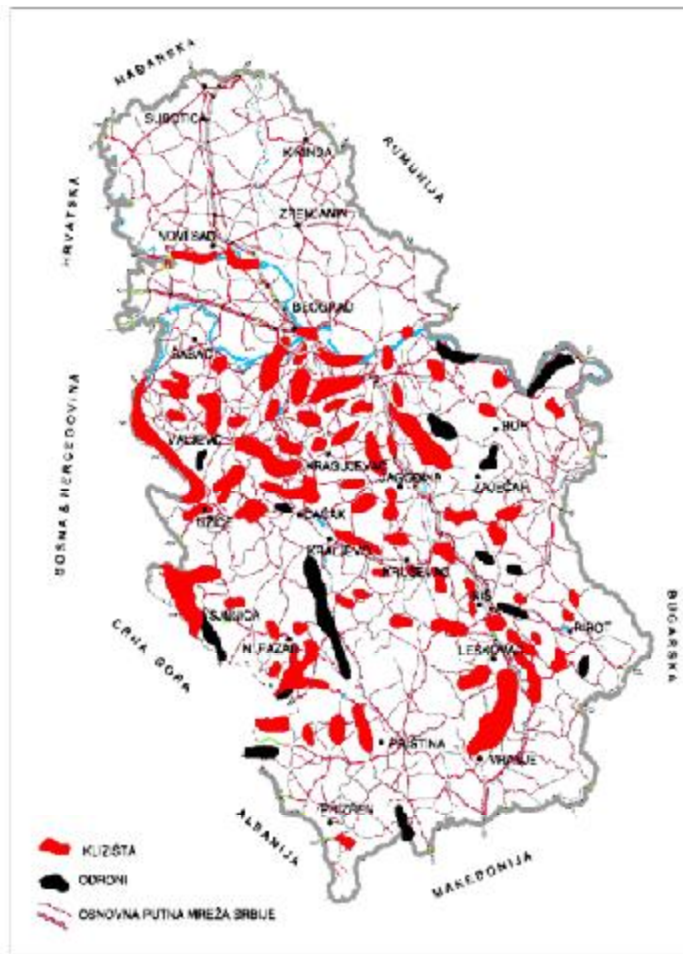
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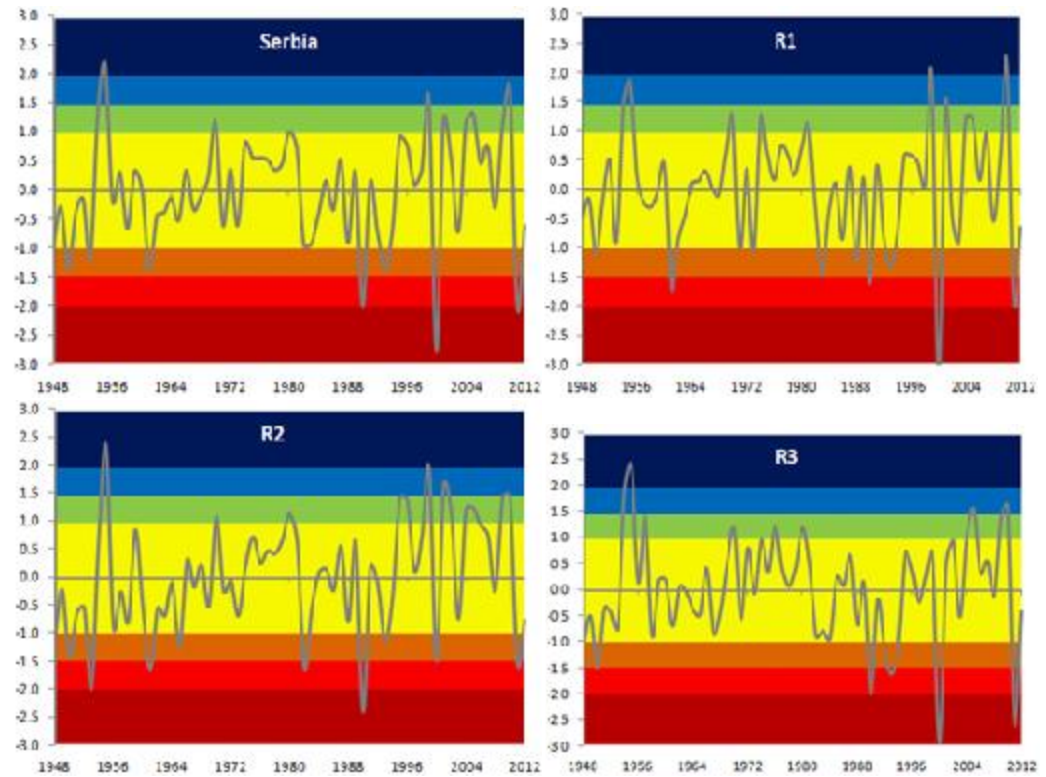
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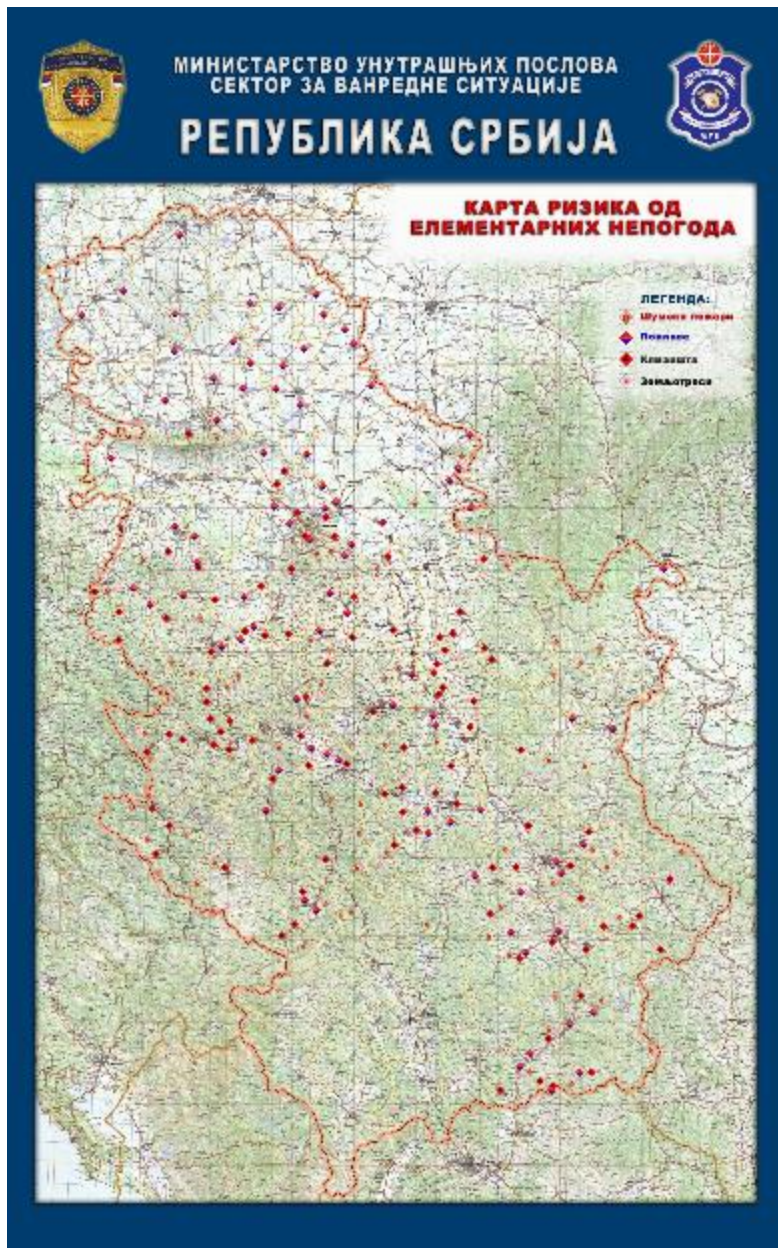
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Сектор/неповољне временске појаве	Процена губитака у секторима	
	Средњи годишњи економски губици у милионима динара	Средњи годишњи губици људских живота
Пољопривреда/поплаве	Од 3.100 до 8.500	Неколико до десетине
Водопривреда/поплаве	Око 1.960	-----
Пољопривреда/град, јаке и обилне падавине, јак ветар	Око 7.316	Неколико до десетине и то од удара грома
Пољопривреда/суша, мразеви	Око 40	Нема губитака
Производња енергије (топлотна енергија)/екстремно ниске температуре ваздуха	Око 716	Неколико до десетине
Одржавање путева/снег, поледица, залеђивање	Око 3.500	-----
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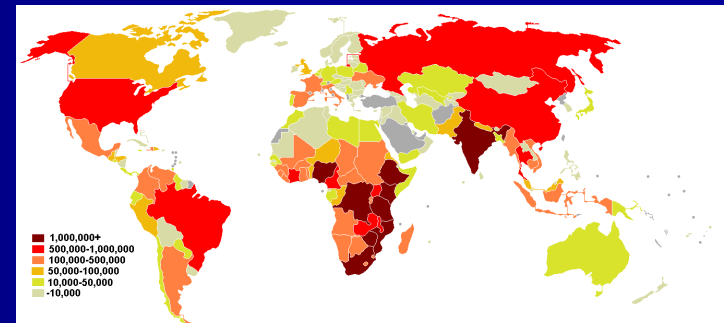
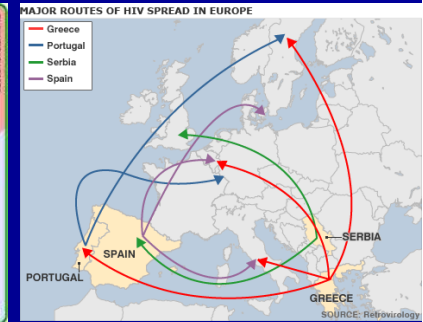
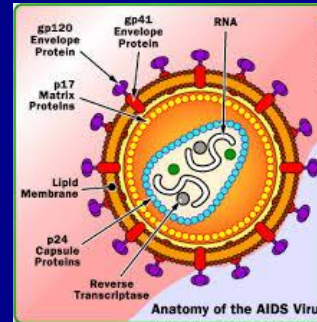
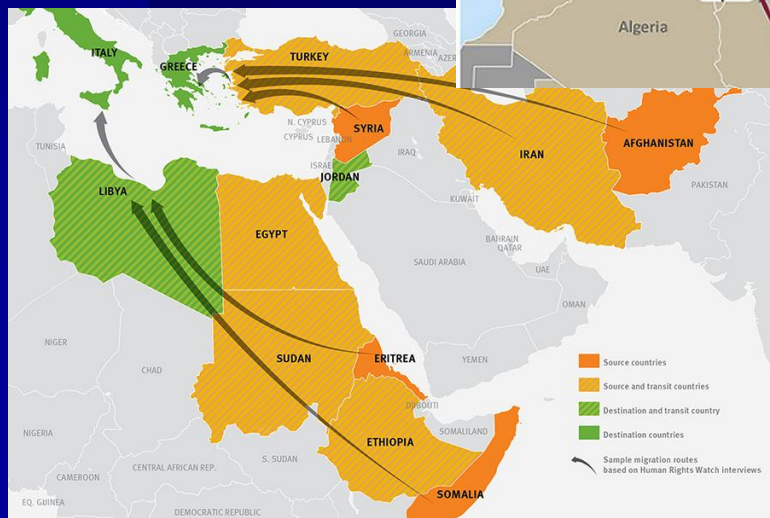
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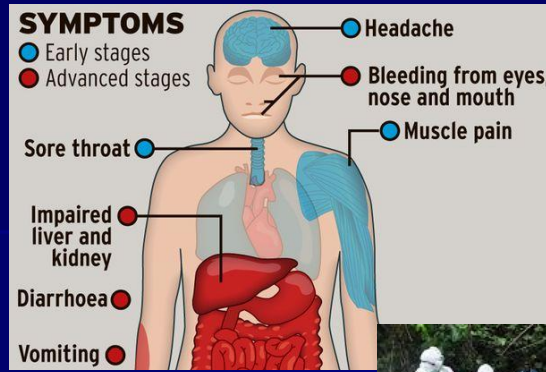
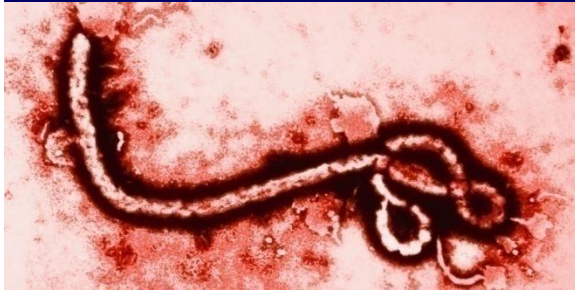
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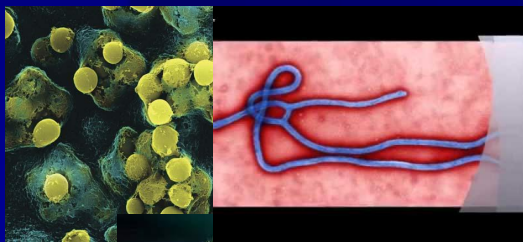
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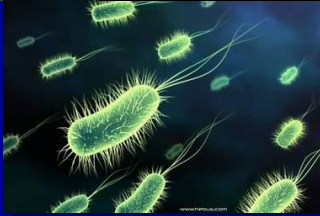
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Louis Pasteur
(1822-1895)



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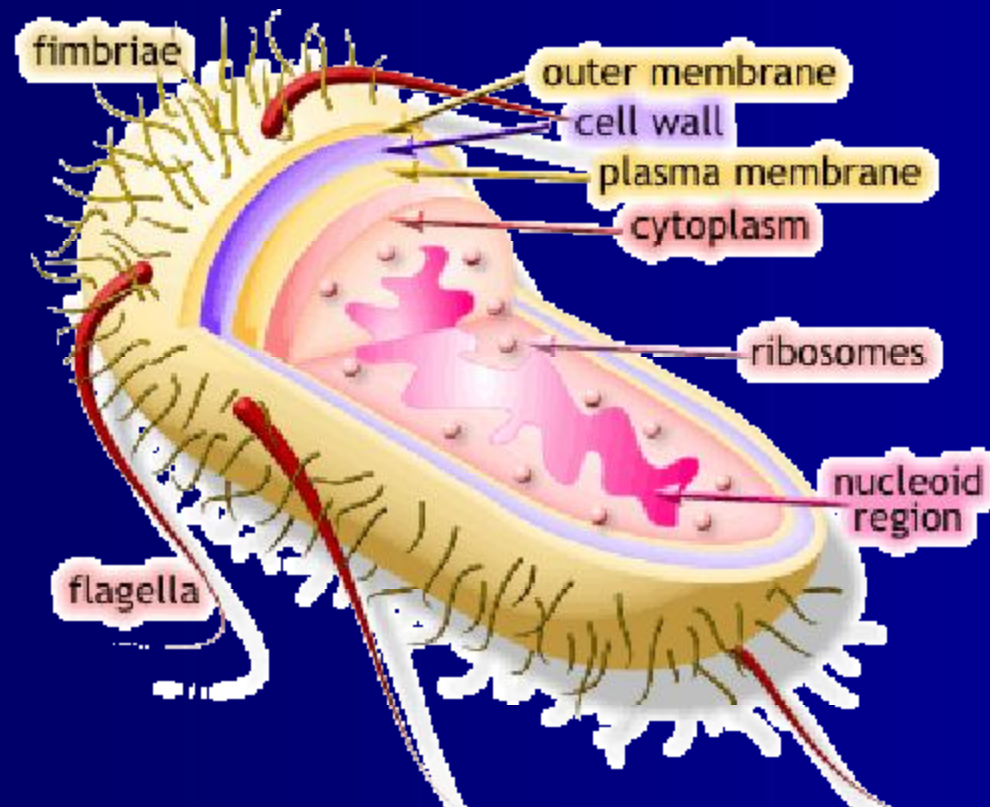


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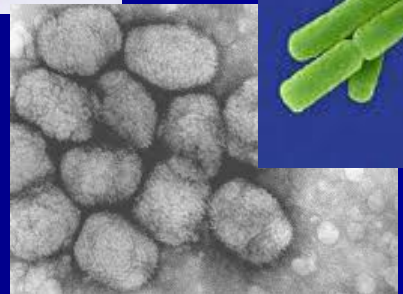
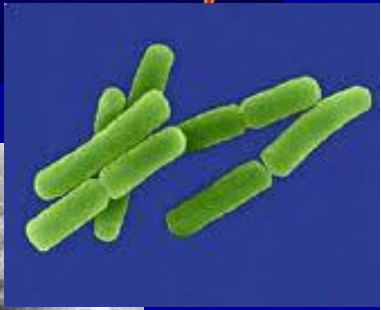
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1. *Yersinia pestis* ()
2. *Vibrio cholerae* ()
3. Smallpox ()
4. *Bacillus anthracis* ()

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(*Poxviridae*-

, *Togaviridae*-

, *Arenaviridae*-

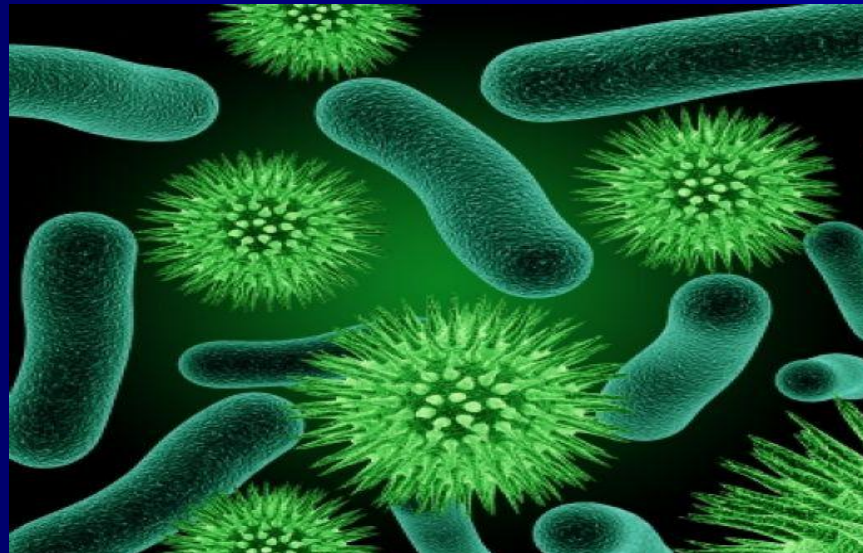
, *Bunyaviridae*-

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, *Orthomyxoviridae*-

, *Picornaviridae*-

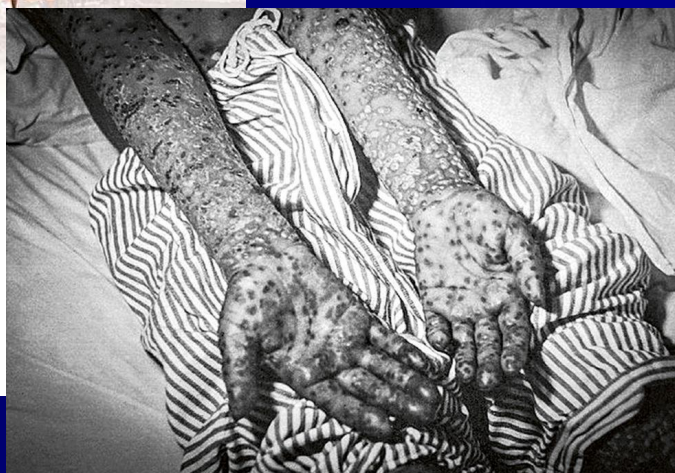
...





Ваљево
1914-1915. године
град болница

Ваљево
Народни музеј Ваљево
2015



Vërejtje
Në këtë shtëpi është paraqitur sëmundja ngjitëse - LIJA Çdo vizitë kësaj shtëpisë është shumë rrezikshme! për deri sa zgjatë infektimi.

SHTABI KRAHINOR PËR SMUNDJE KARANLINE

Упозорење
У овој кући се појавила заразна болест-ВЕЛИКЕ БОГИ. ЂЕ Свака посета овој кући је веома опасна! док траје зараза.

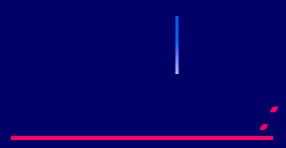
ПОКРАЈИНСКИ ШТАБ ЗА КАРАНТИНСКЕ БОЛЕСТИ

Dikkat
Bu evde Bulagici hastalik - ÇIÇEK HASTALIGI belivermistir. Bu evi, bulagici hastaligin devam ettigi zaman içinde ziyaret etmek çok tehlikelidir.

BÖLGE KARANLIN HASTALIKLARI KURMAYI

: R. prowazekii;

: 30%



- : , 5. . . .

- ,

- *(1918-1922): 3.000.000*

- : 1517, 2.000.000

- : 16. ,

(: 150.000 ,)

(: -)!



W , 1970:

500.000
85.000

50

19.000

1915.



Изложба: ВАЉЕВО 1914-1915 – ГРАД БОЛНИЦА, у Спомен збирци Павла Бељанског, у Новом Саду (Трг галерија 2)



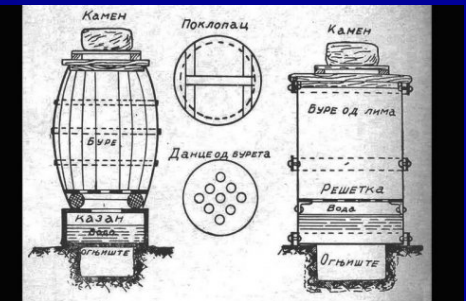
Пацијенти су оправани и обочени или је чиста одећа; све на вратима чекају да и њихова крвоти буду спирани. На два стола лево изашјеђени који су још у припреми



Велики покретни стерилизатор у којем се стерилишу целокупна постељина и одећа; десно од њега стоје браћа Хенкен



FIG. 2. TYPHUS VICTIMS AWAITING BURIAL



1914/15.

«

»

Rickettsiales,

: Rickettsiaceae

1: *Rickettsia*

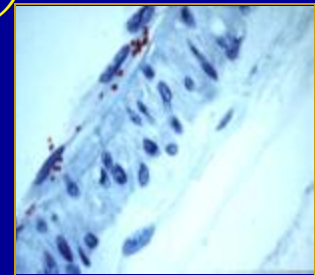
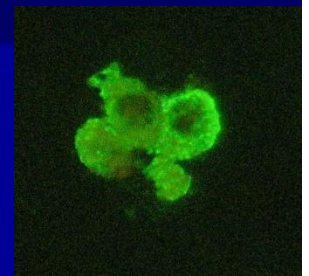
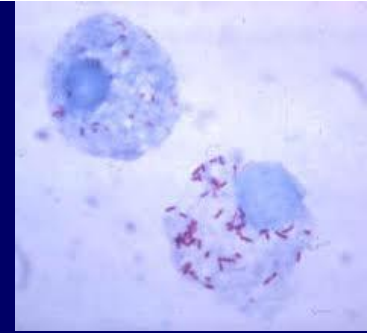
(spotted fever group-SFG):

R. conorii, R. rickettsii, R. akari... (> 20)

(typhus group-TG):

R. prowazekii, R. typhi, R. canada

2: *Orientia* (*O. tsutsugamushi*-scrub typhus agent)



Rickettsia sp.

: *R. prowazekii*;

: 30%

WHO, 1970:

85.000

500.000

50

19.000



?

-
-
-
-
-

:

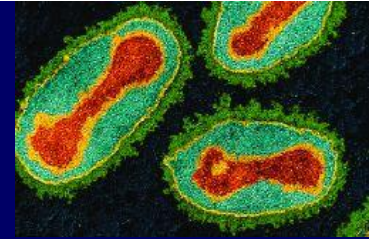
;

!

:

:

1972.

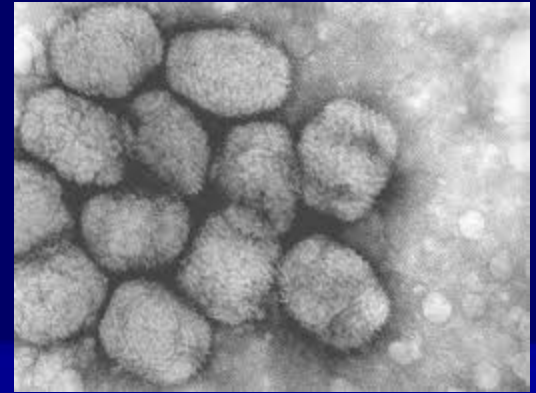


⋮
/
?



: *Poxviridae*

()



2000

V

1157. . . .

710.

1977.



(. small pox)

(15-40%)
(1%)

12



- IgG, IgM

- 1796.

