Tackling childhood obesity in Greece

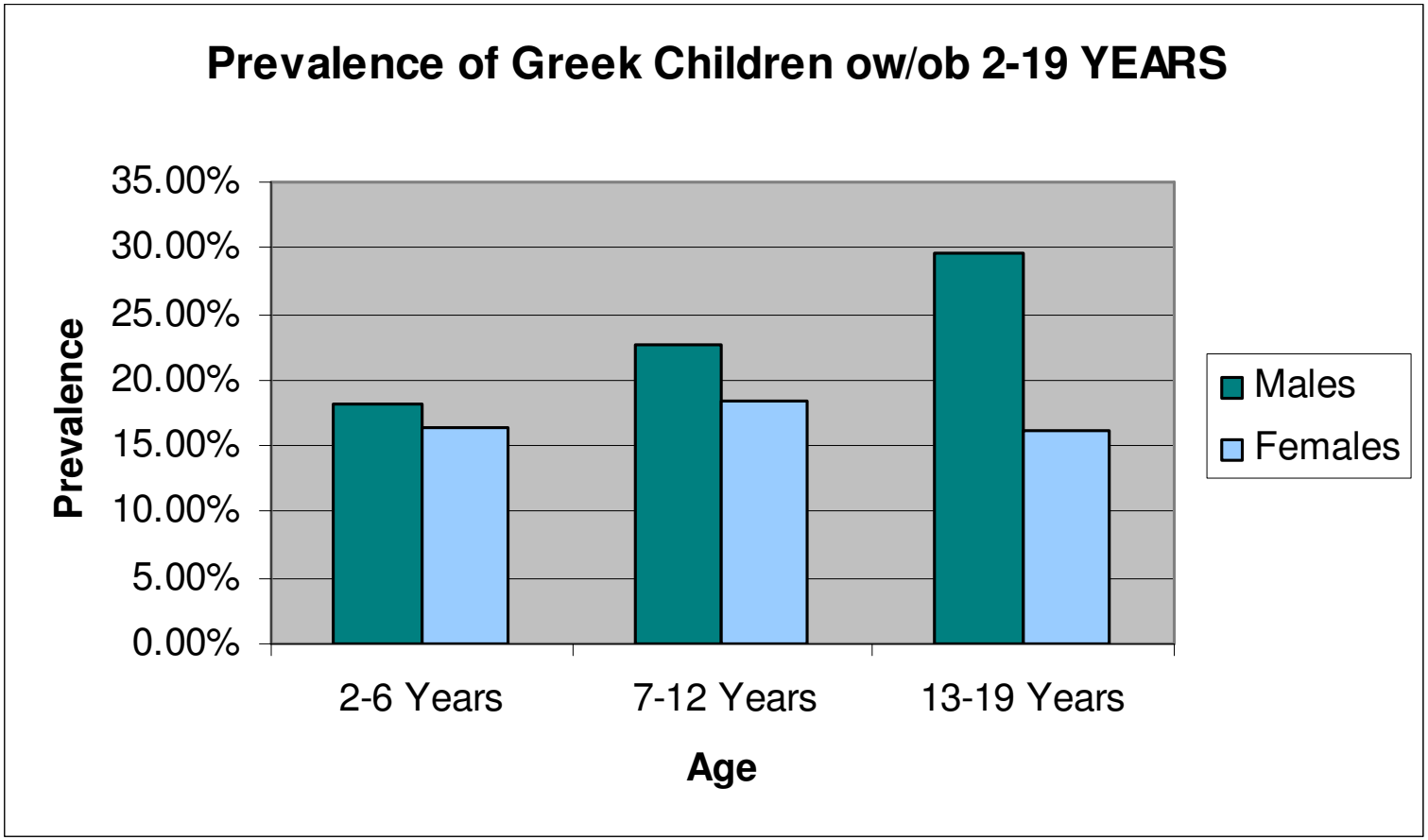
‘A whole school approach’

Introduction

- Greece has one of the most rapidly rising death rates due to CVD in Europe
- One of the highest prevalences of overweight and obesity in Europe

- Dietary habits, sedentary lifestyle and limited health awareness of contemporary Greeks
- Accumulative evidence that these burdens of disease have their roots in childhood
- School-based nutrition and physical activity programmes have a strong preventive potential