(1967. – 1980.)

-
-

2 (,)

- , :

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

(

-)



Adult Smallpox Case



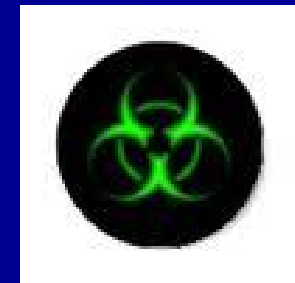
50-100

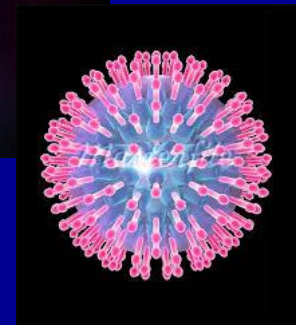
50-100

10-20

(50x10=500;50x20=1000);

)





 <p>HEALTH THREATS HAVE NO BORDERS</p> <p>The IHR strengthen countries' abilities to control diseases that cross borders at ports, airports, and ground</p>	 <p>TRAVEL AND TRADE ARE MADE SAFER</p> <p>The IHR promote trade and tourism in countries and prevent economic damage</p>	 <p>GLOBAL HEALTH SECURITY IS ENHANCED</p> <p>The IHR establish an early warning system not only for diseases but for anything that threatens human</p>	 <p>DAILY THREATS ARE KEPT UNDER CONTROL</p> <p>The IHR guide countries to detect, assess and respond to threats and inform other countries quickly</p>	 <p>ALL SECTORS BENEFIT</p> <p>The IHR prepare all sectors for potential emergencies through coordination and information sharing</p>
--	--	---	--	--

2009?

DRAMATIČNO
**Grip stiže sa
Univerzijadom!**

Epidemiolog Predrag Kon upozorava da će novi virus u Srbiju doći najverovatnije tokom leta, i to prilikom nekog od većih javnih skupova



Нови грип прети Универзијади

Да ли се сви, који ће посетити око 9.000 спортиста из земљи света, носе посебан ризик од инфекције?

**Svinjski grip
stiže na leto**
Novi virus A (H1N1) u Srbiju dolazi



ВОЈНОМЕДИЦИНСКА АКАДЕМИЈА
Здравље... Више од злата

25th Universiade
**BELGRADE
2009**



Yersinia pestis -

(,)

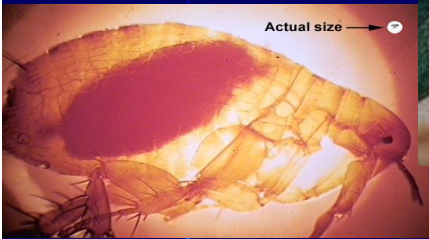


- 1. - 167-164 . . . - 1.094.000
- 2. -531. - 50%
- 3. 1346. - 24 25
- 4. 19. - - - 12





Yersinia pestis



(100 , 99) :
 (4-40°).
 1. 25 .
 220 ;
 40-
 60%, 100%.
 ()

Yersinia pestis

•1905.

-

,

.

90

(

)

:

:

(

16

)

• , 1970:

50

5

150.000

36.000.

1

10

•

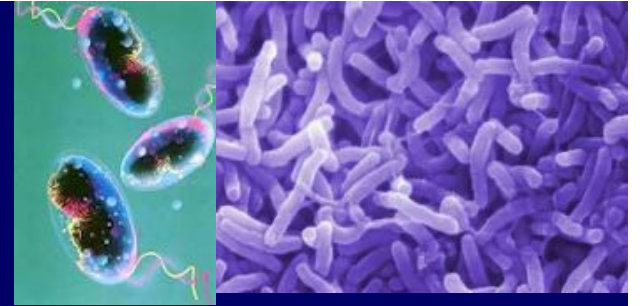
1-6

2-6

• , 1995.



Vibrio cholerae -



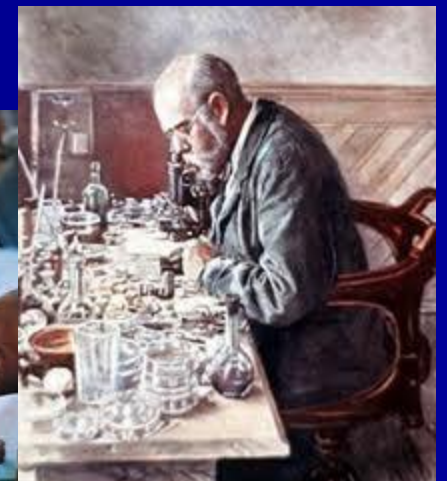
1883.

35-37°

1-4

7-10

50%,





6

16. -

19.

1. 1817-1823.

2. 1826-1837. -

3. 1846-1855.

4. 1863-1873. -

5. 1883-1895. -

6. 1902-1909.

662.814

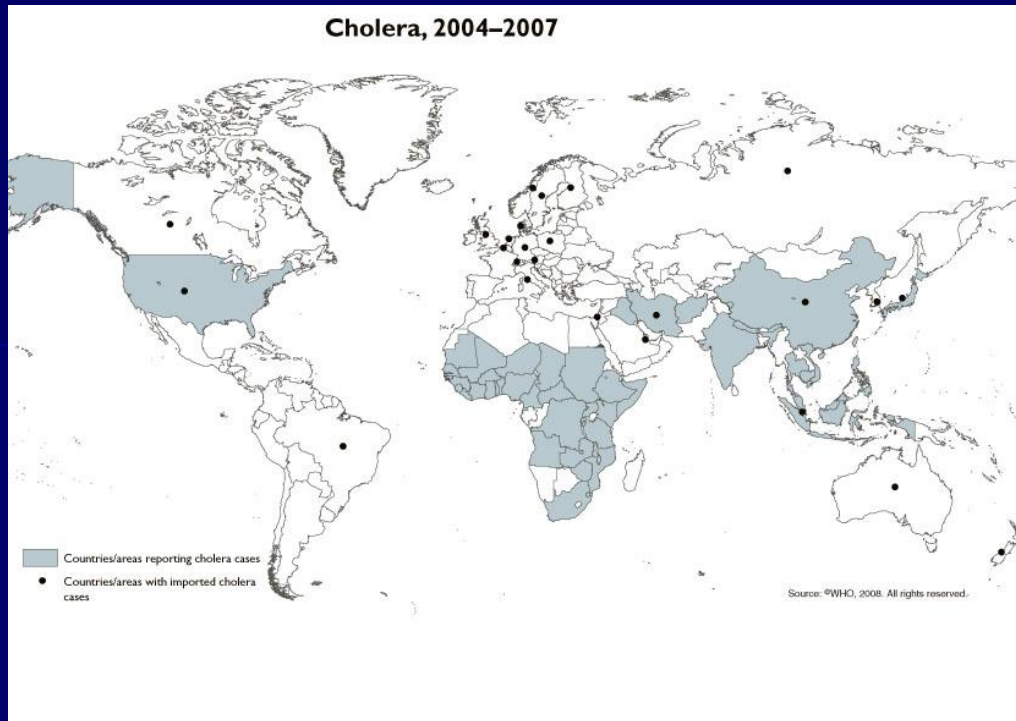
270.915(50%)

1909. .

15.000

1922. ()

100



Ko

2010 – 10.000 ;

1.100 720 ;

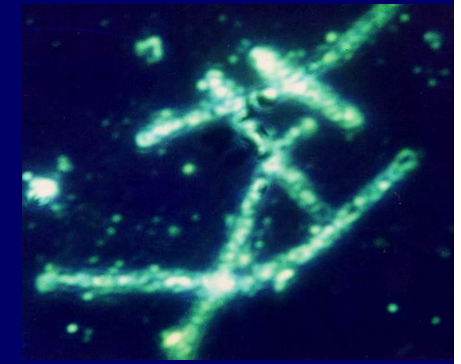
, 2291

13 ;

Bacillus anthracis-

• *Bacillus anthracis* 1-2,5 μm

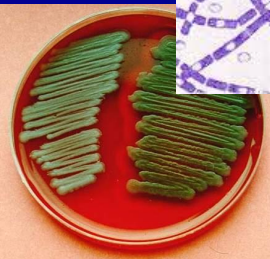
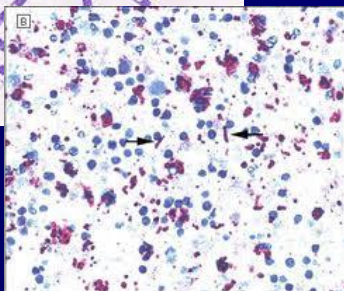
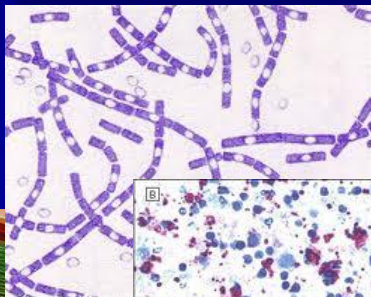
3-10 μm



• *B. anthracis*

(pH 7-7,4),

35°C.



• *Bacillus anthracis*

(,).
1491 17.

LD50

2500

60 000

1.

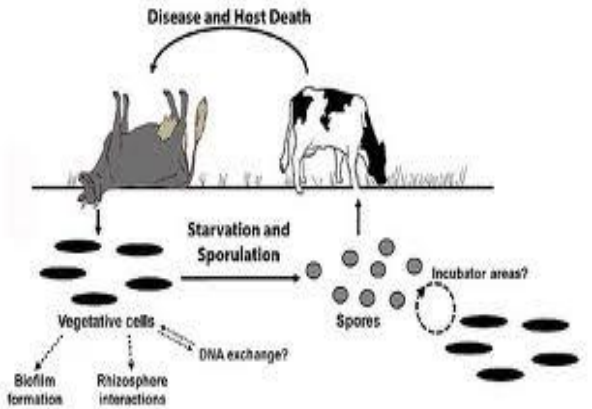
2.

3.

(PA),
(LF)
(EF)



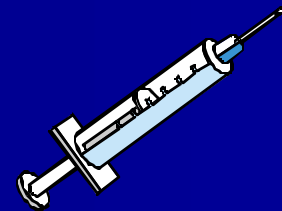
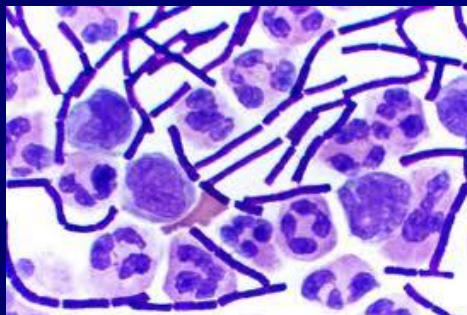
-
-
-



- 1.
- 2.
- 3.



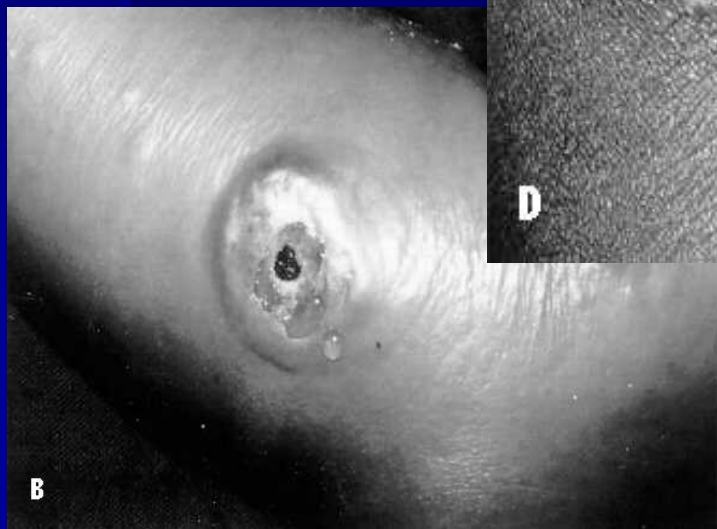
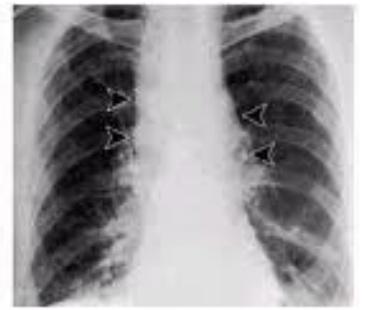
(BSL II, BSL III)



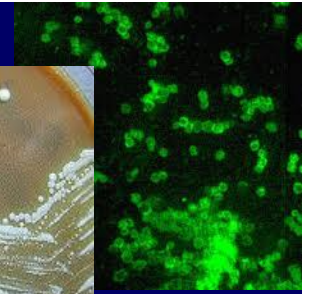
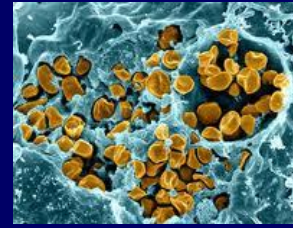


n
n
n
n
n
n
n

- (;)
 1941/42. *B.anthraxis.* *Gruinard*
 45 ; 1986. .
 , 1979.
 (*Aum Shirikyō*) B.a. 1995. (Sternov soj)
 , 2001: 22 , 11 , 11 ,5
 ;
 : - "Ames"
Fort Detricku i Porton Downu !!!
 :
 !!!
CDC, 1993:
 100 3 000 000 5 000 000



Francisella tularensis-



(0.2-0.2x0.7 μ m),

: 2Mb;
(51%),

(69%)

250

Lagomorpha *Rodentia*



1.

2.

3.

4.

n

n

n

n

n

n

n

F. tularensis:

F. tularensis

(2-10)-

()-

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.



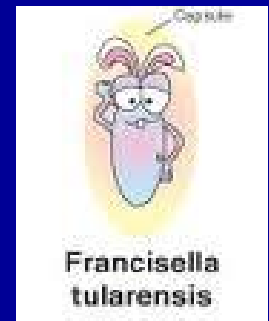
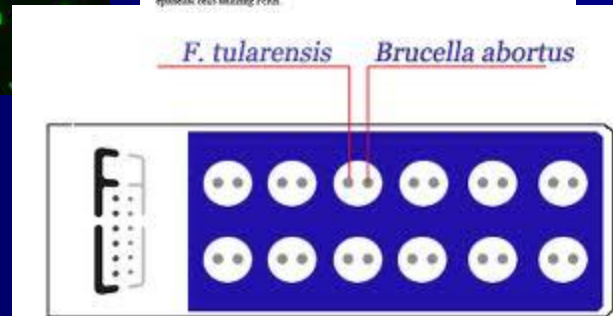
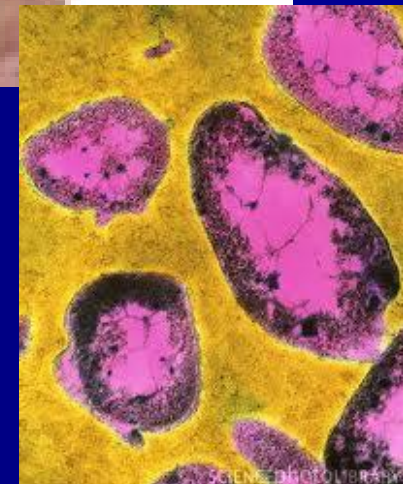
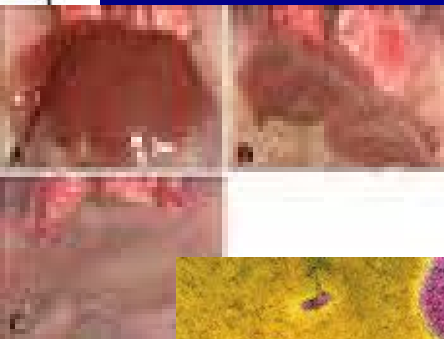
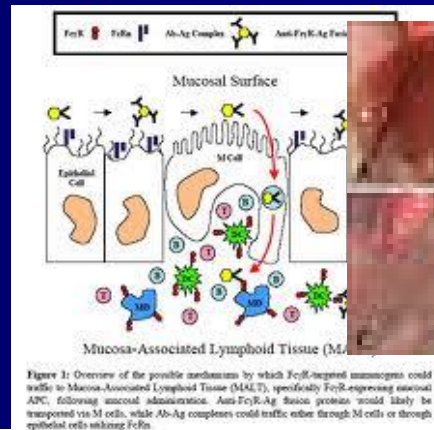
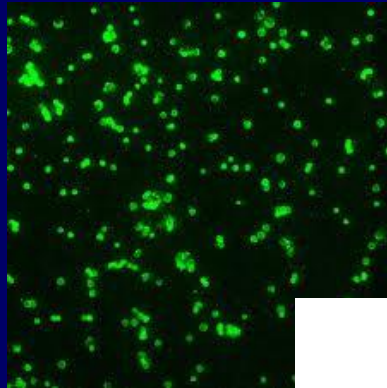
20.

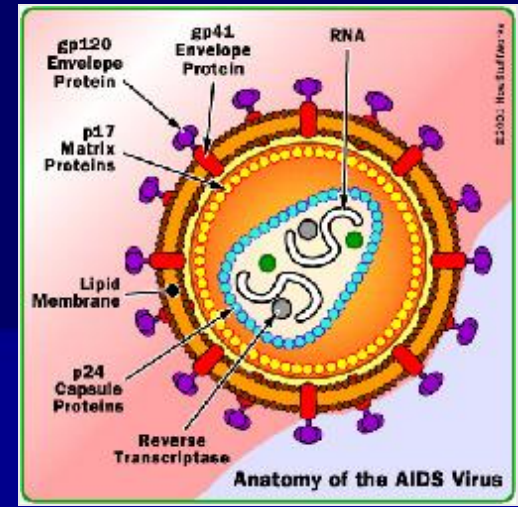
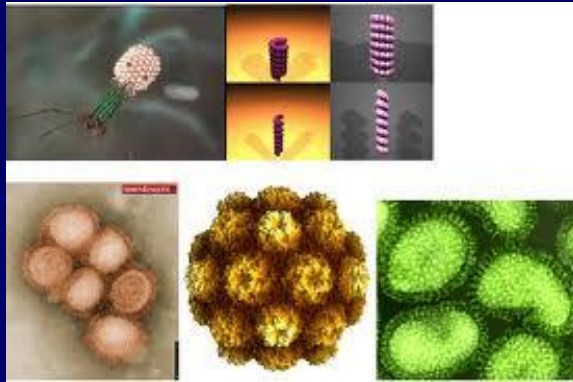
1998. ()

Apodemus

F. tularensis

(CDC) :

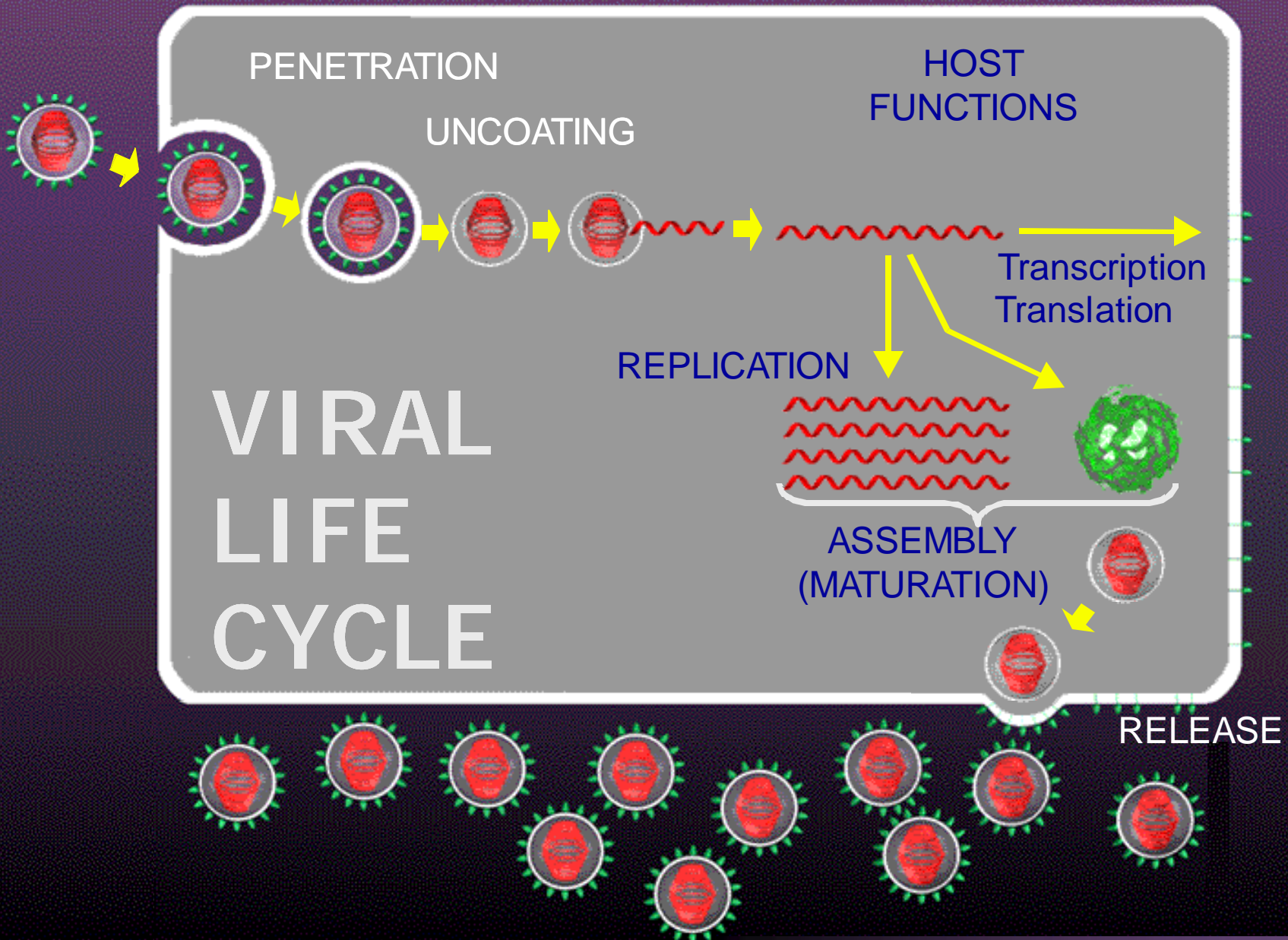




- 1.
- 2.
- 3.
- 4.

ATTACHMENT

Click after each step to view process



VIRAL LIFE CYCLE

PENETRATION

UNCOATING

HOST FUNCTIONS

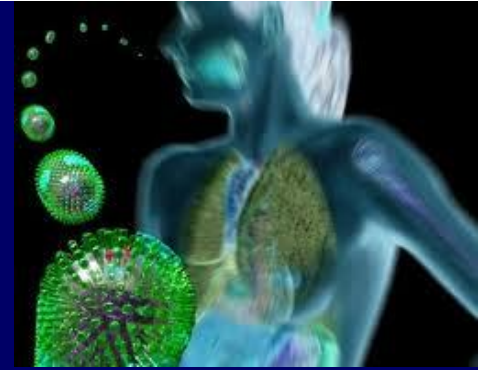
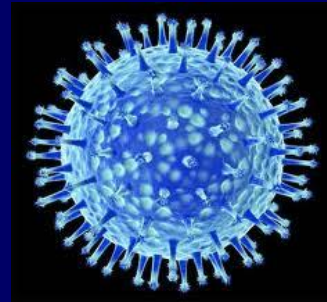
Transcription
Translation

REPLICATION

ASSEMBLY
(MATURATION)

RELEASE

MULTIPLICATION



:

1.

(-1)

2.

(,)

3.

()

10.000 : ("

5x5 m." K.Bayley)

:

1.

2. , ;

3.

()

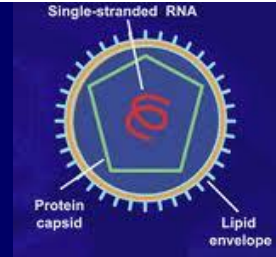
4.

()

5.

(boomerang)

A



Dengue fever is characterized by:

- Fever
- Rash
- Muscle and joint pains

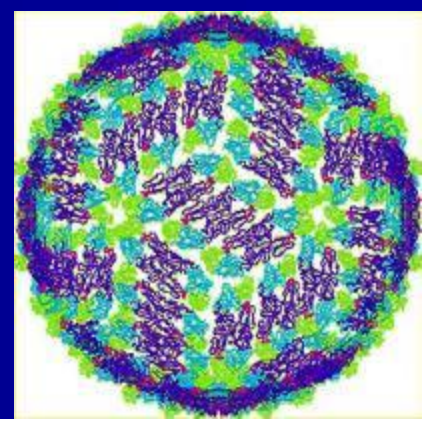
Aedes aegypti mosquito

#ADAM

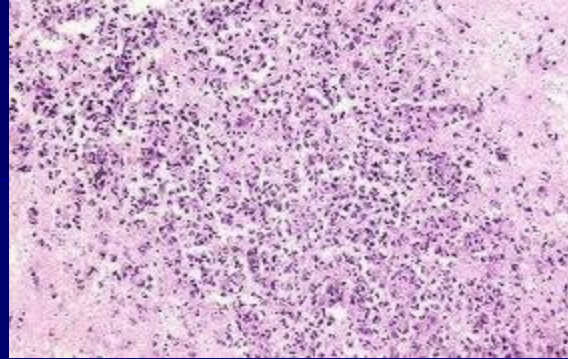
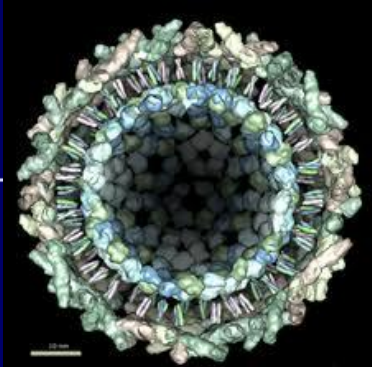
This block contains text describing the symptoms of dengue fever: fever, rash, and muscle and joint pains. It includes an illustration of an Aedes aegypti mosquito on the left and a child with a red rash on their torso on the right. The text 'Aedes aegypti mosquito' is positioned below the mosquito, and the hashtag '#ADAM' is in the bottom right corner.

•80

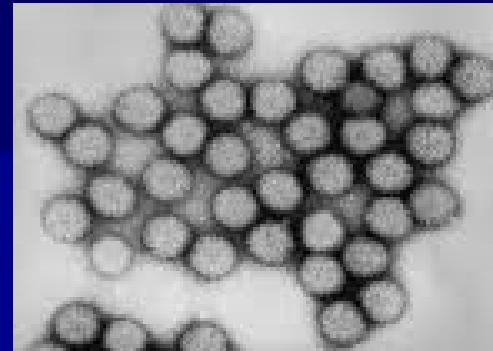
20-50%, 7-9
200.000



(



)



•

•

•

•

•

•

1995,

-50-75%.

40%.

, 300

-

100.000

-

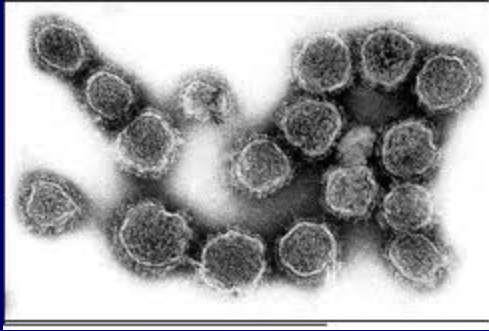
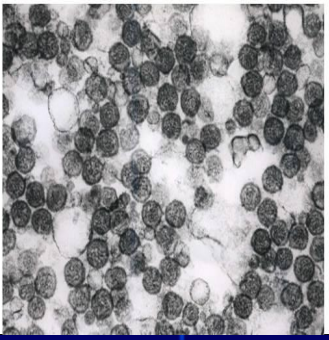
, 3000

10%,

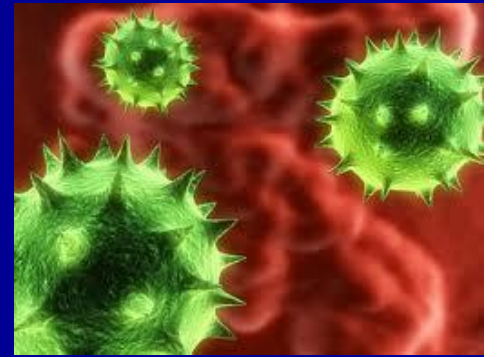
...)

(

)



300)



•

•

•

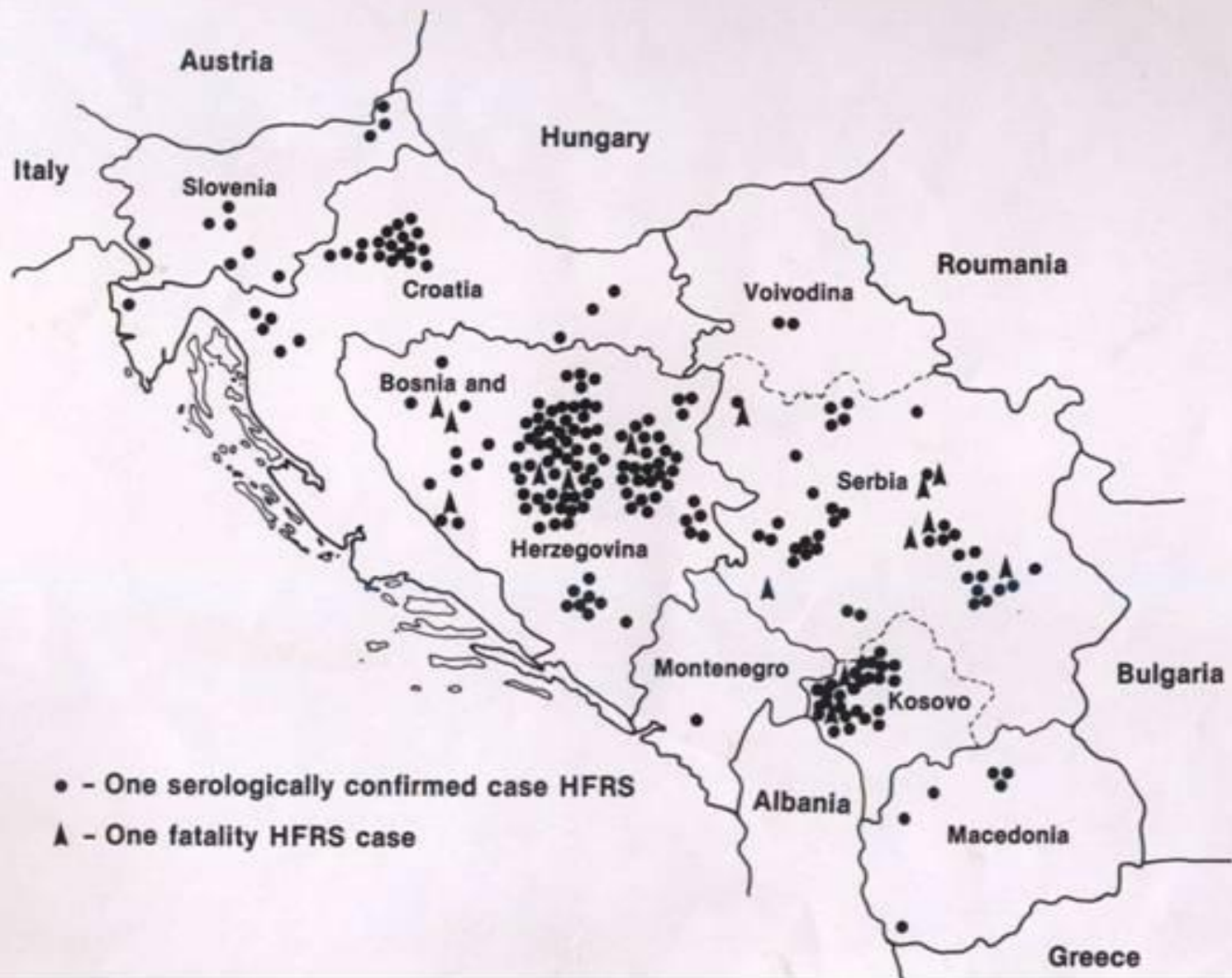
•

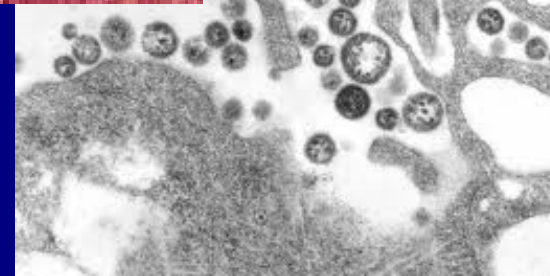
•

(

)

(





50-300

-40-50%;

BSL-4

10%,

-3

24

"

"

"

"

- 1962.

:

+Q-

()- .0.5%, .1

()- .1-2%, .3

C.burnetti (Q-)- .1%, .3

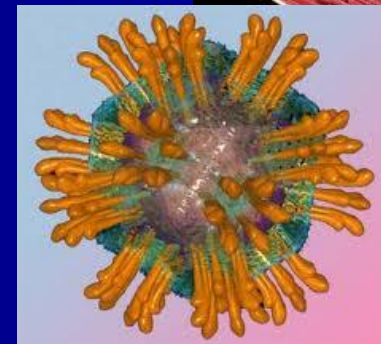
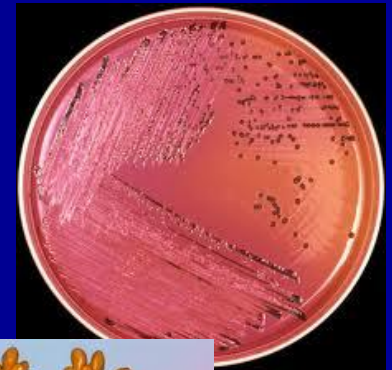
R.rickettsi (SFG) - .5%, .4

Chl.psittaci ()- .1-2%, .1

- .0.1% .3

- .2-3%, .4

- .0.01%, .2



1. *Coccidioides immitis* () - . 20% . 9 .

2. *Histoplasma capsulatum* () - . 30-50%, . 3-6 .

3. *Cryptococcus neoformans* () - . 20%, . 9 .

1. *Plasmodium spp.* () - . 2%, . 3-5 .

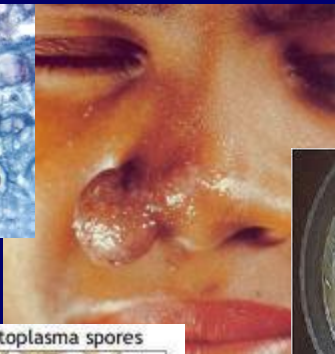
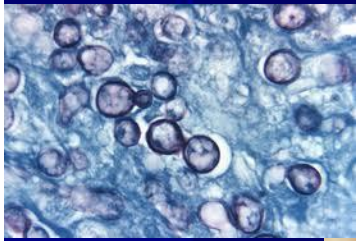
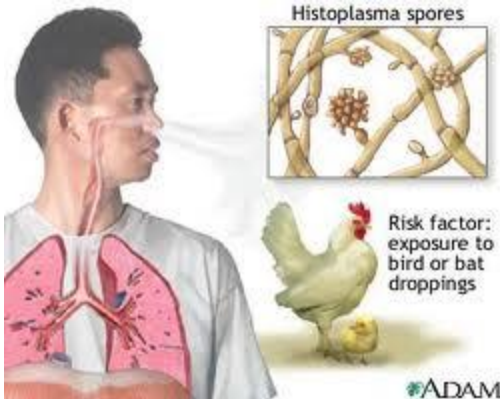
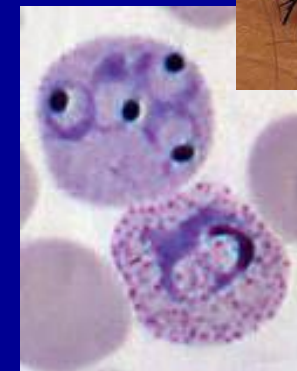


Figura 1. *Cryptococcus neoformans* in standard Staib agar.



270

2.5

10

3.2

()

		50 (mg/kg)
	<i>Clostridium botulinum</i>	0.0002
	<i>Clostridium tetani</i>	0.0001
	<i>Staphylococcus spp.</i>	0.03
	- <i>Aspergillus</i>	400
	- <i>Penicillium</i> , <i>Physarium</i>	
- /	,	8
		0.03

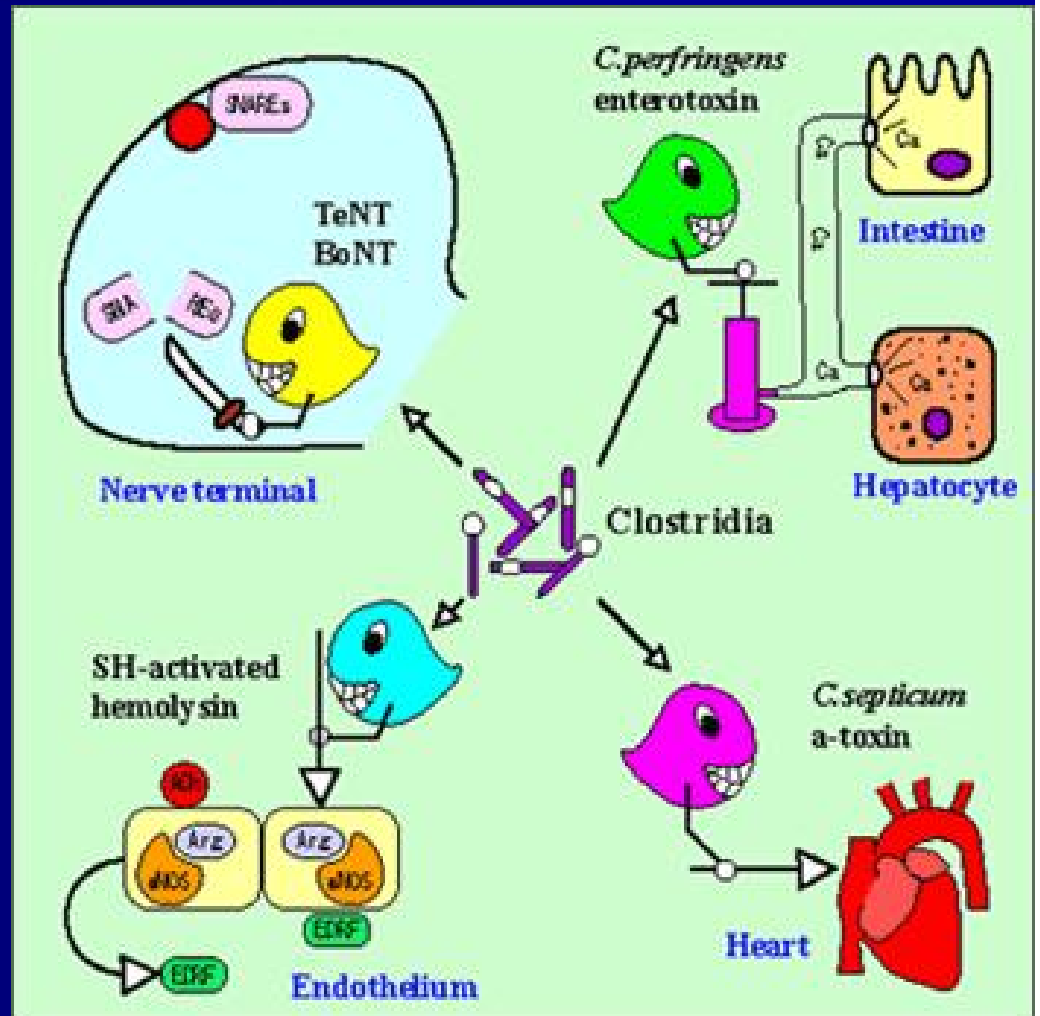
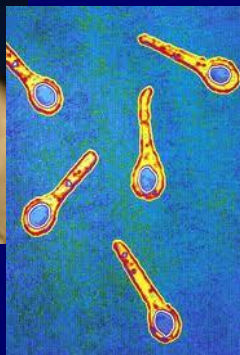
:Clostridium

C. perfringens, C. septicum

C. tetani

C. botulinum

C. difficile

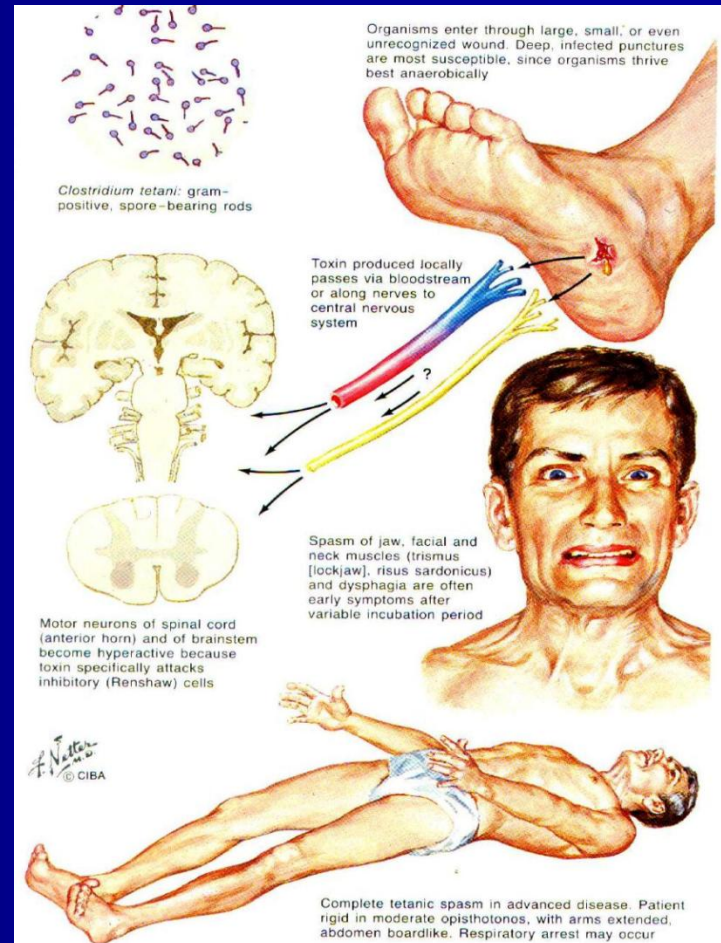
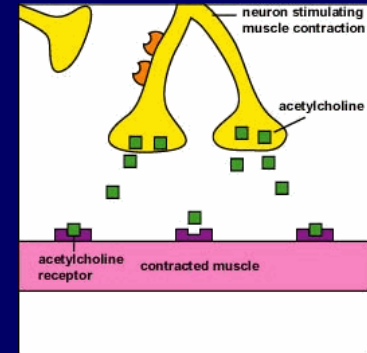


Clostridium tetani

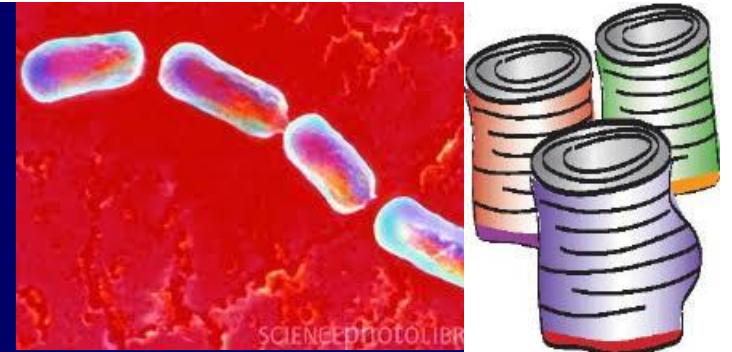
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Clostridium botulinum



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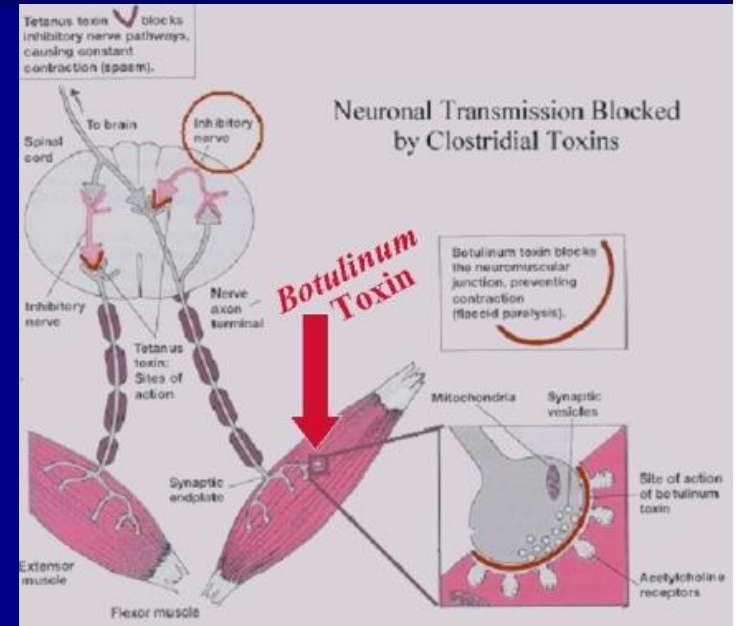
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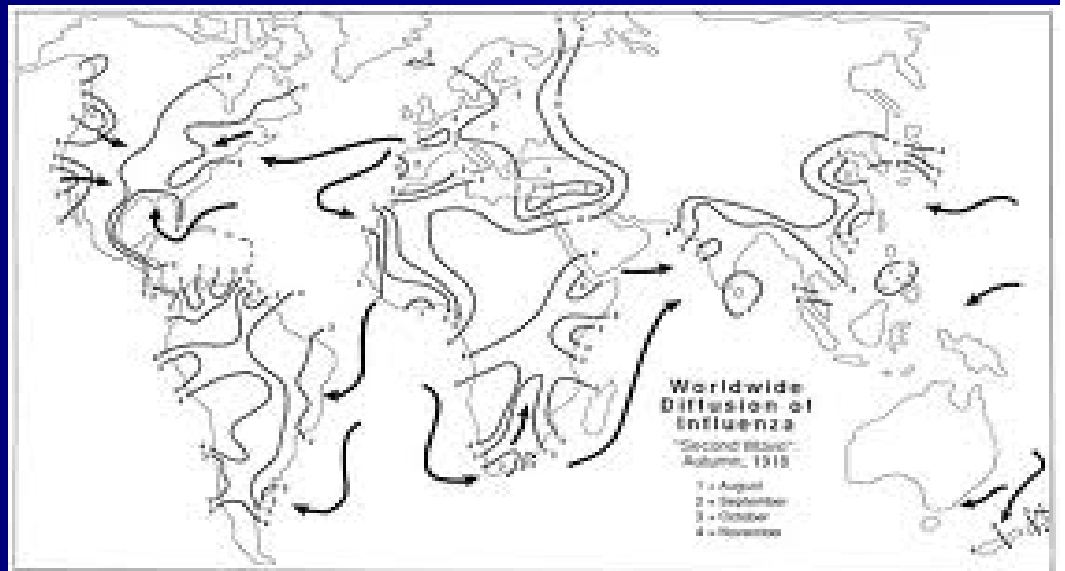
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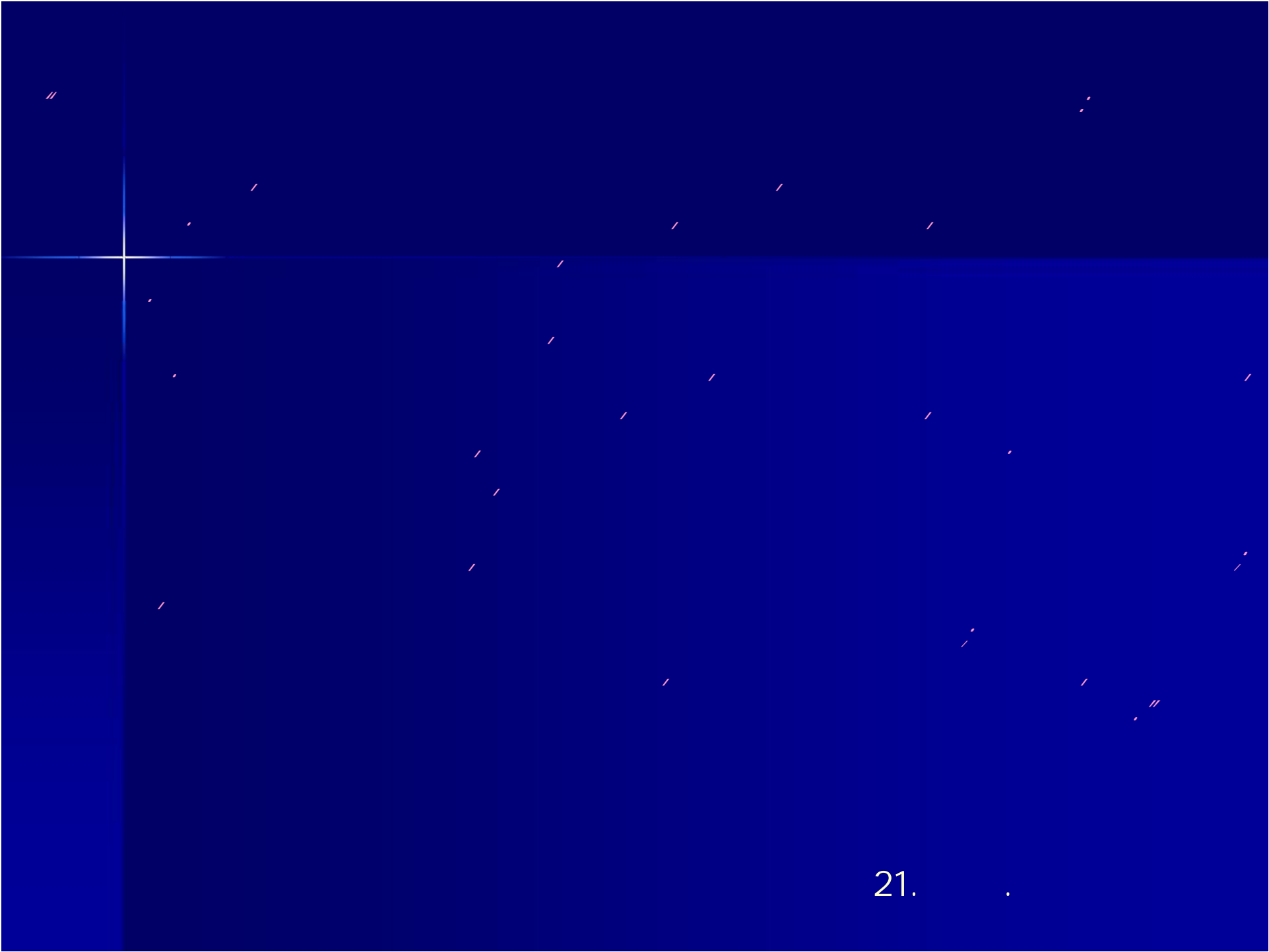
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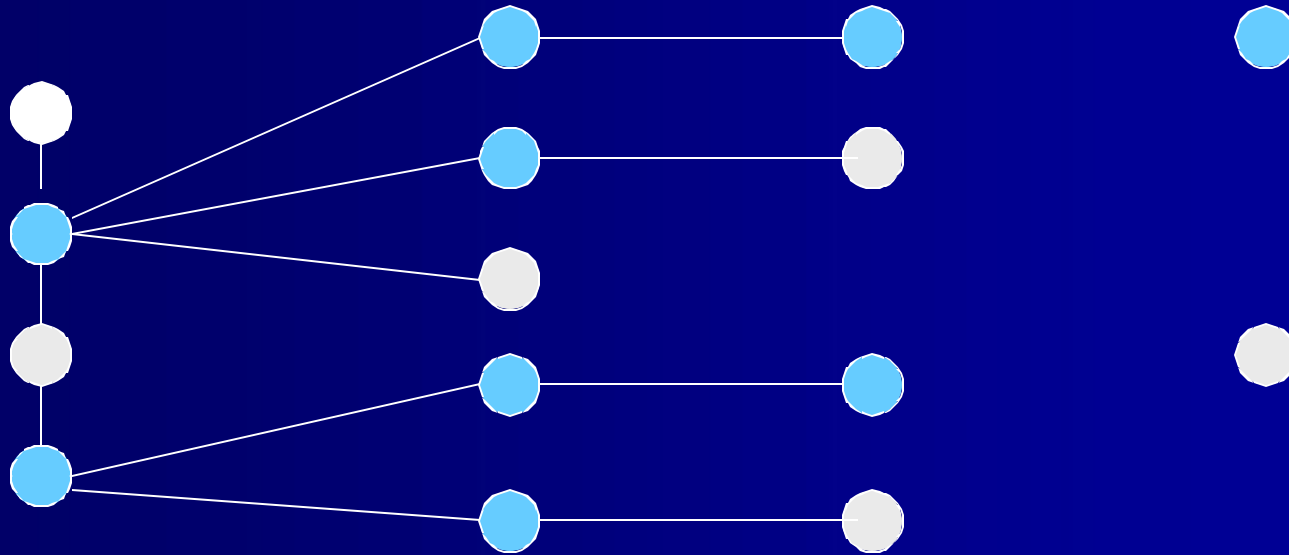
- *epi* - *demos* -