Obesity in Greek Children



Source: Int J Obes, 2004:28 (Suppl 1); 72

Supporting policies

- WHO Global Strategy on Diet, Physical Activity and Health
  - Adopted by WHA 2004
  - 9 recommendations to address the risk factors that lead to chronic diseases including school policies to improve health literacy, promote a healthy diet and provide physical education and facilities
- European Network of Health Promoting Schools
  - Joint WHO-EC-CE project
  - Greece joined 1992
- EURODIET (1998-2000)
  - 'schools provide a valuable opportunity to influence the dietary habits of young people at an influential stage in their life' 'most effective initiatives adopt a whole school approach'

Studies on childhood obesity in Greece

- Hellenic Medical Association of Obesity (2004)
  - First national epidemiological survey
  - N=18000 1-19yrs
  - 7-12yrs 11.9% overweight 8.6% obese
  - 13-19yrs 16.3% overweight 6.1% obese
- Dept. of paediatrics 'Ag Sofia' Children's hospital (2003)
  - N=10 000 1-18yrs
  - Female 18 yr olds 2kg heavier than US counterparts
  - Male 18 yr olds 3 kg heavier than US counterparts
- Panagia Hospital, Thessaloniki (2001)
  - N=2 500 7-17yrs
  - Boys 25.9% overweight 5.1% obese
  - Girls 19.1% overweight 3.2% obese
- HSBC Health Behaviour in School-Aged Children (1996)
  - N=4 300
  - Boys 21.7% overweight 2.5% obese
  - Girls 9.1% overweight 2.5% obese

Nutrition policies & interventions in Greece

- Statutory legislation*
  - Nutrition policy statement as part of environmental policy
  - No policy on fortification
- Food based dietary guidelines (FBDG) (1999)
  - Supreme Scientific Health Council

  National Nutrition Policy Committee
  - To develop key strategy to tackle nutrition related issues
- Hellenic Medical Association of Obesity
- Hellenic Heart Foundation
- Greek Network of Health Promoting Schools
- The Hellenic Ministry of Sports:
  - Sports for All
  - Youth Sports

* Source: Making way for a healthier lifestyle in Europe, Summary Report – final version, October 2003, pg. 17

Stakeholder analysis matrix 1 – How are they affected by the obesity problem?

Stakeholders	How affected	Capacity/motivation to participate in addressing the problem	Relationship with other stakeholders
1.Children	○ Potential ↓ concentration, hyperactivity & psyc. stress (bullying) ○ Limited ability for PA – unhappy children, health problems	○ Mixed motivations	○ Partial or full cooperation with teachers
2.Headteachers /teachers	○ Difficulties in protecting ow/ob children from stigma and bullying ○Affect school rating	○ High motivation	○ Full cooperation with children & parents
3.Parent/ Governor	○ Family may become frustrated when unable to tackle obesity	○ Mixed motivation	○ Willingness to collaborate with teachers & children

Stakeholder analysis matrix 2 – How are they affected by the obesity problem?

Stakeholders	How affected	Capacity/motivation to participate in addressing the problem	Relationship with other stakeholders
4.Food Industry	○Sales of high-fat, high sugar products	○ None	○Profits, conflict with other stakeholders
5.Local GPs, paediatricians, dietitians	○More cases	○High workload	○Cooperation with parents, children
6.Media	○More educational programmes on obesity & related diseases to ↑ awareness	○Mixed motivation, possible participation	○Possible cooperation with Gov. & food industry
7.NGOs (Hellenic Med. Ass. Ob. & Hellenic Heart F.)	○Became more active, larger action plan to tackle obesity ○↑ Research	○Increased awareness & motivation	○Lack of partnership & cooperation with Gov.