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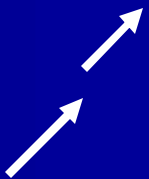
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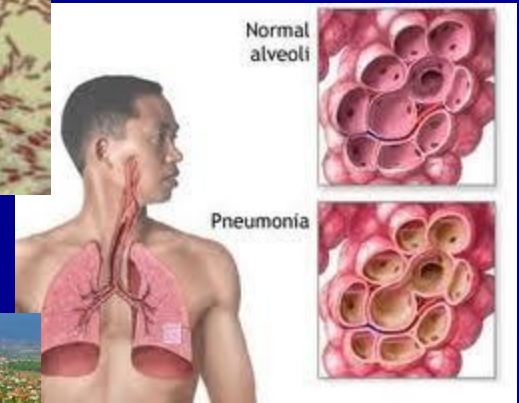
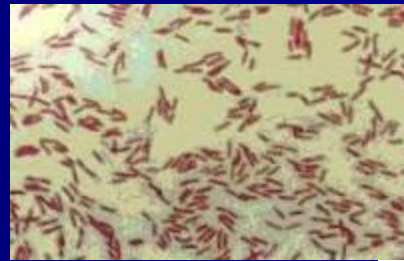


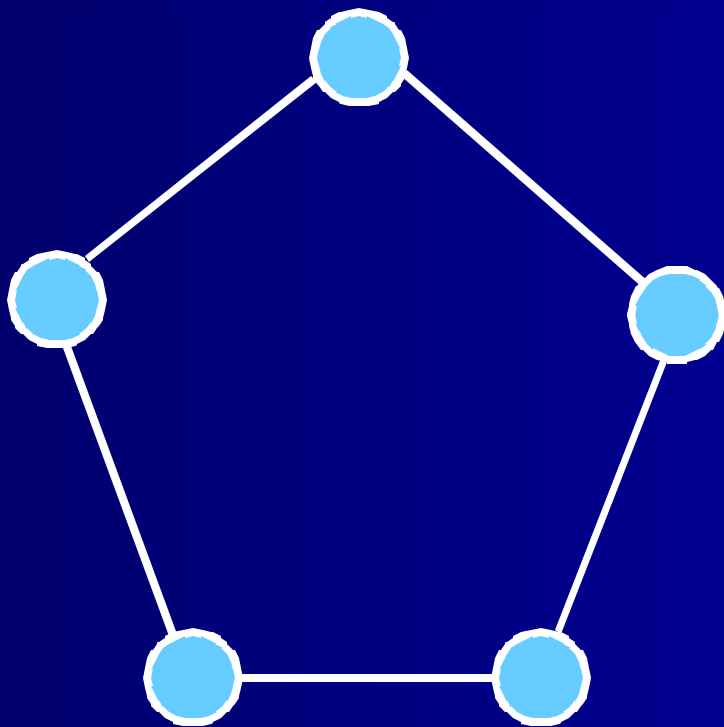
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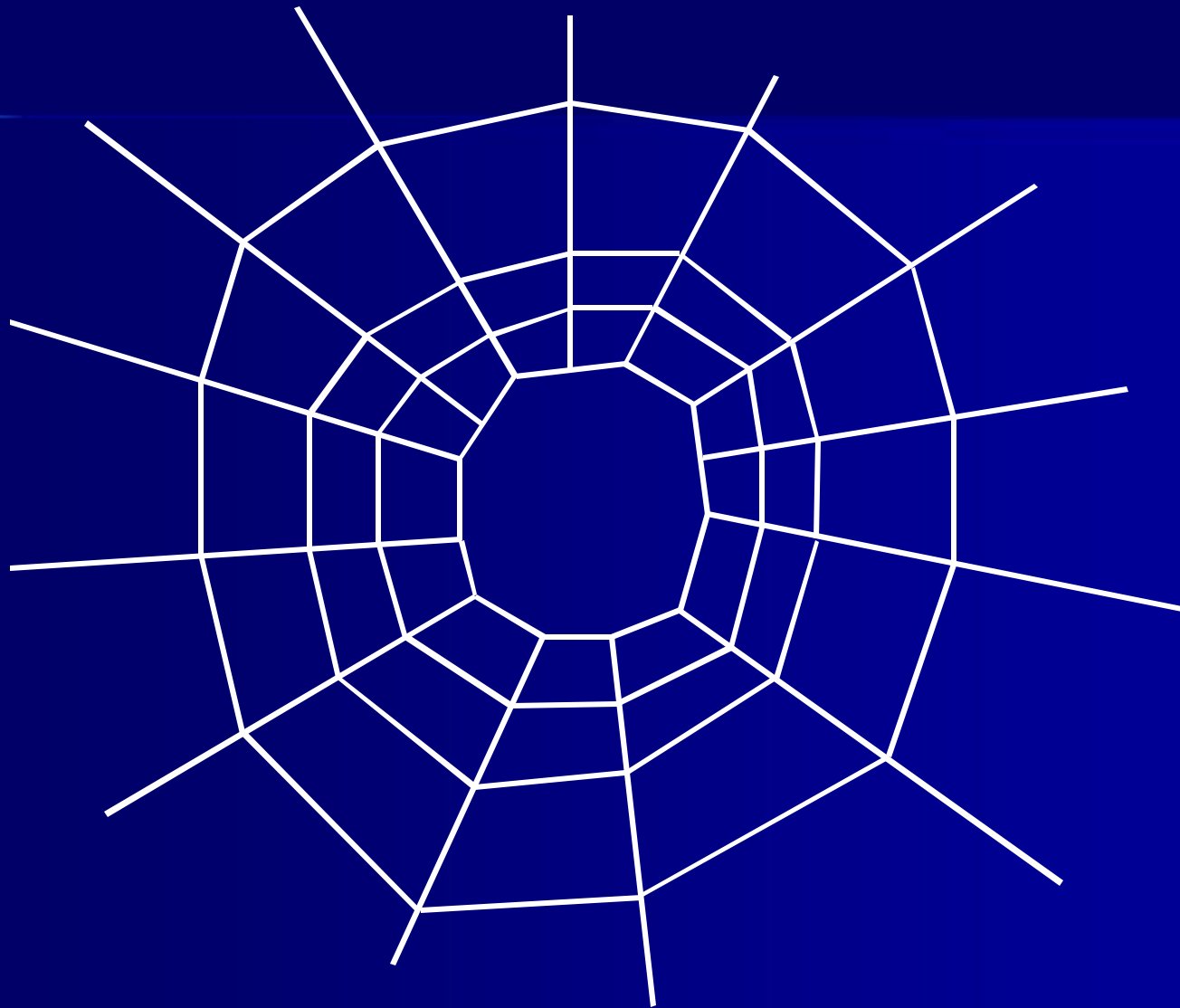
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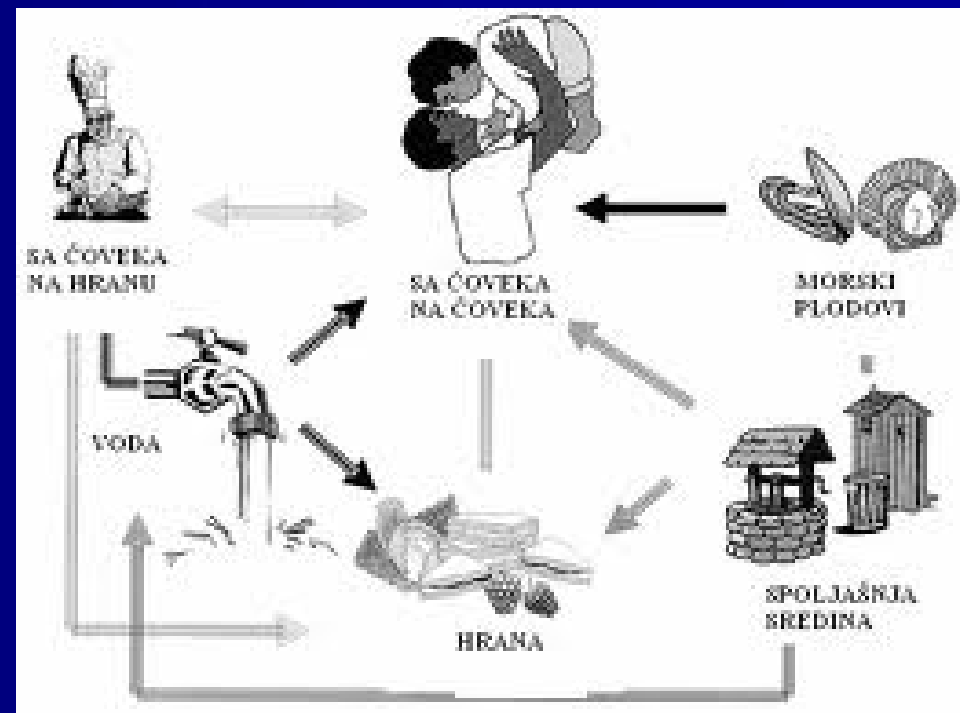
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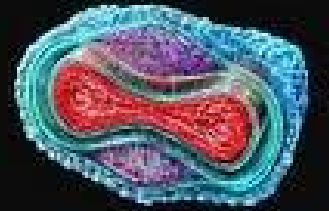






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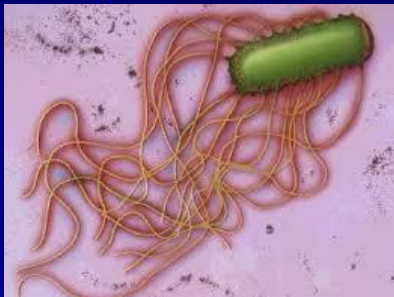
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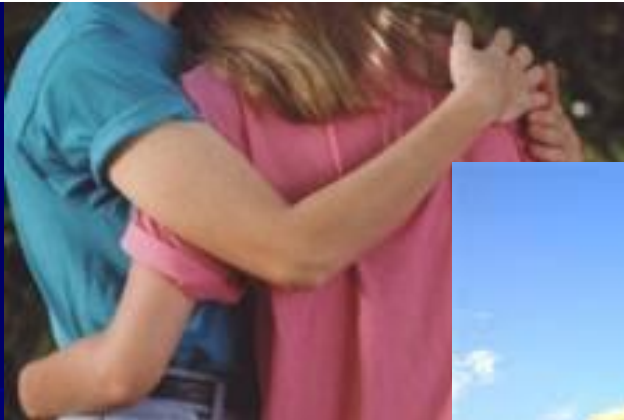
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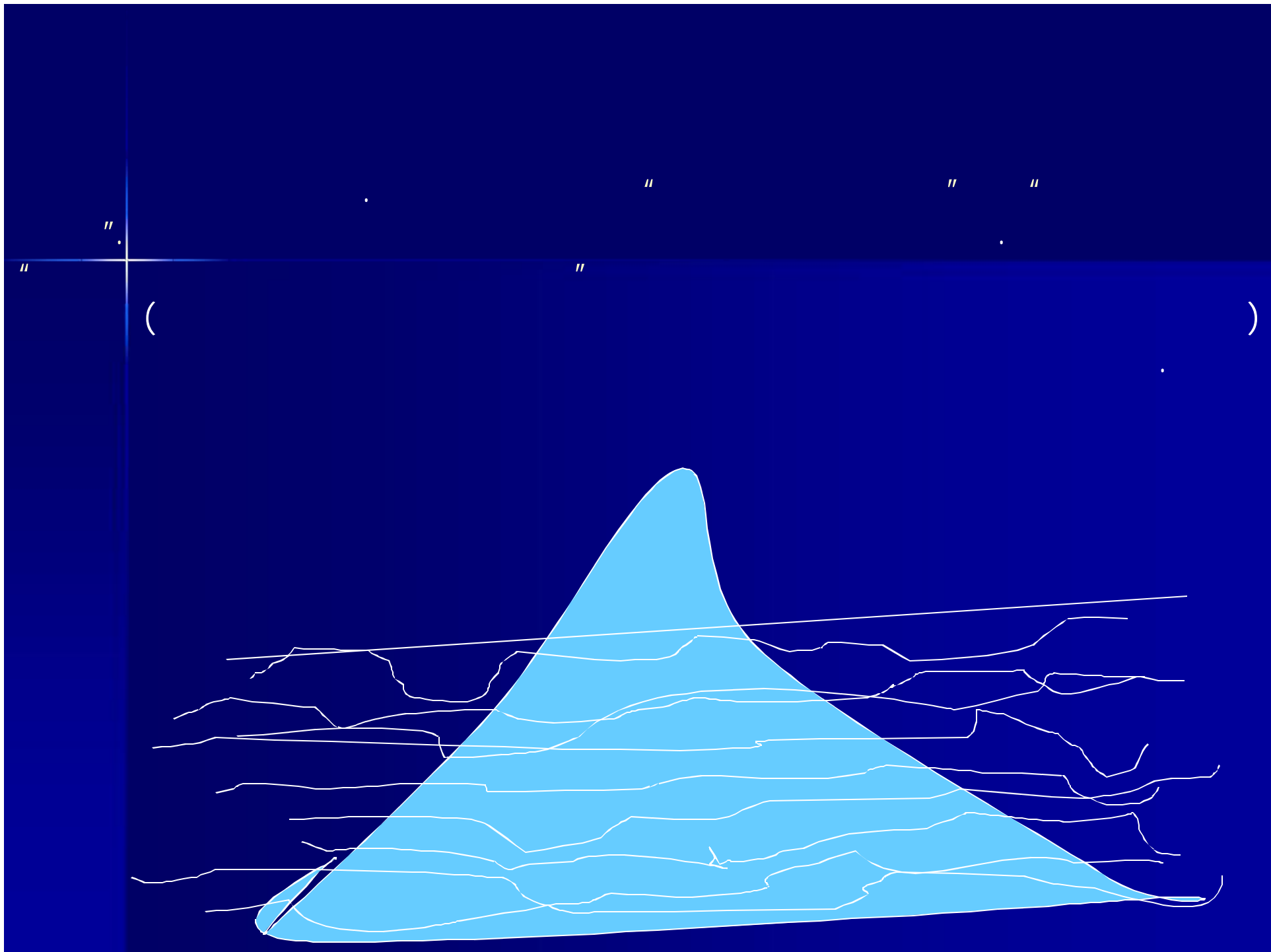
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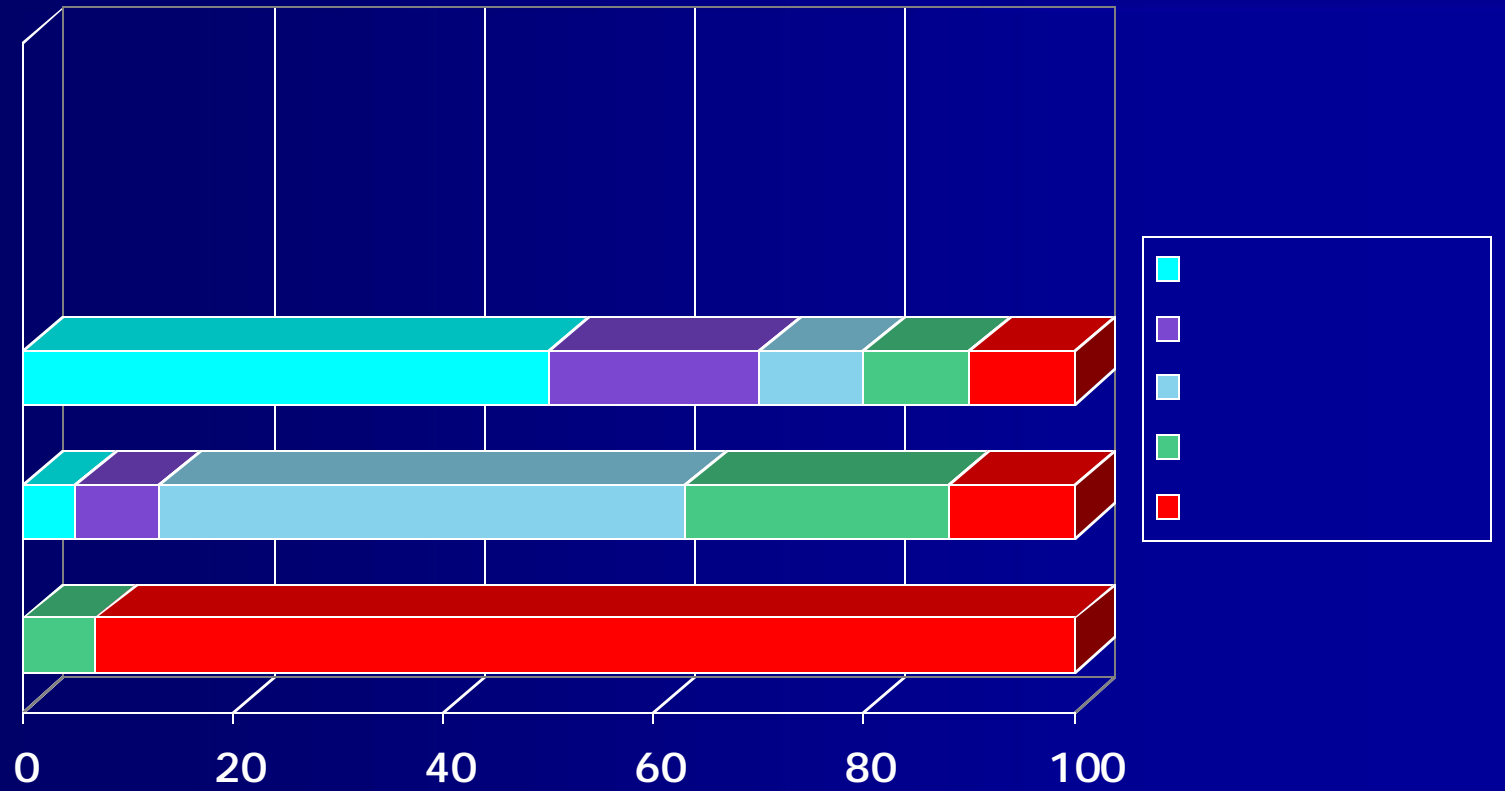
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:Mausner & Kramer (5)



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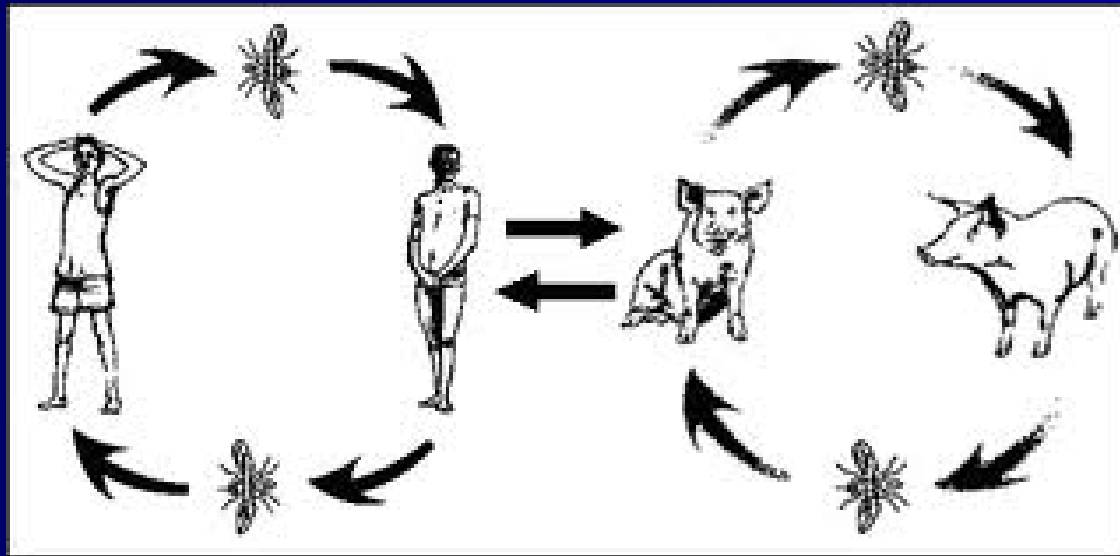
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World Health Organization



(
- *Borrelia recurrentis*,
Bartonella quintana)



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MIGRANTS AND REFUGEES

LEAVING NO ONE BEHIND ON THEIR JOURNEY

WHO is providing access to health care throughout their journey: from the country of origin, as they transit and until they reach their final destination.

60+ MILLION

Number of people forced to flee their homes and seek refuge and safety due to wars, conflict and persecution.