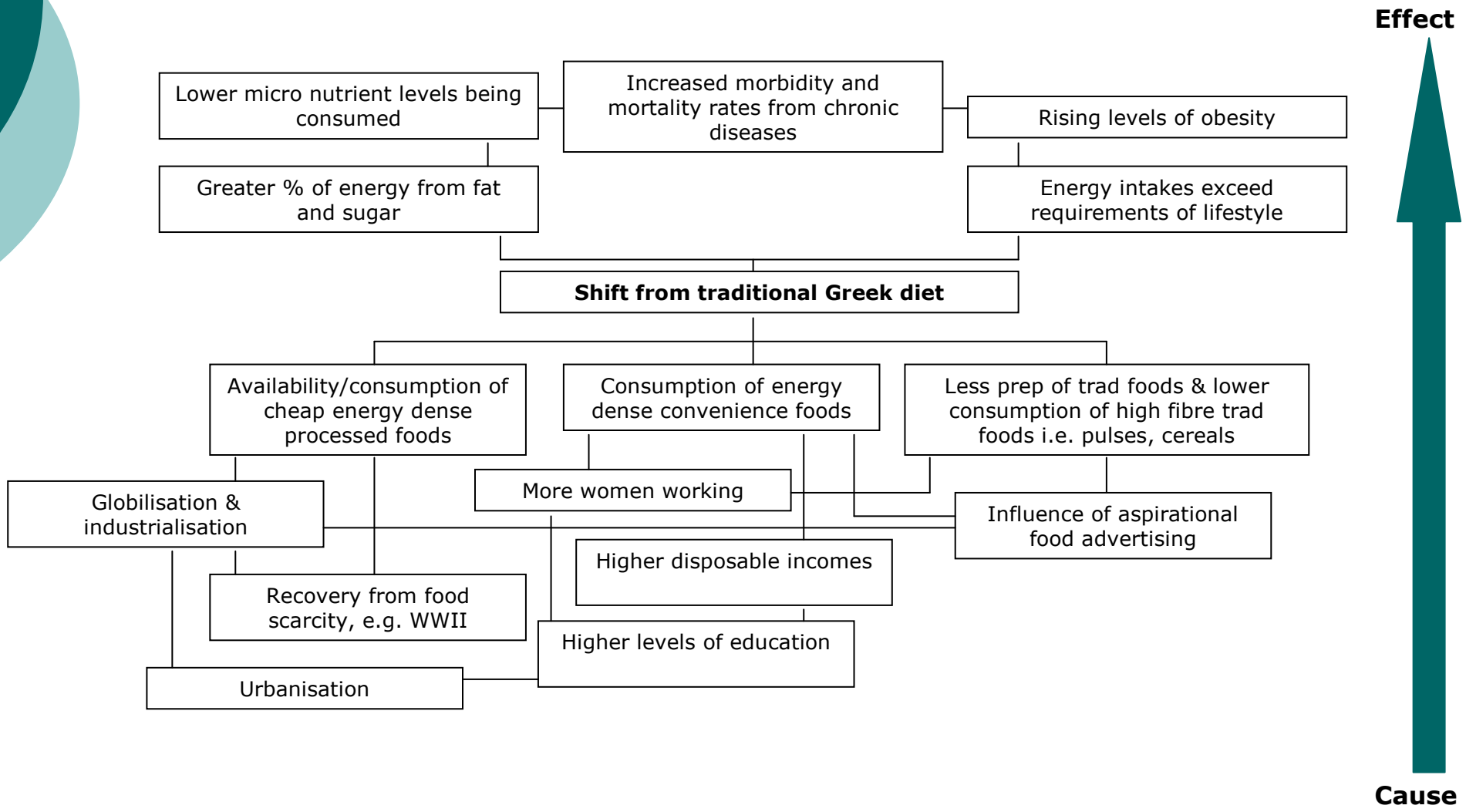
Stakeholder analysis matrix 3 – How are they affected by the obesity problem?

Stakeholders	How affected	Capacity/motivation to participate in addressing the problem	Relationship with other stakeholders
8.Govern./MoH	○Obesity & related diseases' cost (prevention & treatment)	○Not always encourage intervention ○Mixed motivation	○Gaps in terms of cooperation with other stakeholders (NGOs & indus)
9.MoE	○School ranking not as good as EU (re: physical education/activity etc) ○School food intervention programmes, fund research on obesity.	○Mixed	○Co-operation with scientists & researchers therefore funding other stakeholders (MoH)
10. Peer Influence (Other children)	○Indirect way	○Possible	○Depending on situation: encourage/ discour.obese peers