1+ MILLION

Migrants and refugees who have crossed into Europe by land and sea in 2015

WHO RESPONSE

-  Provision of life-saving emergency medicines and supplies
-  Maternal and child health care support
-  Disease surveillance and outbreak response
-  Support for mobile clinics and outreach services
-  Vaccination campaigns including measles, polio, etc.
-  Provide support to refugees in need of mental health care
-  Training health workers
-  Facilitates information sharing among partners and governments


DESTINATION


TRANSIT


ORIGIN

922.691
 1.06.2015. 10.01. 2016.
 68.816



76 ()
 71.253 " "
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: 95 %
 , 93
 463 , 1.160
 (27.620),

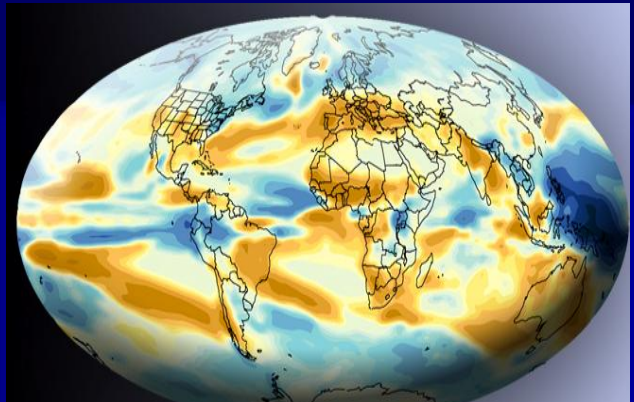
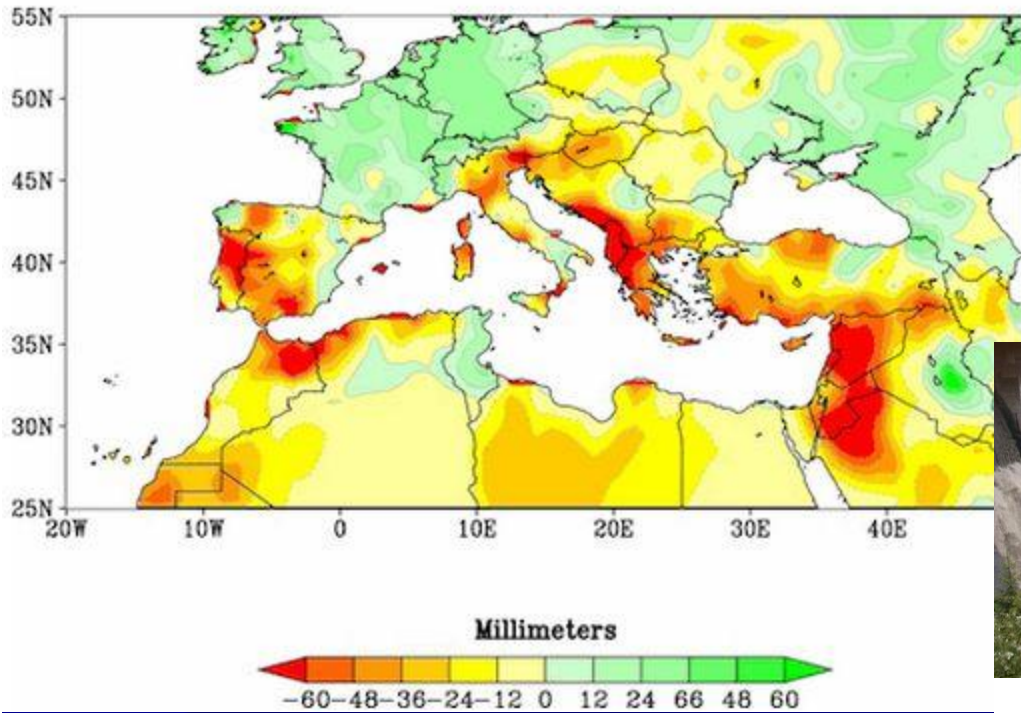
(5.472),
 (3.217)
 (3.109).



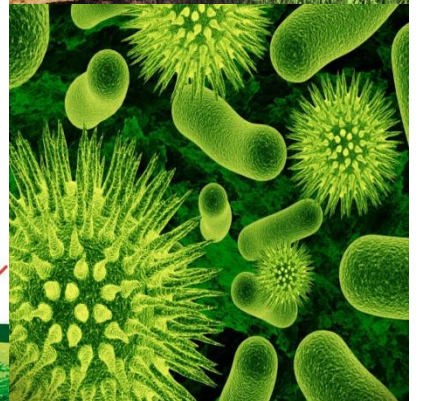
-29, 14; -56
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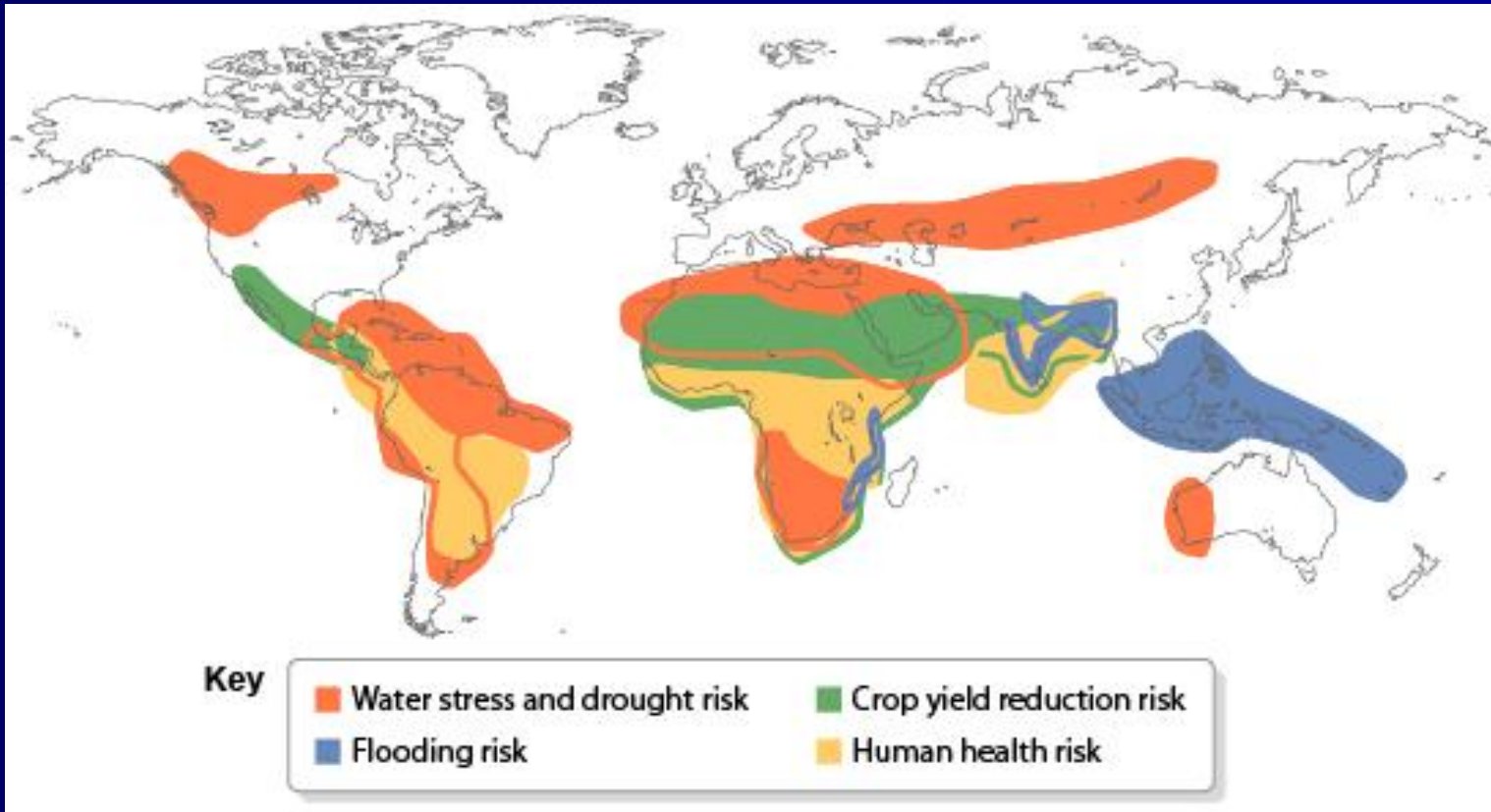


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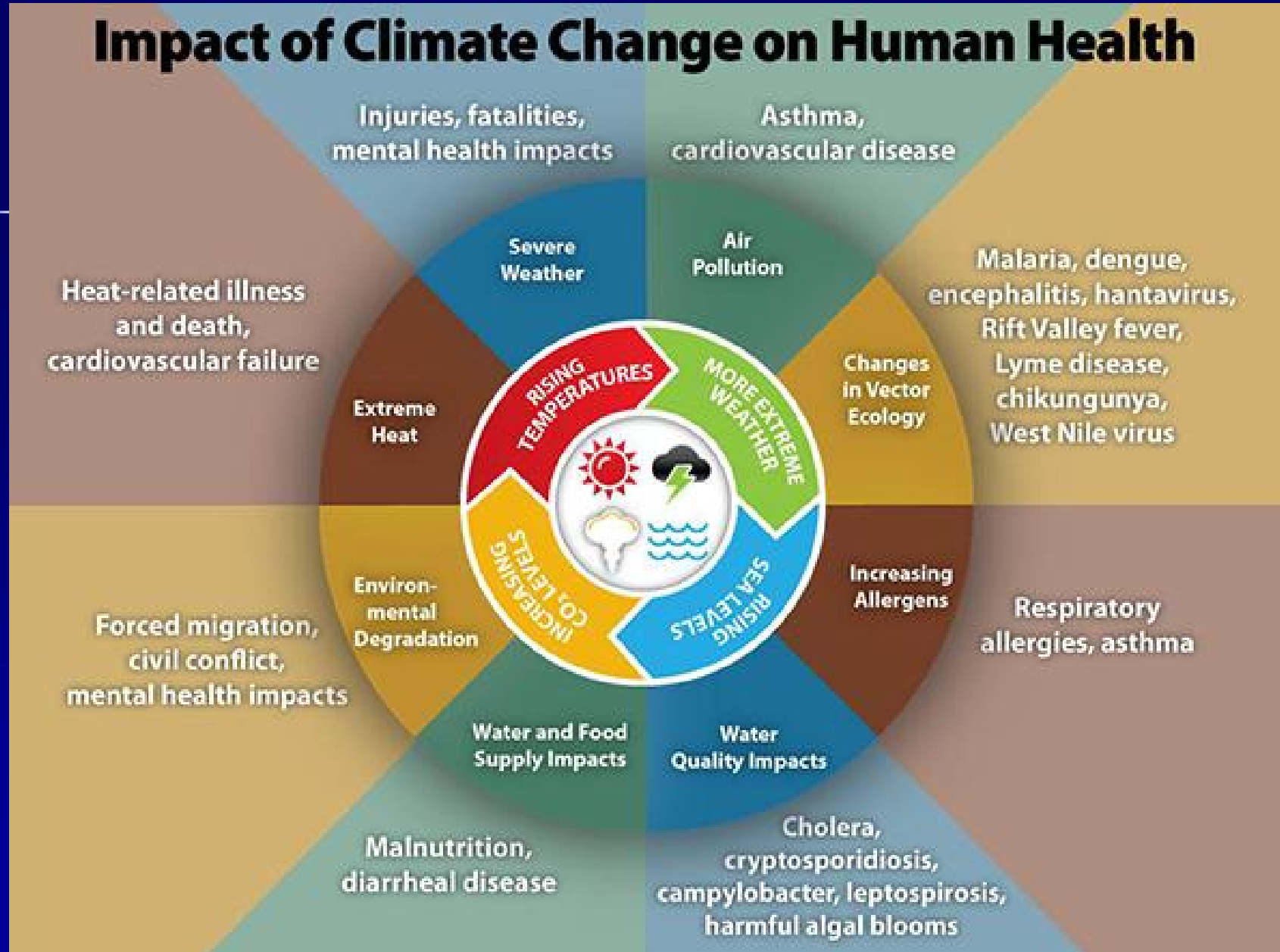


2006. 2011. 60%

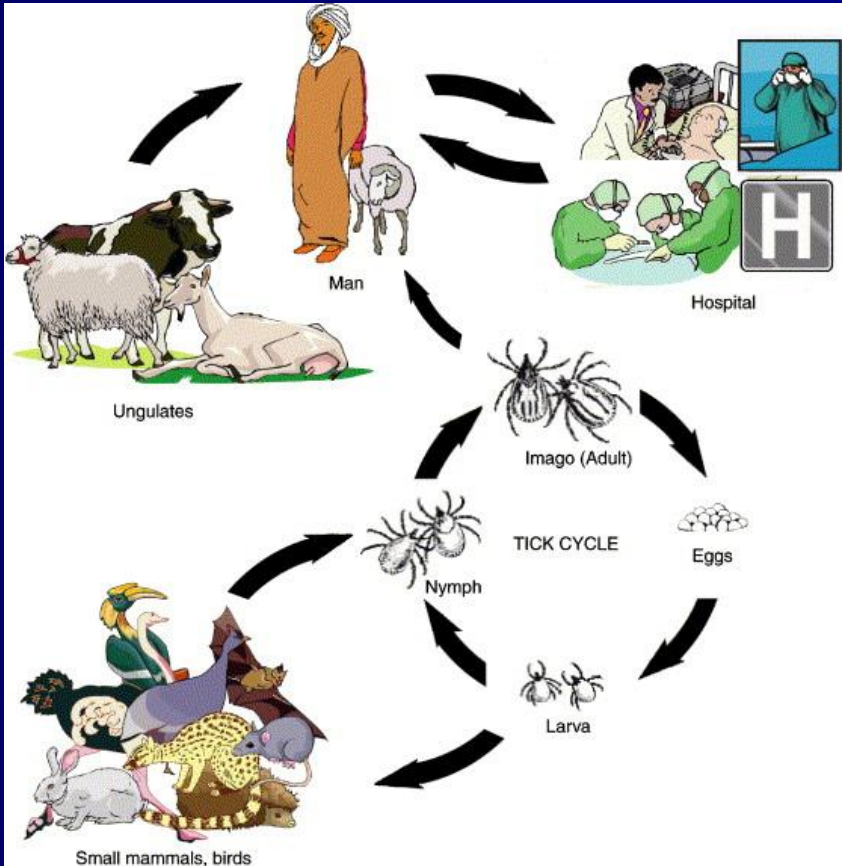




Impact of Climate Change on Human Health

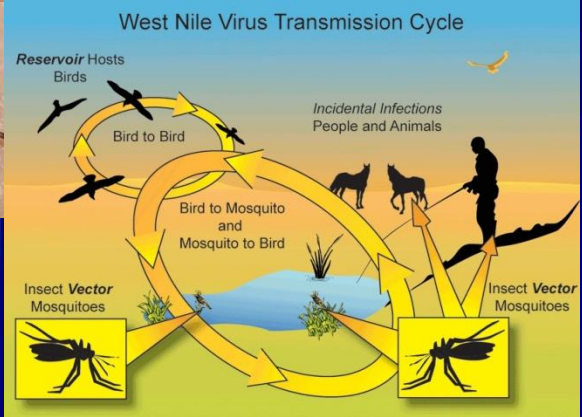


(75%)





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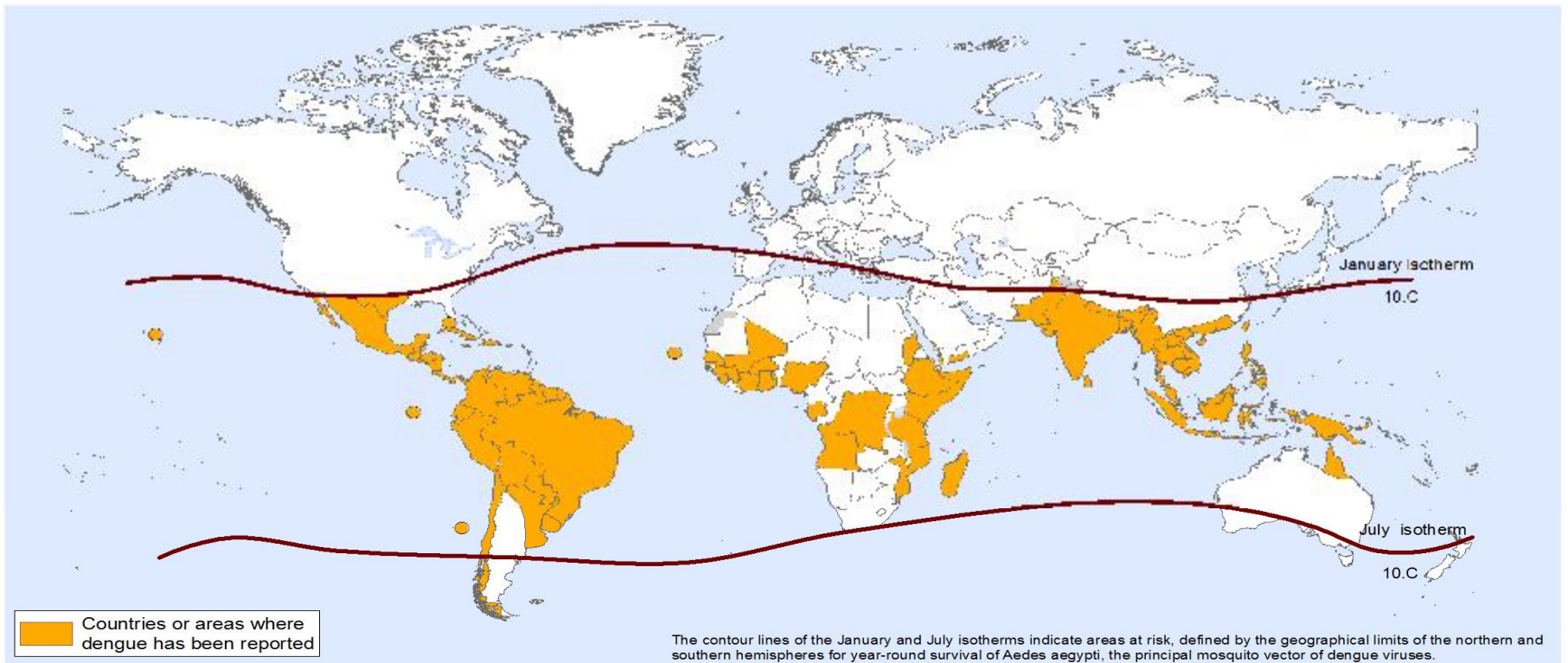


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Dengue, countries or areas at risk, 2013

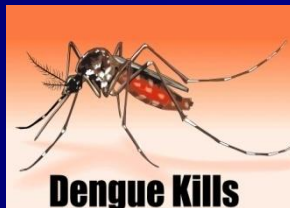


The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Data Source: World Health Organization
Map Production: Health Statistics and
Information Systems (HSI)
World Health Organization