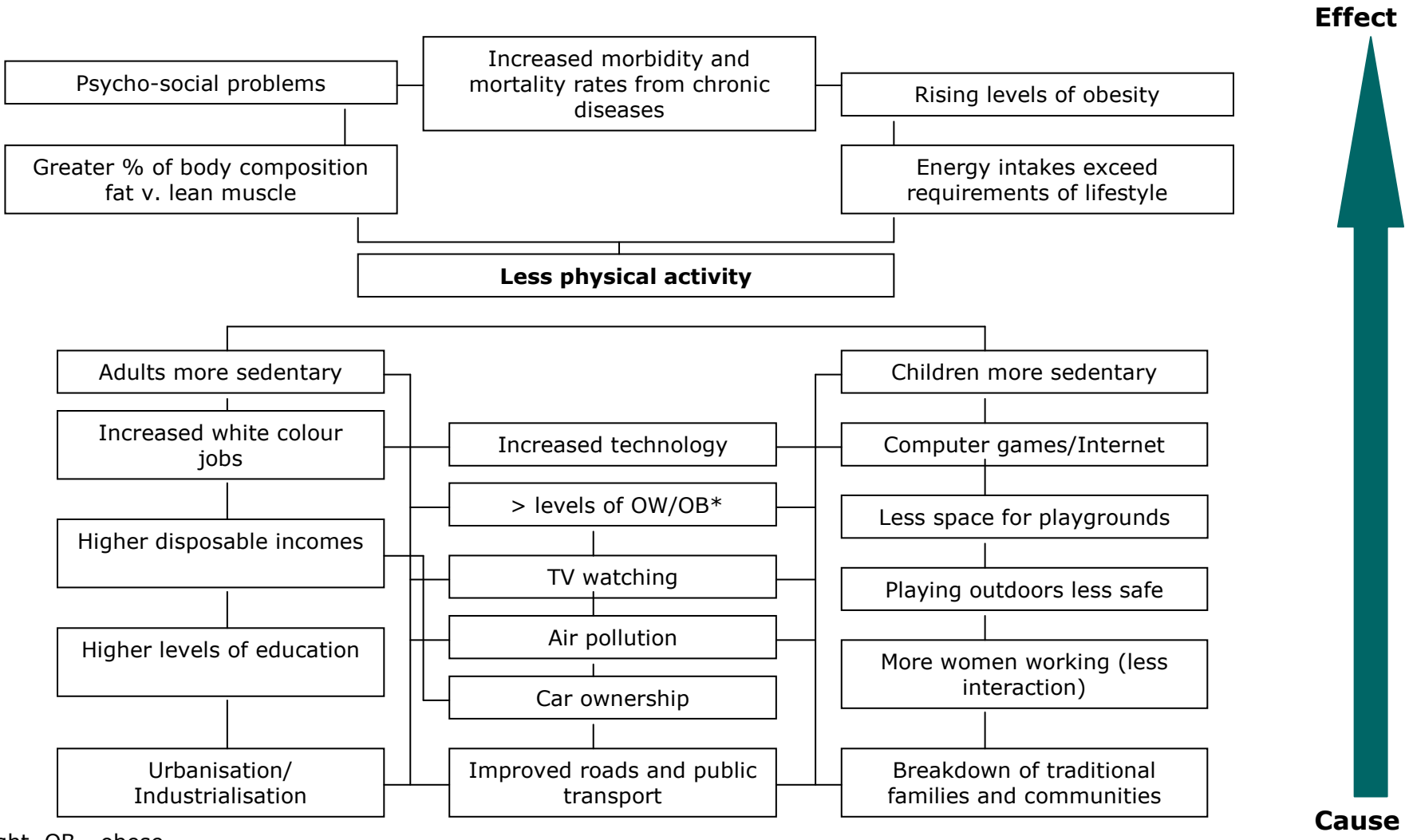
Stakeholder analysis matrix 4 – How are they affected by the obesity problem?

Stakeholders	How affected	Capacity/motivation to participate in addressing the problem	Relationship with other stakeholders
11. Scientists/ Researchers/ National Nutrition Committee	○Conduct more studies/ surveys/ projects to identify prevalence of obesity or evaluate the effectiveness of interventions	○High	○Working in collaboration with the food industry/ MoH & MoE & NGOs avoiding bias & corruption.
12. The Hellenic Ministry of Sports	○Programmes to improve physical activity level & promote fair play	○High motivation	○Co-operation with the MoE, teachers & children.