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Zika virus risk in Europe

Tiger mosquito population as of Oct 2015

- Established
- Introduced
- Absent
- No data

Aedes albopictus Tiger mosquito



Dark in colour

Present in several EU states

Could become the Zika vector in Europe

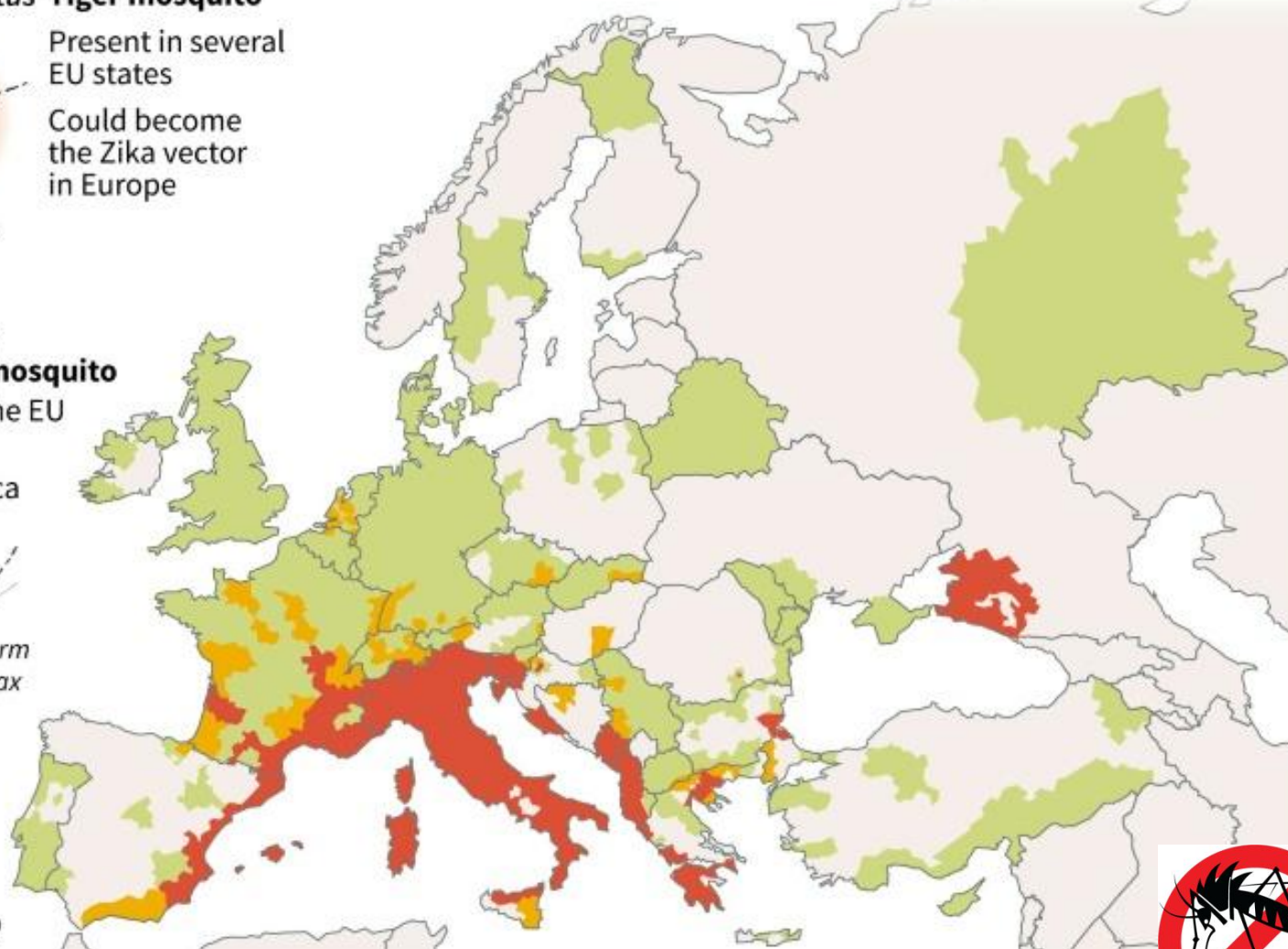
Aedes aegypti Yellow fever mosquito

Not found in the EU

Zika vector in Latin America



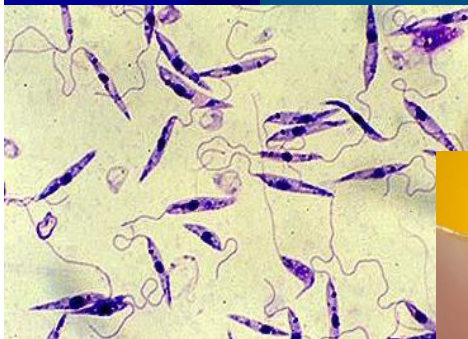
Marking in the form of a lyre on thorax

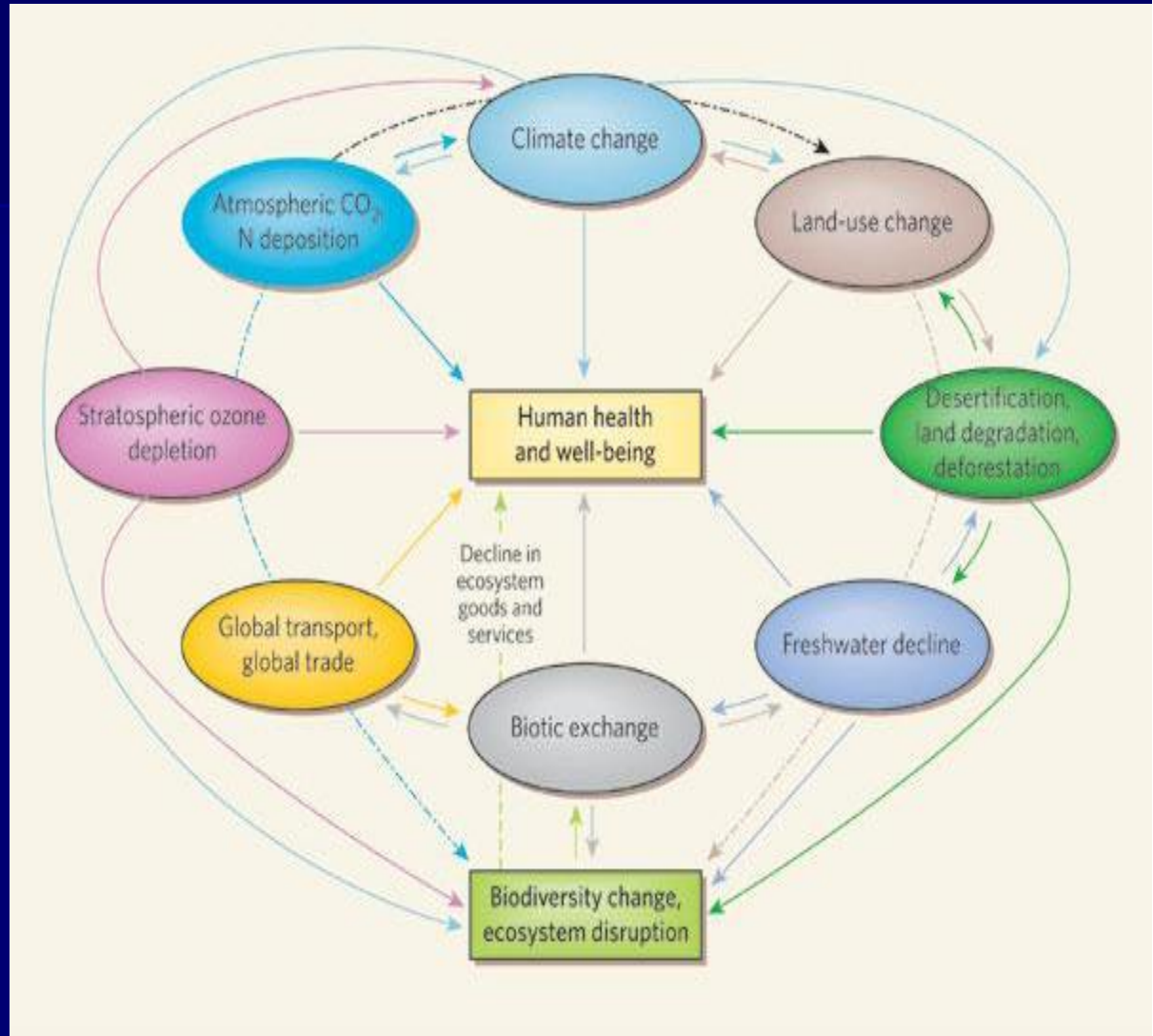
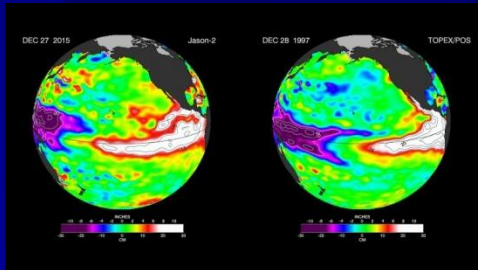
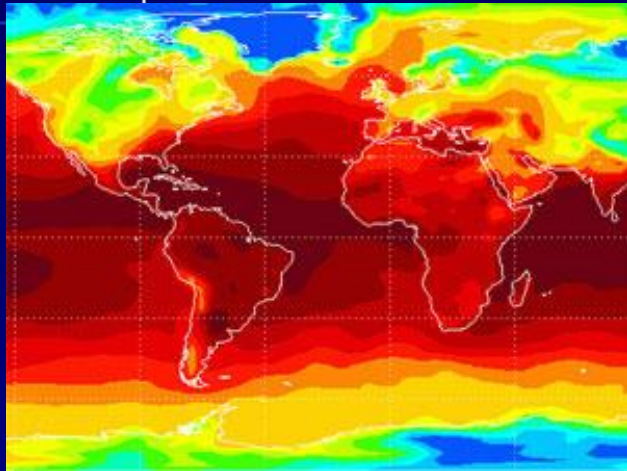


Sources: ECDC, WHO



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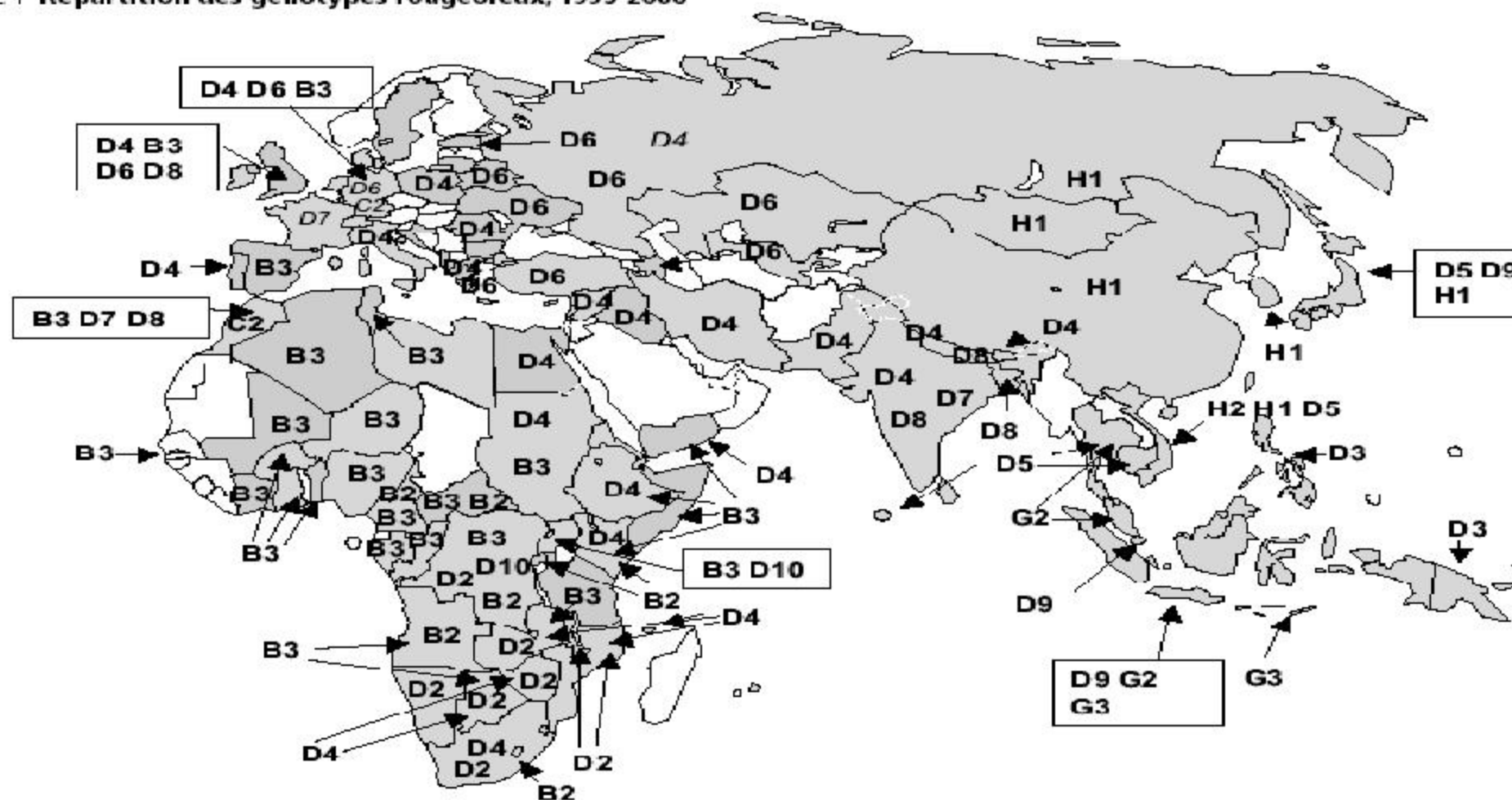
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Map 1 **Distribution of measles genotypes, 1995–2006**
 Carte 1 **Répartition des génotypes rougeoleux, 1995-2006**



Gray shading = Countries reporting genotype information. – Pays communiquant des informations sur les génotypes.
 White shading = No genotype report or no reported measles cases. – Aucun génotype ou cas de rougeole signalé.
 Boxes – Boîtes = Detection of multiple genotypes in the indicated country. – Dépistage de plusieurs génotypes dans le pays indiqué.
 Italic – Italiques = Previously endemic genotypes in Europe. – Génotypes précédemment endémiques en Europe.

This map shows the geographical distribution of measles genotypes in regions that have not yet eliminated transmission. Data are cumulative and based on surveillance between 1995 and 2006 (with the exception of the European Region). The Region of the Americas and Australia are not shown because these countries have eliminated measles. Because countries in the European Region have a complex genotypic pattern, only the genotypes associated with major outbreaks during 2005–2006 are shown. See text for information on other imported cases. Arrows indicate presence of genotype only; they do not indicate transmission pathways. *la carte illustre la répartition géographique des génotypes de virus rougeoleux dans les Régions où la transmission n'est pas encore éliminée. Les données sont cumulatives de la surveillance exercée entre 1995 et 2006 (sauf pour la Région européenne). La Région des Amériques et l'Australie ne figurent pas sur la carte parce que la rougeole y a été éliminée et que les cas qui y sont importés correspondent à une multiplicité de génotypes. Les caractéristiques du génotype étant complexes dans les pays de la Région européenne, seuls les génotypes associés à d'importantes flambées entre 2005 et 2006 sont indiqués. Voir le texte de l'article pour les autres cas importés. Les flèches indiquent uniquement la présence de génotypes; elles n'indiquent pas les voies de transmission.*

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38,5

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30%

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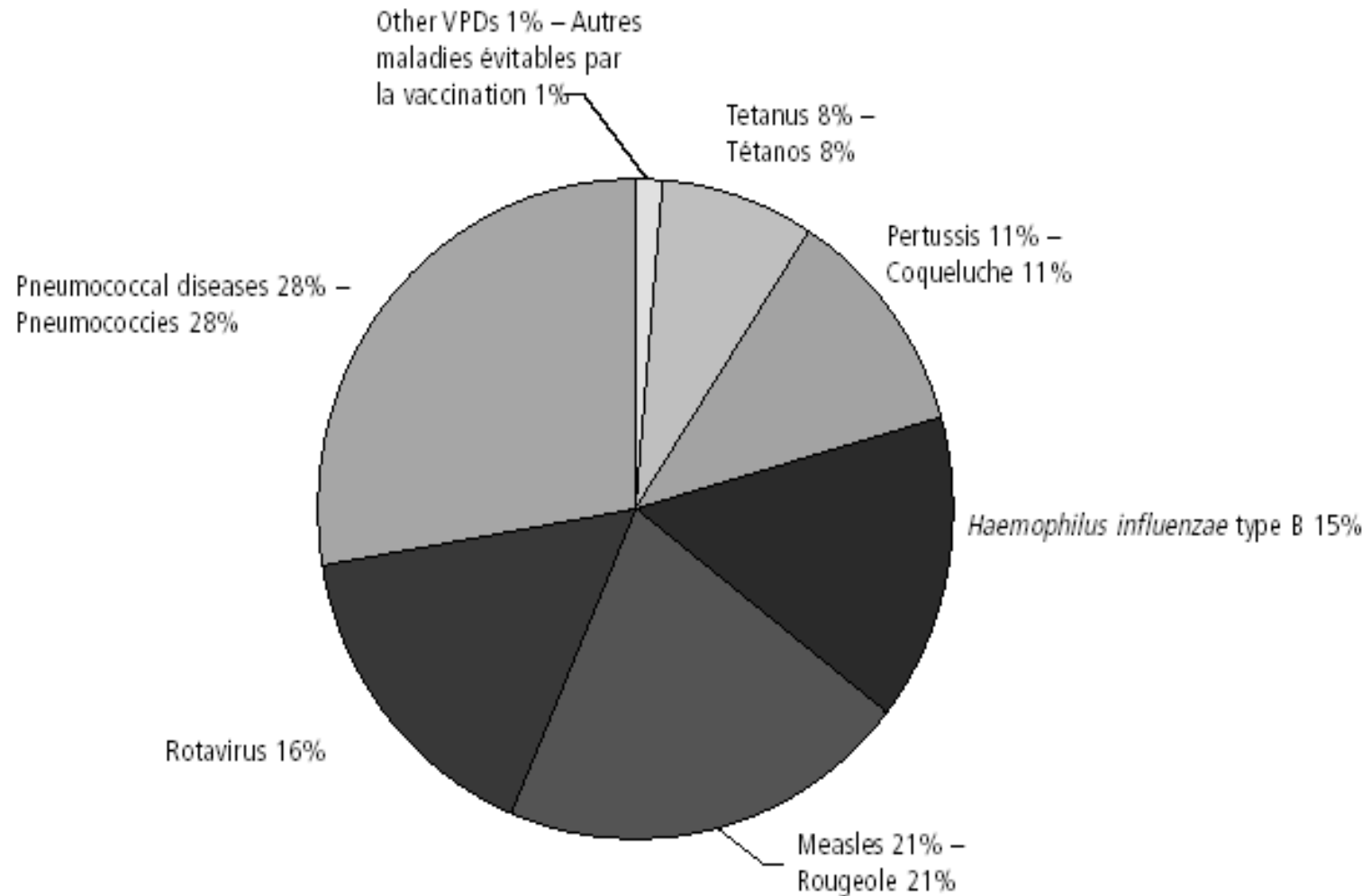
18%

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, 1985 -1992

Fig. 1 Causes of 2.5 million child deaths^a out of 10.5 million child deaths globally, 2002

Fig. 1 Causes de décès de 2,5 millions d'enfants^a sur les 10,5 millions de décès d'enfants dans le monde, 2002



Other vaccine-preventable diseases (VPDs): polio, diphtheria, hepatitis B, yellow fever, Japanese encephalitis, meningococcal disease. – Autres maladies évitables par la vaccination: poliomyélite, diphtérie, hépatite B, fièvre jaune, encéphalite japonaise et méningocoques.

^a Deaths in children aged under 5 years attributed to diseases for which vaccines are currently available. – Décès d'enfants de moins de 5 ans dus à des maladies pour lesquelles des vaccins sont actuellement disponibles.

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95% (90-98%) - 2-5 %

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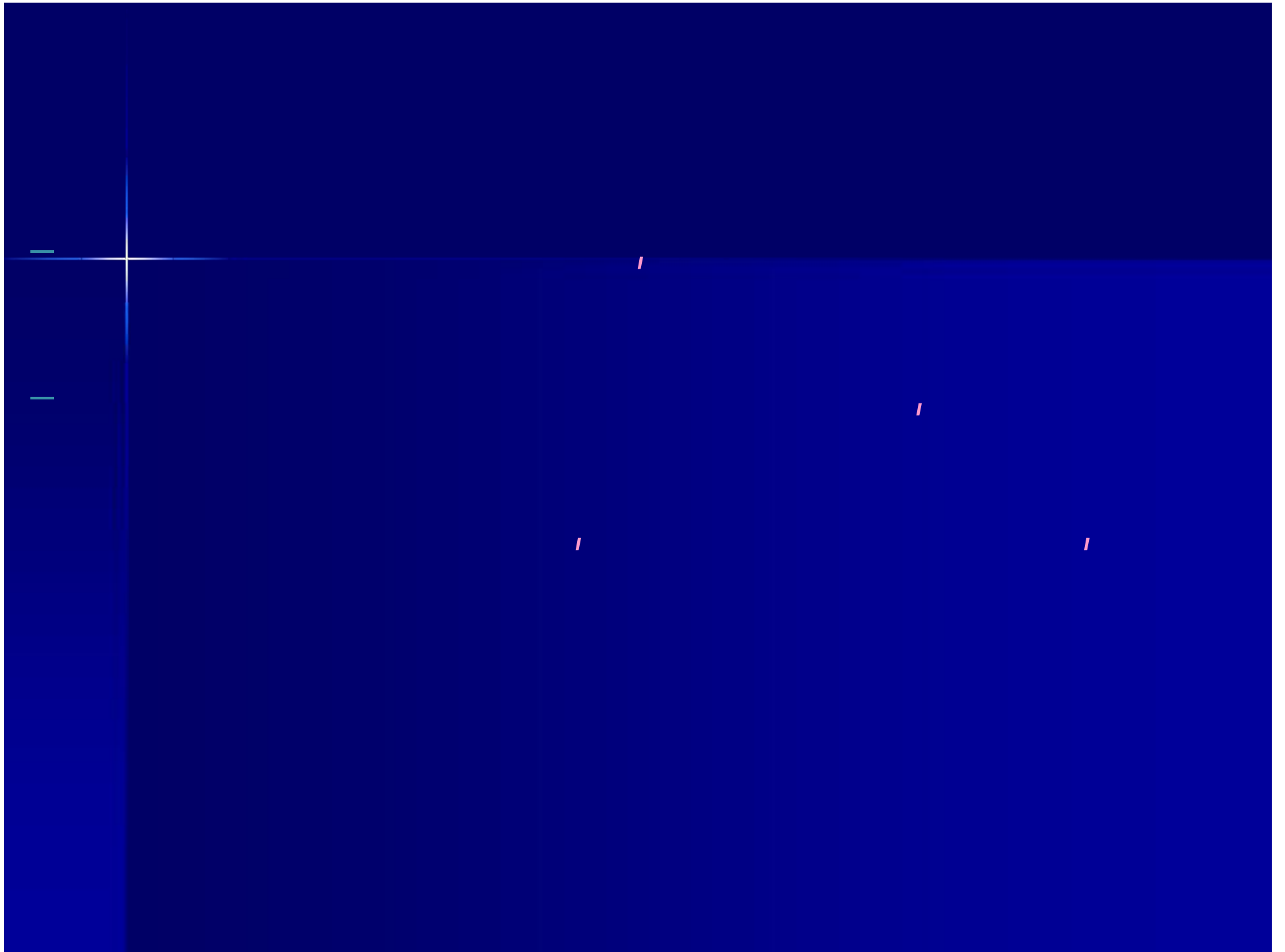
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12

72

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94%



, 2007

- 201 (2,68/100 000);

73,6 %

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24,9%

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87%

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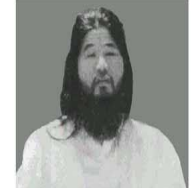
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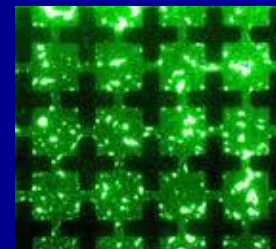
AUM SHINRIKYO
("SUPREME TRUTH" CULT)



Shoko Asahara, Leader



© 1995 AUM SHINRIKYO

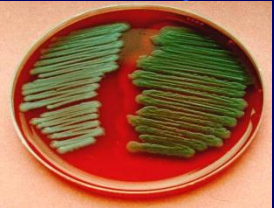


(War on Terror); Sanctuary States/ Regimes)
(Crime/ Police Activities)
(Disease) –

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B. anthracis

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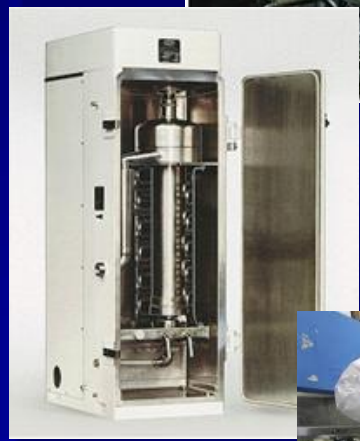
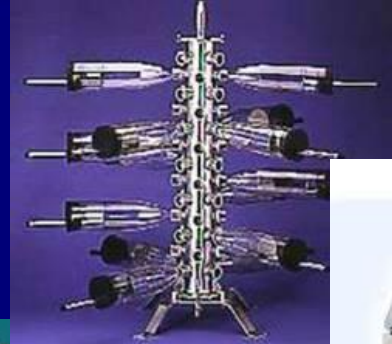
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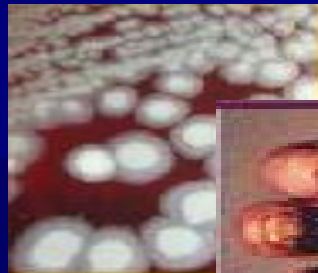
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(CDC, A)

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Ebola, Marburg, Lassa, Junin...

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(, , *V.cholerae*, *E.coli* O 157:H7, ,)

0, , 1984

Rajneesh-

S. typhimurium

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• *Cryptosporidium parvum*-

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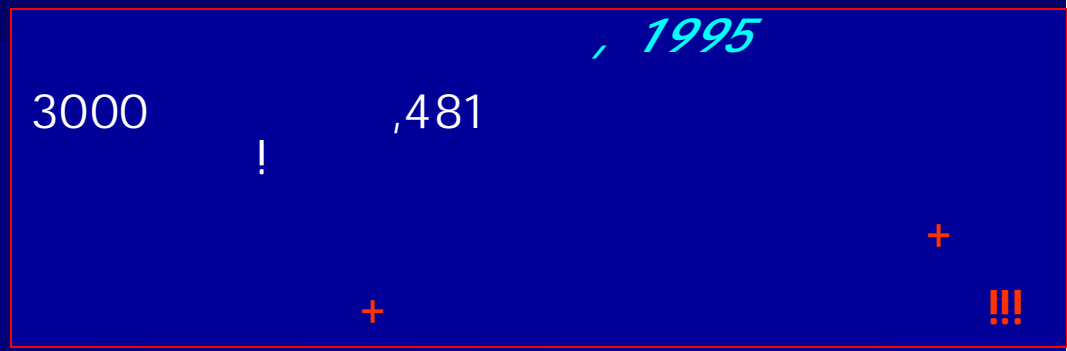


1993, Milwaukee,

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CDC:

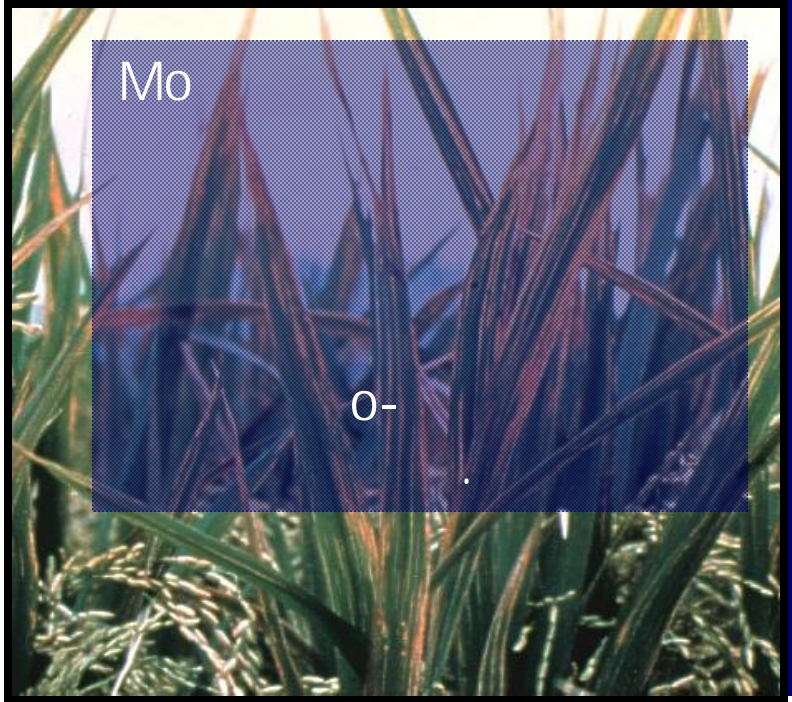


M. tuberculosis



(1920-1992)

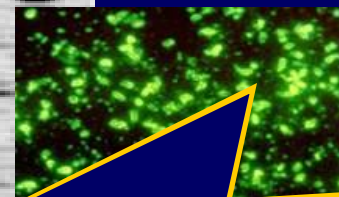
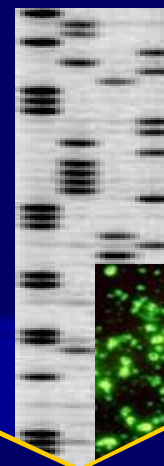
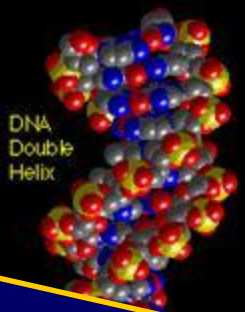
"boomerang" e



(2002-???)

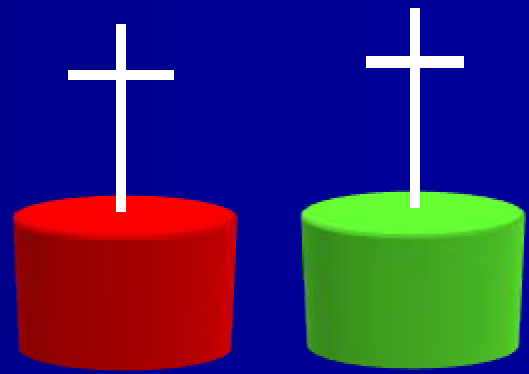
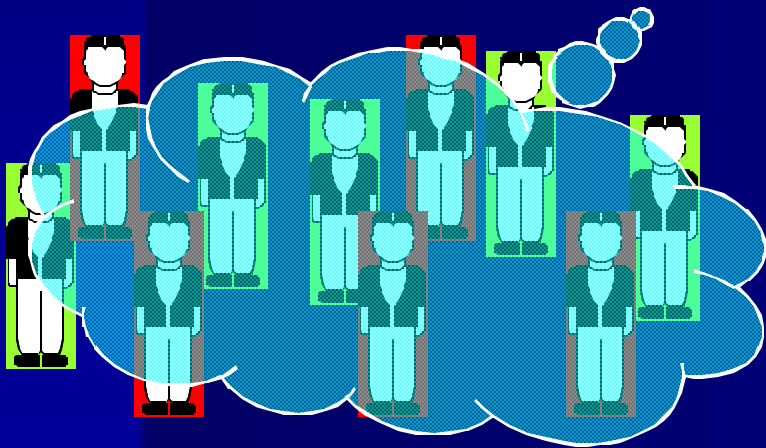
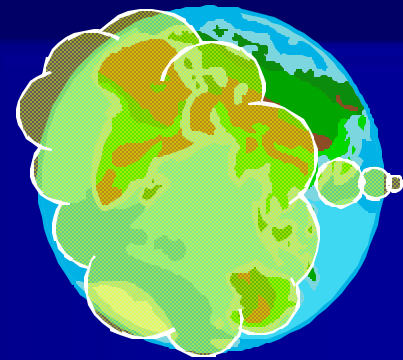
e

"boomerang" e



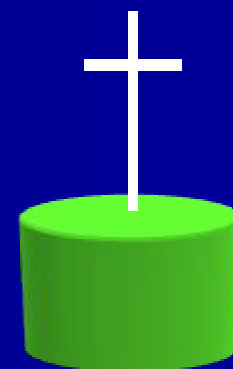
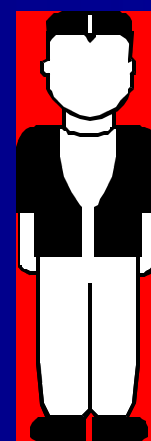
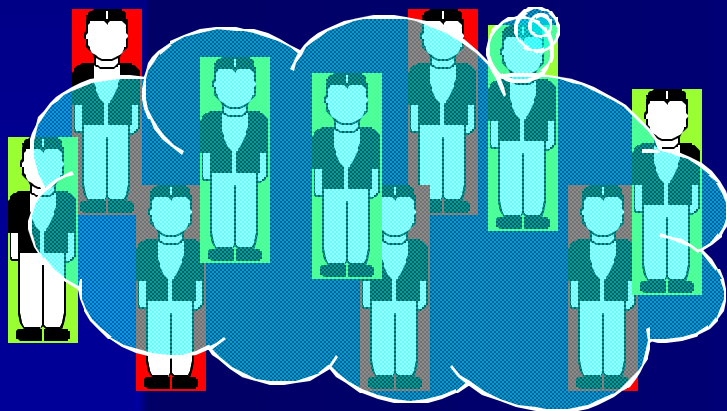
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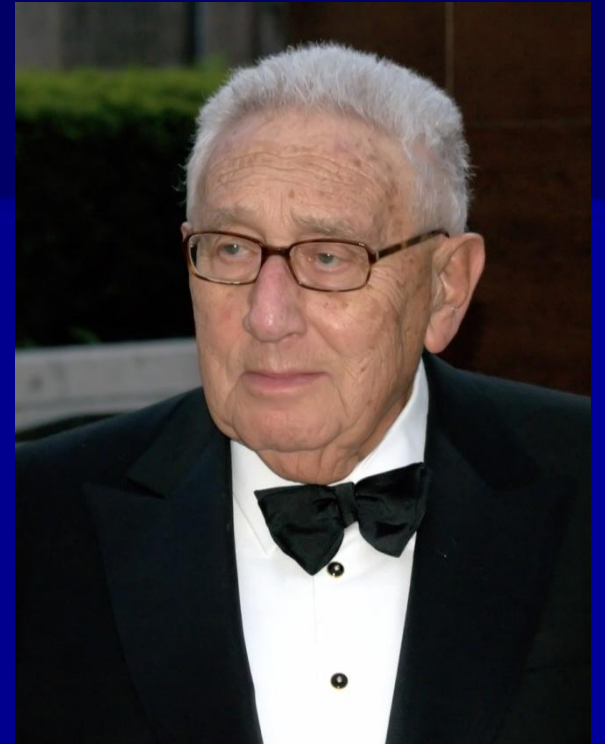
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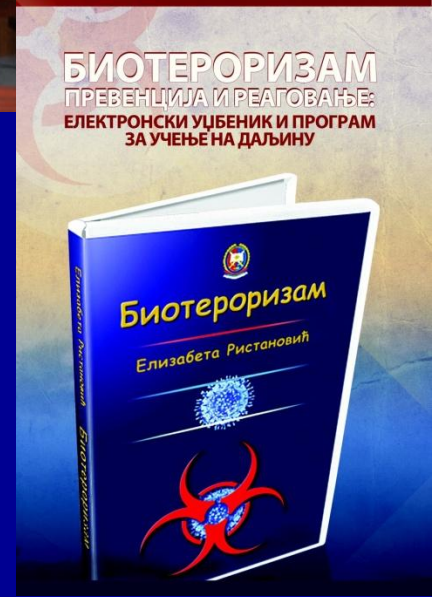
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БИОТЕРОРИЗАМ

превенција и реаговање

проф. др Елизабета Ристановић



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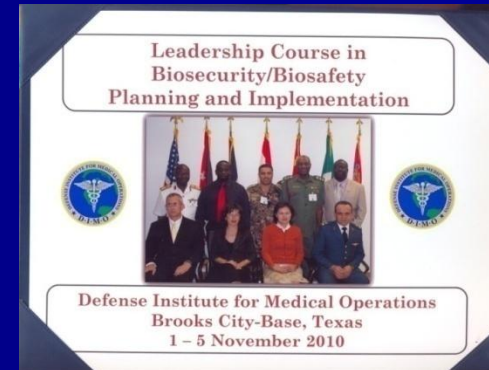
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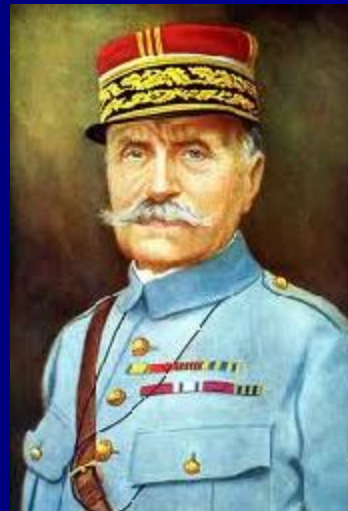
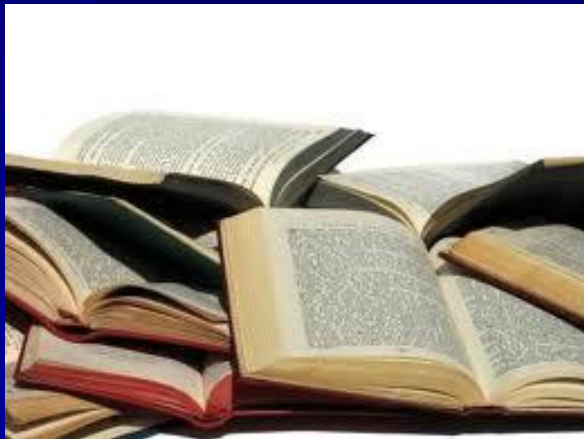
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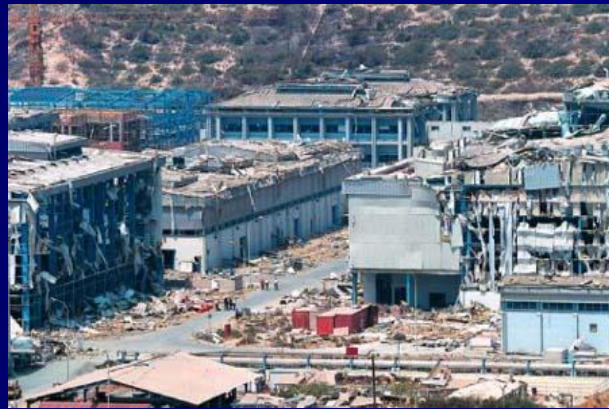
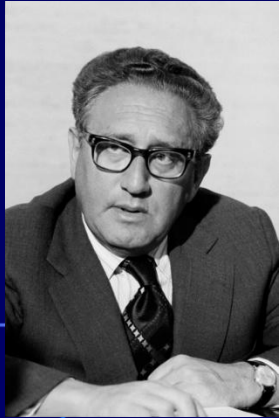
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(Disaster)



*UN/International Strategy for
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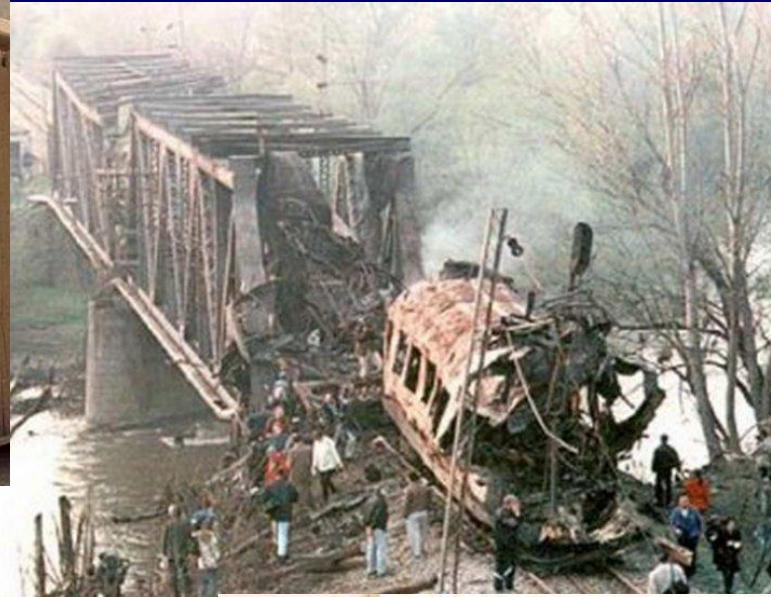
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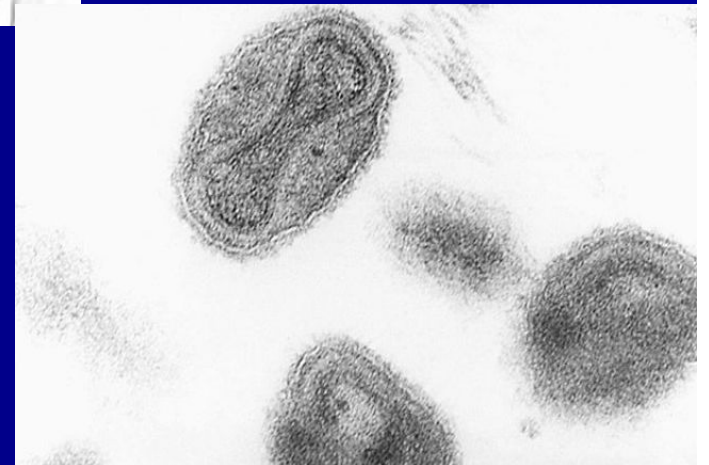
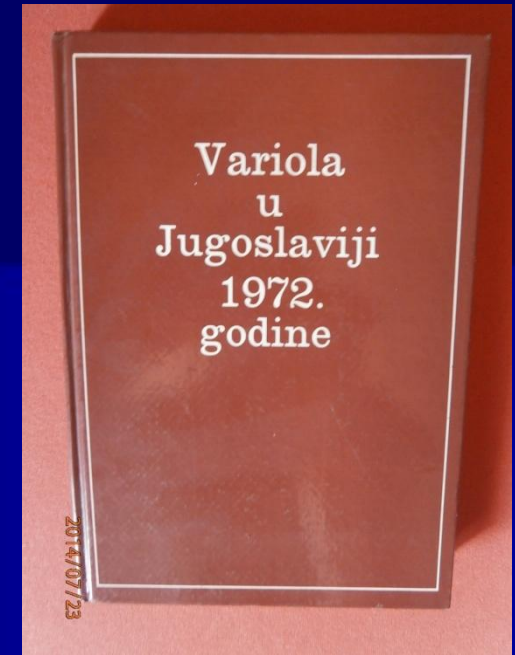
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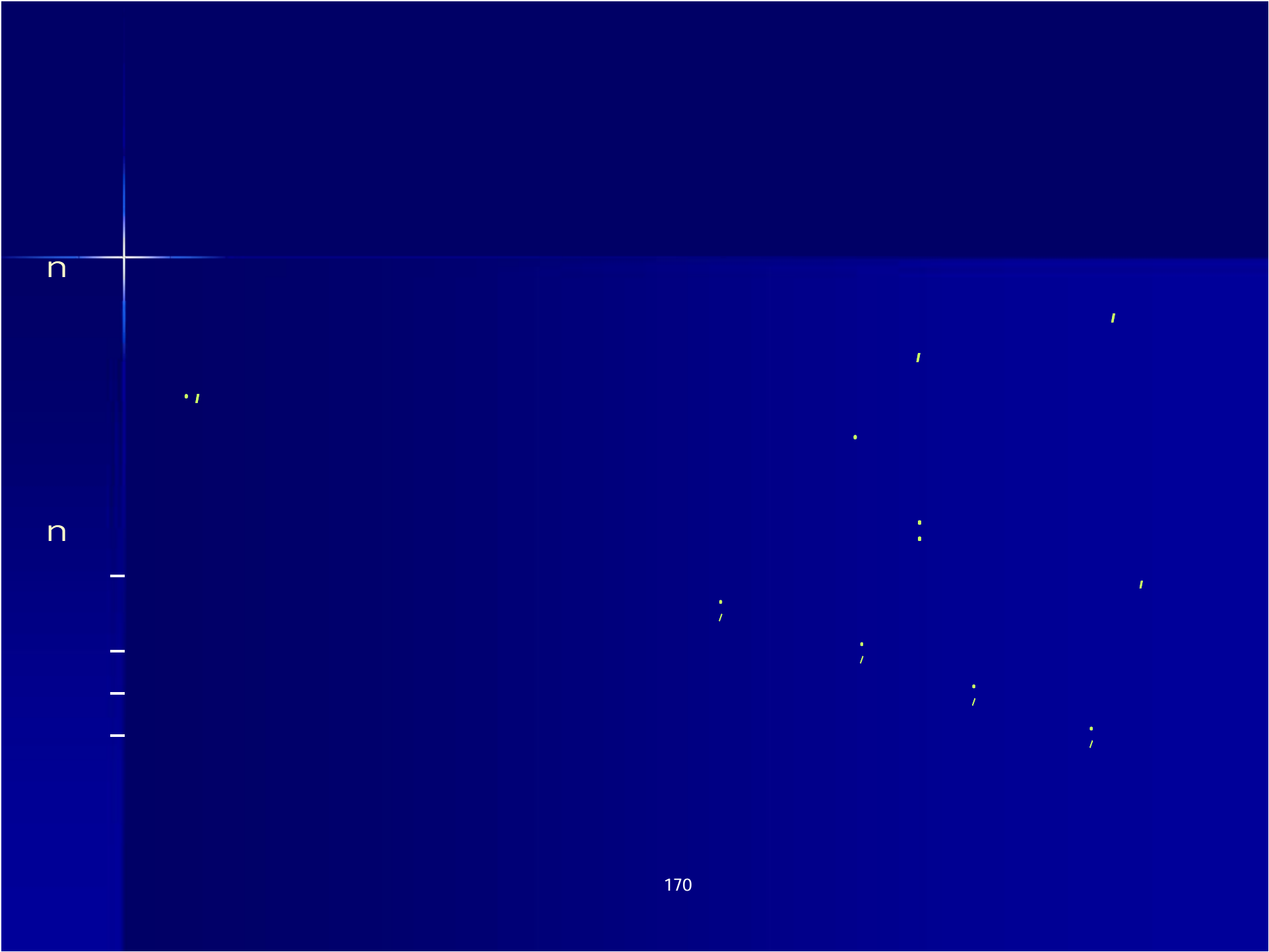
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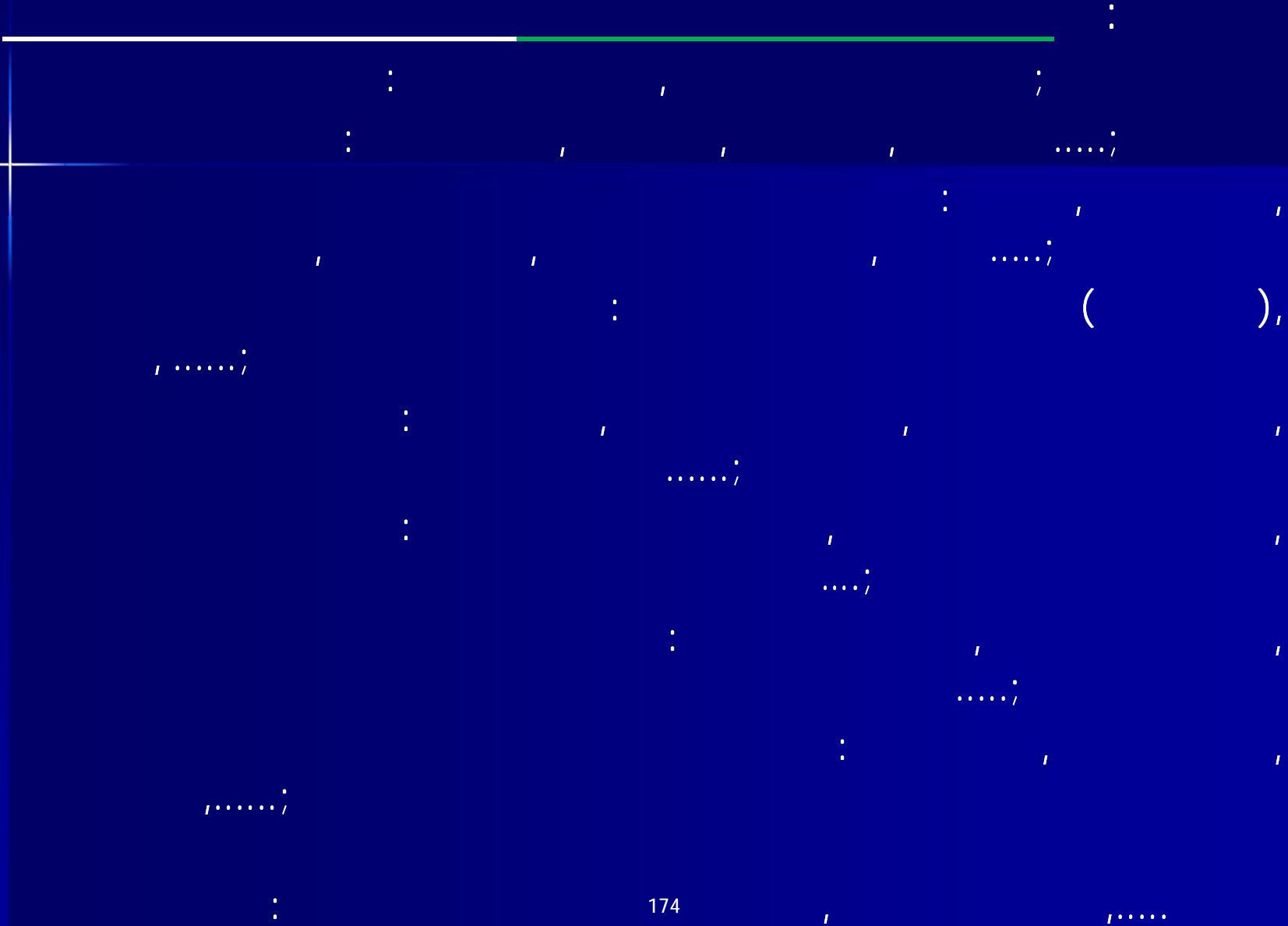
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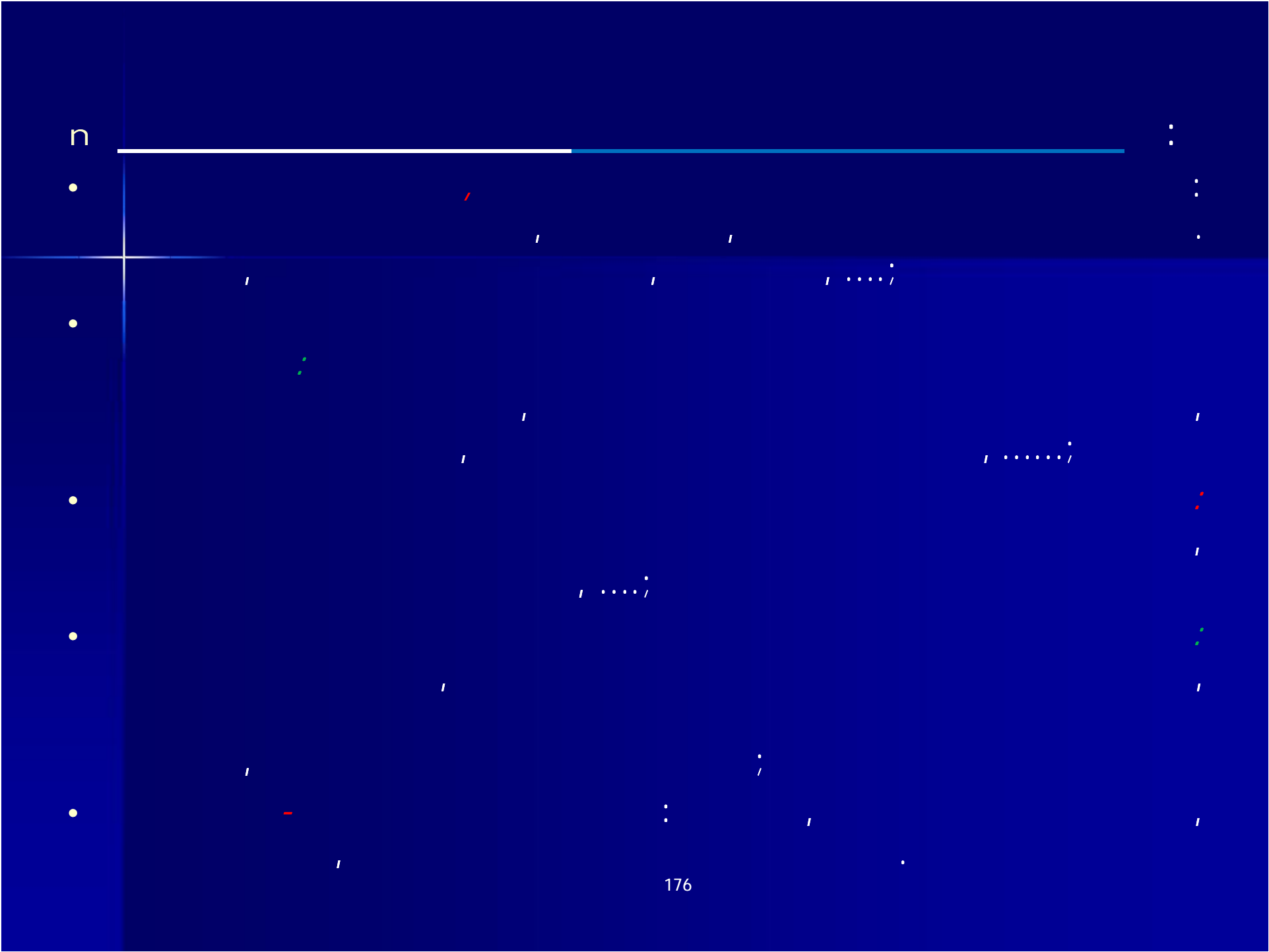
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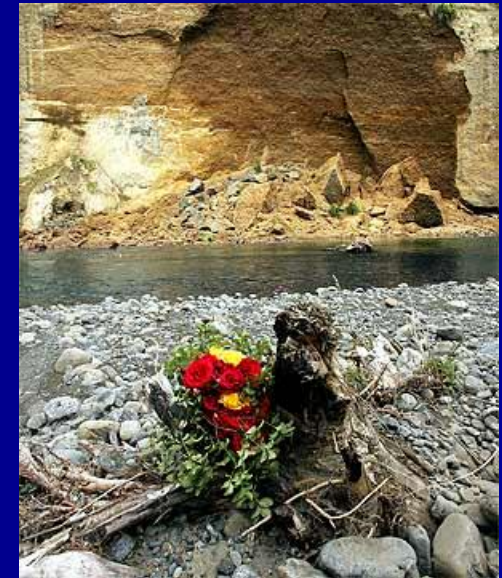








© Peter Dyrinda



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Pre-disaster

Mitigation & Preparedness

- Assessment
 - Risk factors
 - Vulnerability
- Planning
 - Infrastructure
 - Policy making
 - Capacity building
 - Pre-positioning resources
- Training/education

Disaster

Response

Relief operations:

- First phase
 - Medics, food, shelter
- Second phase
 - Housing
 - Food supply chain building

Logistics stages:

- Mobilization and procurement
- Long haul
- The last mile

Post-disaster

Recovery

- Debris cleaning
- Infrastructure rebuilding
- Re-establishing communities

Measure the effects of:

- Infrastructure
- Planning
- Response short and long term

Lessons learned, feedback to planning and response

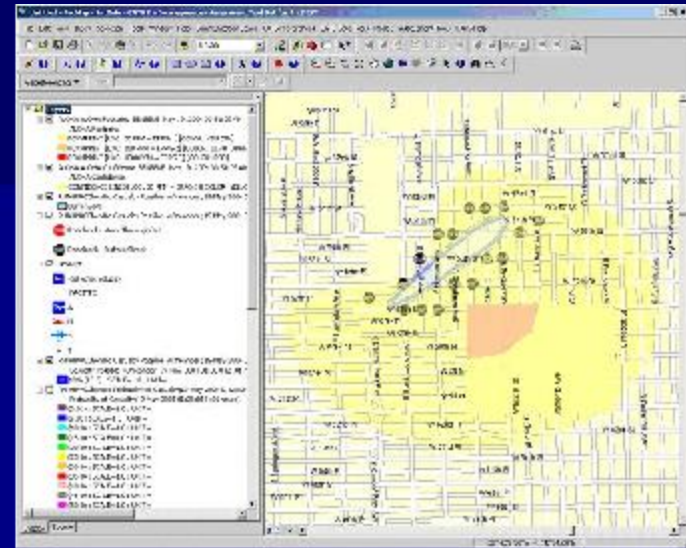
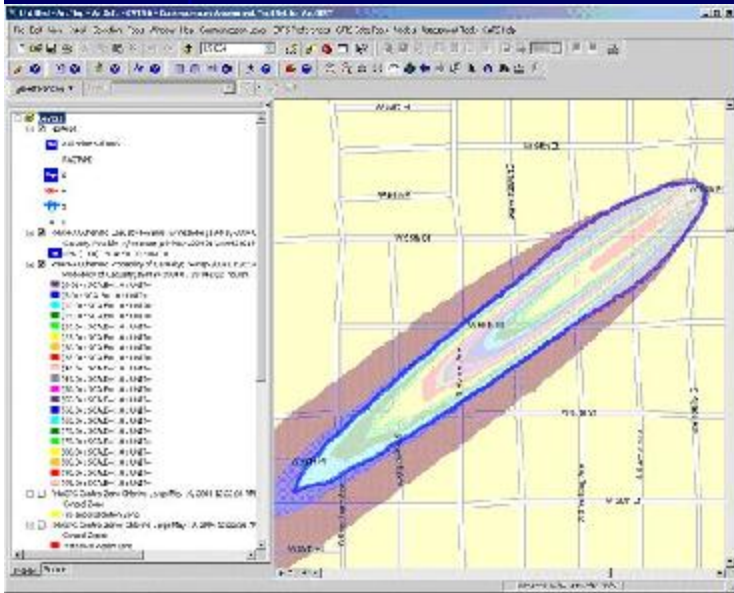
- Systematic
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A Science Based Approach

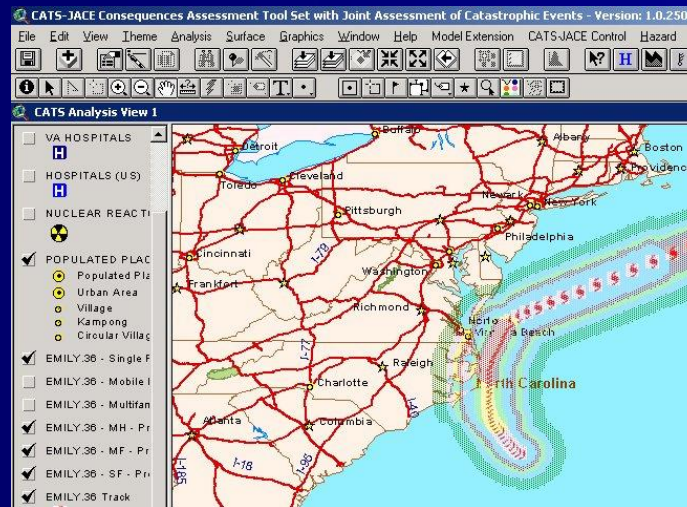
... and ... How We Act

GIS FOR HAZARD RESPONSE: Preparing communities to respond to hazard or events is a top priority in every country. GIS should be integral component of the day-to-day operations of public health and public safety organizations



Realtime – Roadblock information

Hazard Prediction and Assessment Capability



Catastrophic Natural Event Prediction

- Disaster risk identification and priority assessment
- Disaster plan management
- Plan exercise and visualization



- Disaster monitoring & early warning
- Disaster simulation



- Disaster assessment
- Post-disaster reconstruction planning



- Disaster response and emergency rescue
- Command and dispatch
- Disaster information display and real-time publishing



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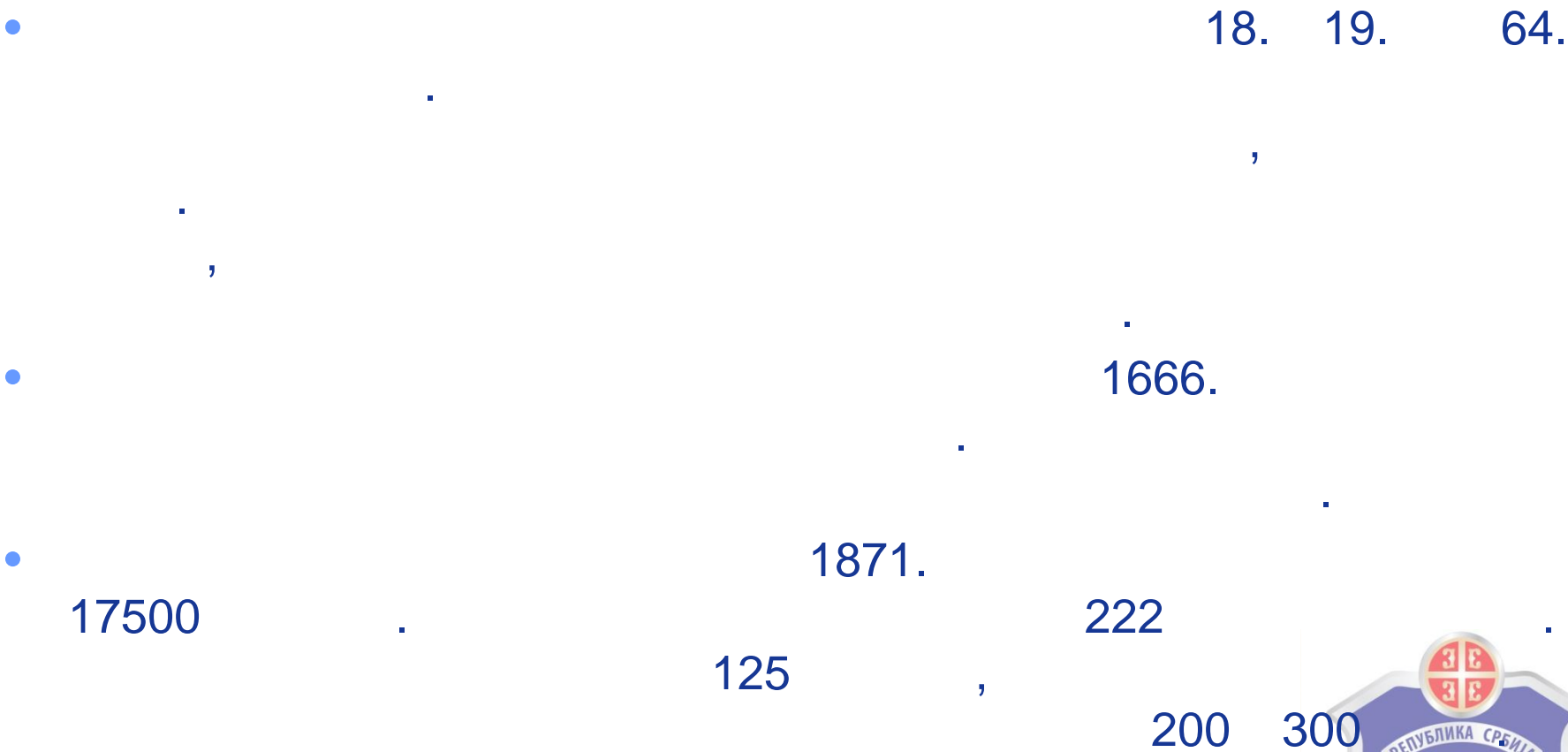


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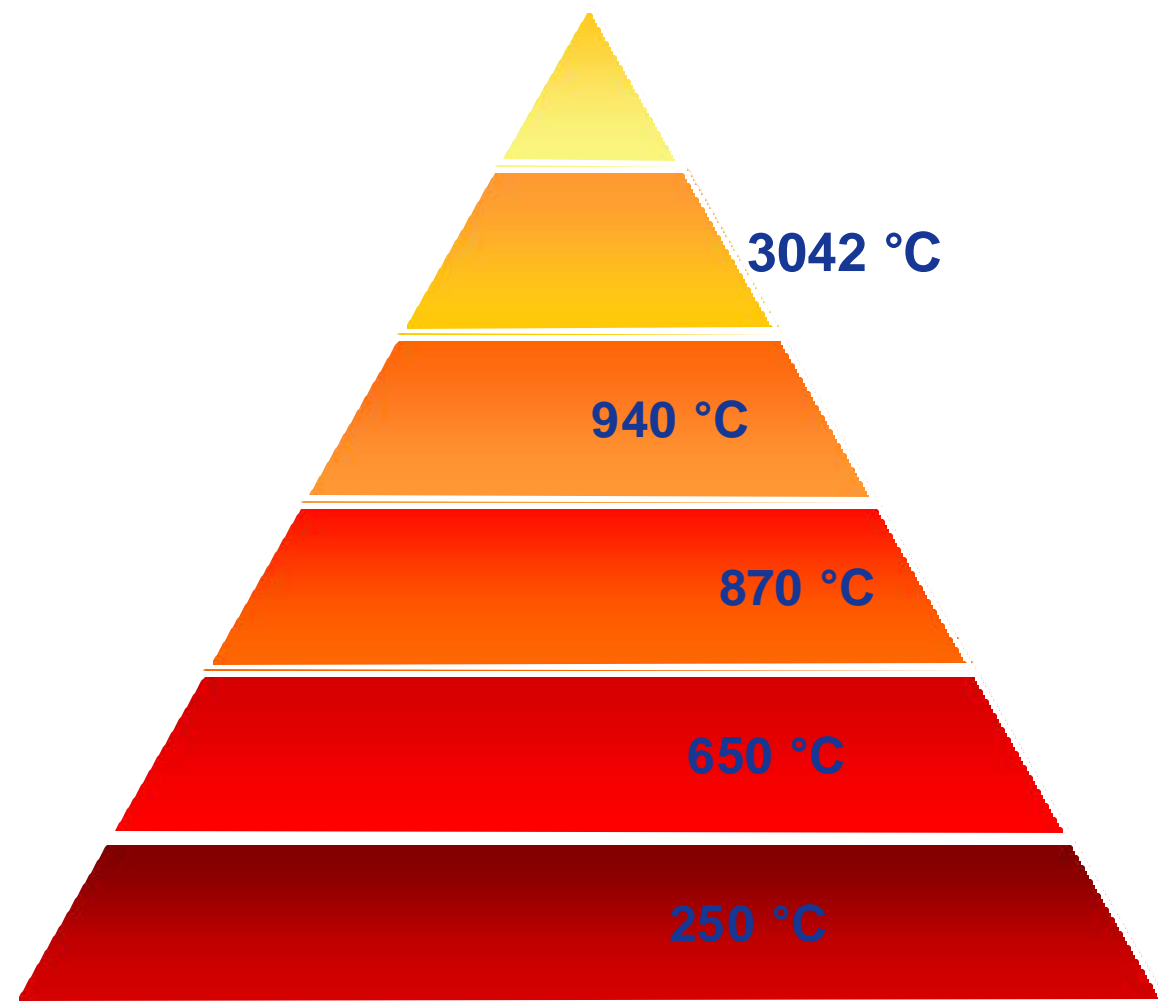
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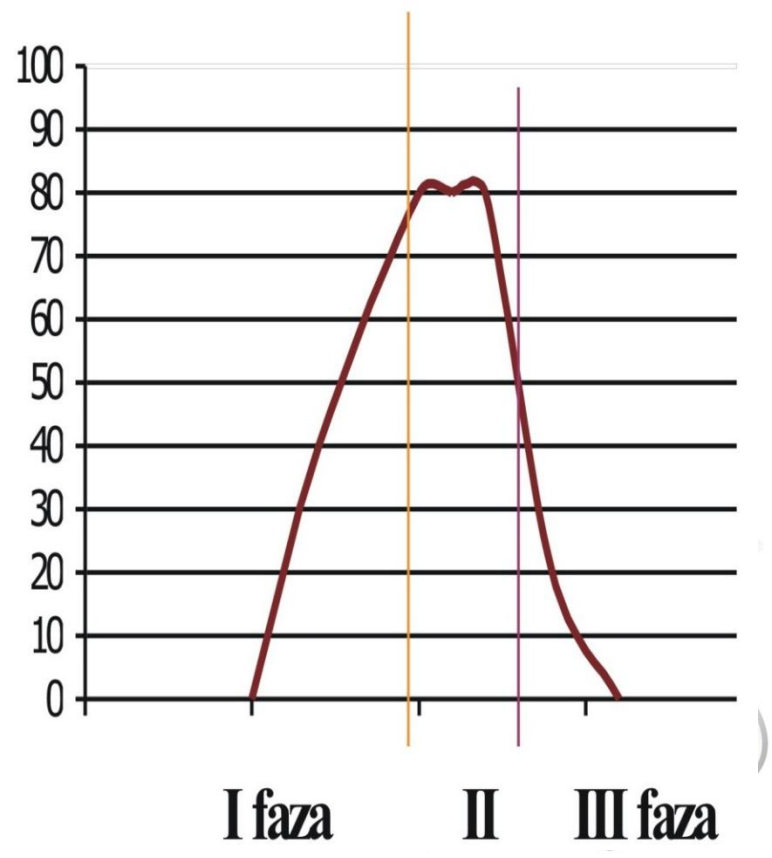
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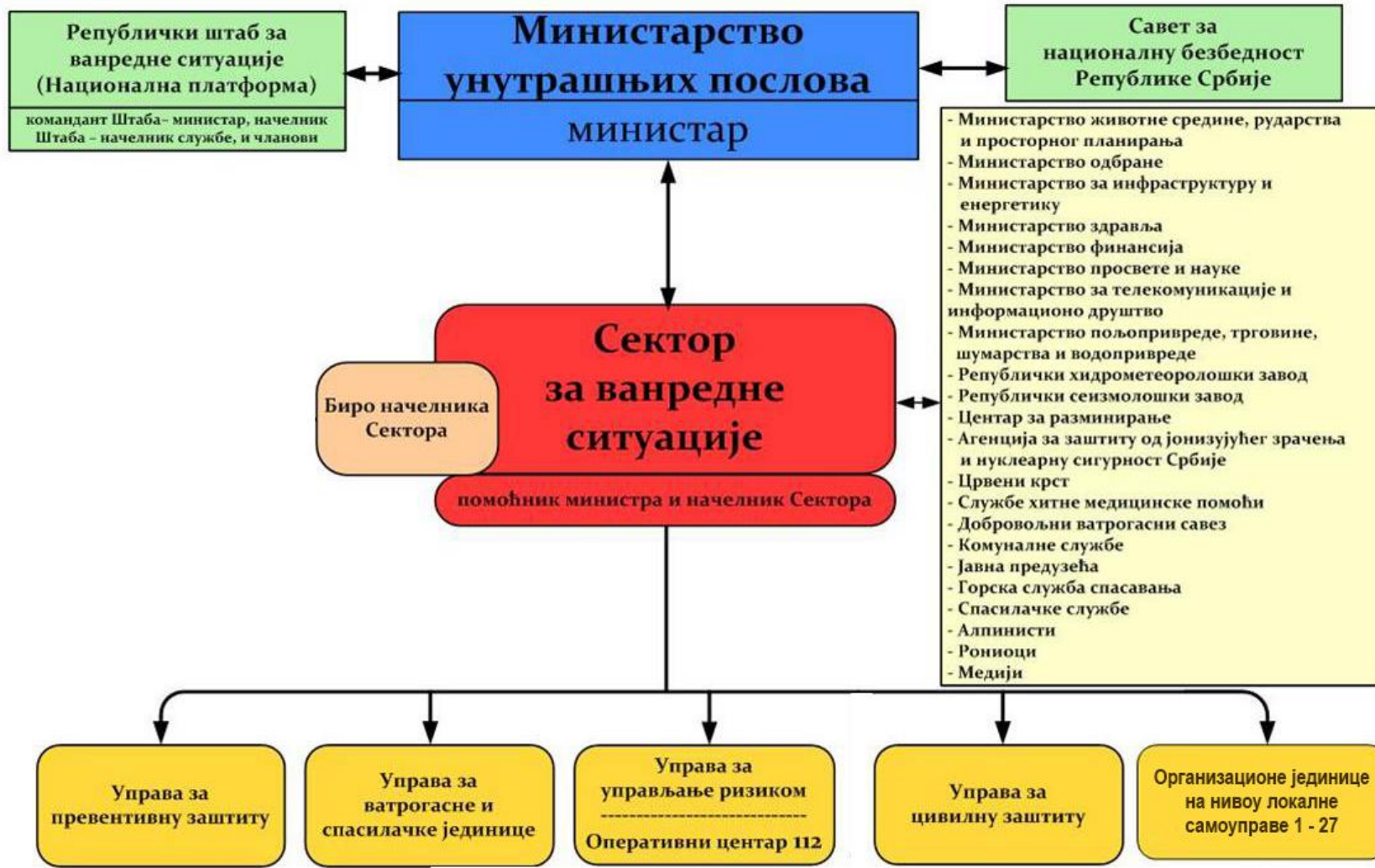


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	29.074	15.687	12.340	15.958	12.890	23.678
	2.551	2.338	2.327	2.532	2.436	2.685
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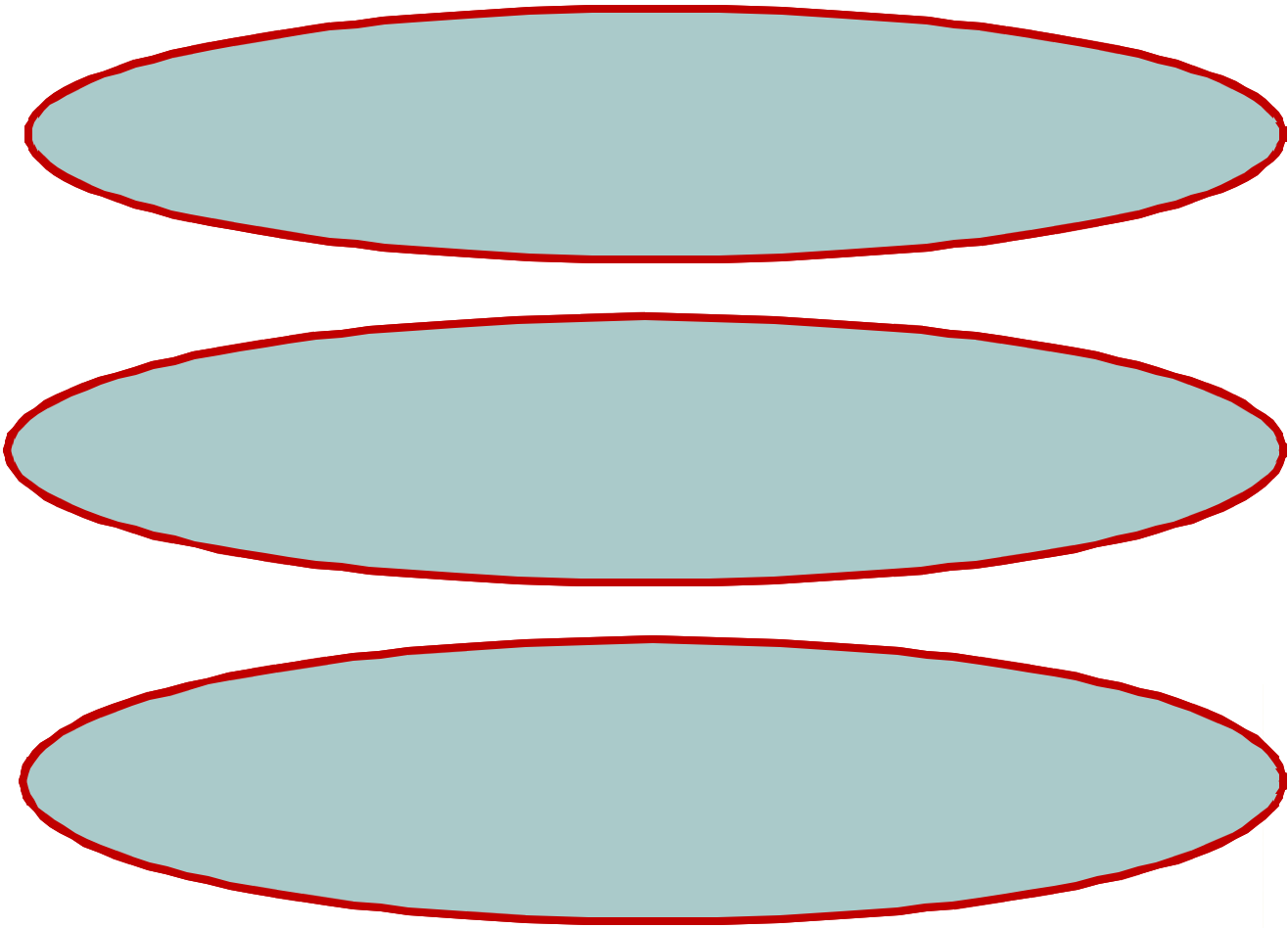
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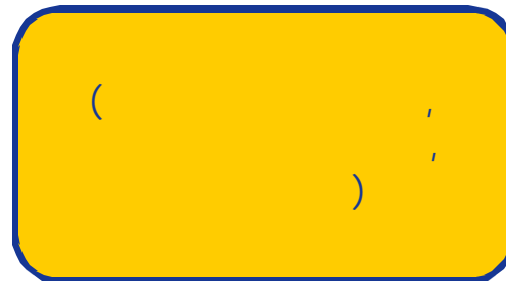




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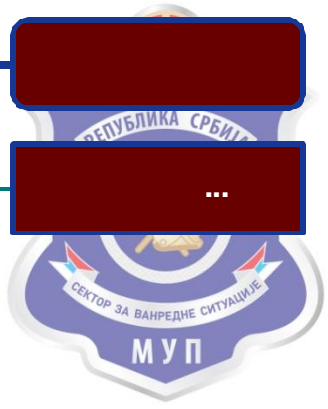
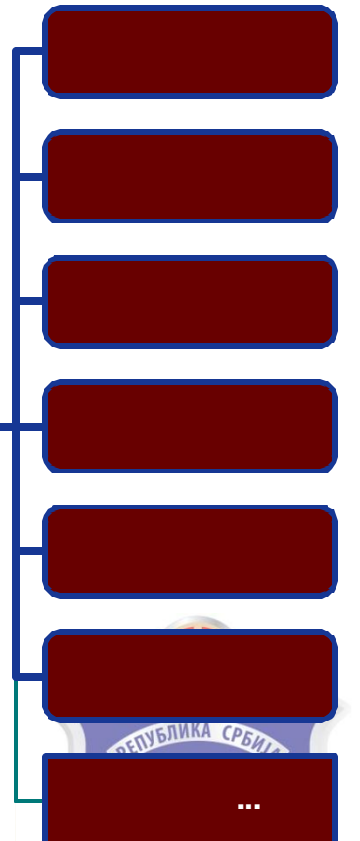
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