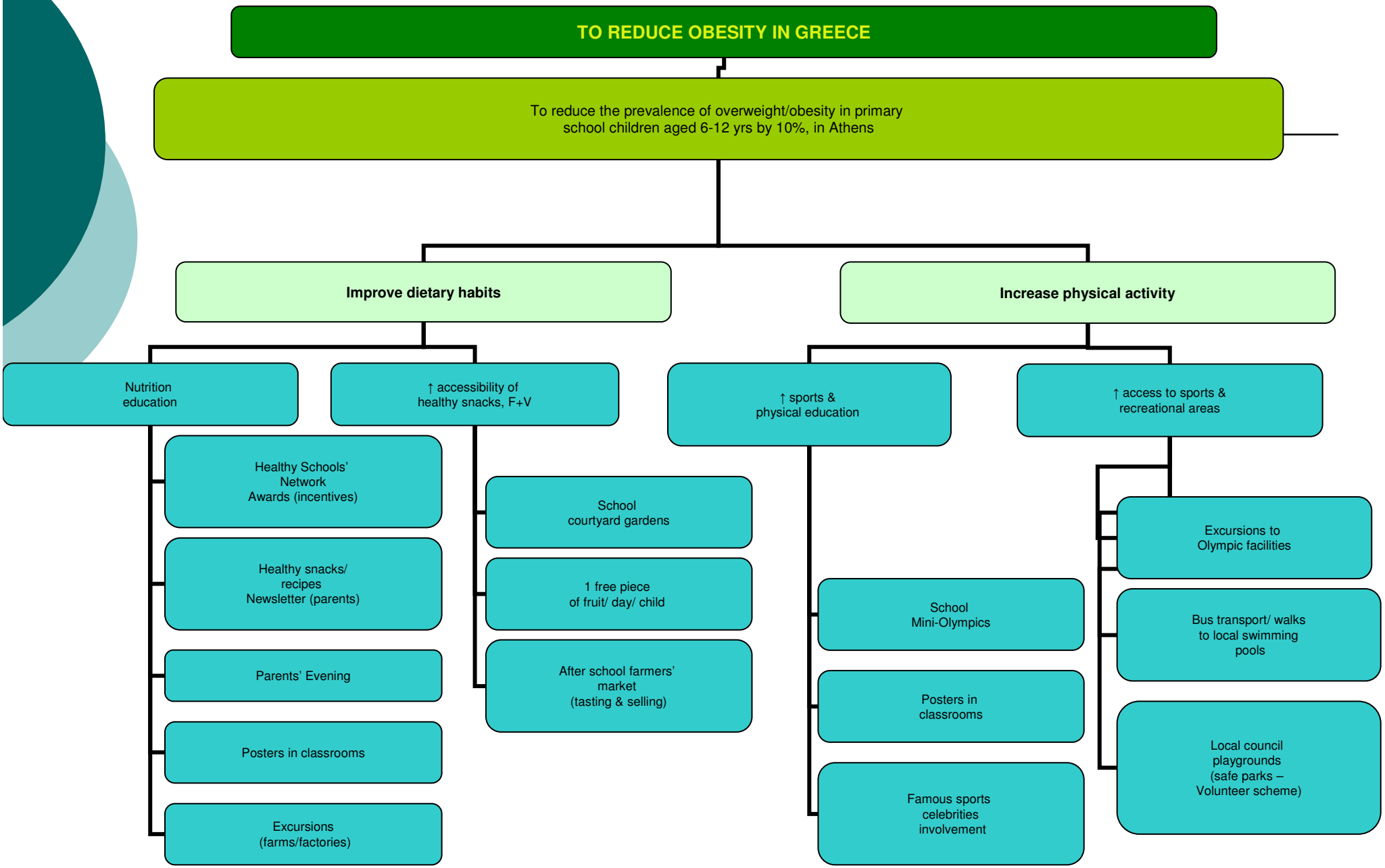
Problem tree – shift from traditional Greek diet



Problem tree – less physical activity



*OW – overweight, OB - obese


TO REDUCE OBESITY IN GREECE
To reduce the prevalence of overweight/obesity in primary school children aged 6-12 yrs by 10%, in Athens
Improve dietary habits
Increase physical activity
Nutrition education
↑ accessibility of healthy snacks, F+V
↑ sports & physical education
↑ access to sports & recreational areas
Healthy Schools' Network Awards (incentives)
Healthy snacks/ recipes Newsletter (parents)
Parents' Evening
Posters in classrooms
Excursions (farms/factories)
School courtyard gardens
1 free piece of fruit/ day/ child
After school farmers' market (tasting & selling)
School Mini-Olympics
Posters in classrooms
Famous sports celebrities involvement
Excursions to Olympic facilities
Bus transport/ walks to local swimming pools
Local council playgrounds (safe parks – Volunteer scheme)

Project log frame

	Project Description	Key indicators	Means of verification	Assumptions
Goal	To reduce obesity in Greece	Prevalence of obesity in Greece	Secondary data European union (EU) data National Institute of Child Health (Greece)	
Purpose	To reduce the prevalence of overweight and obesity in Primary school children, aged 6-12 years, in Athens by 10% in 6 years.	% Reduction in the prevalence of obesity in children.	Surveys Growth charts/ BMI measurements School records Secondary data	Data is available, reliable & representative Data has been triangulated Baseline data is available Stability of macro level factors
Objective 1	To promote the principles of the Greek traditional Mediterranean diet using the whole school approach	No. of schools actively engaged in programme	Local Council/ Ministry of Education records Internal project evaluation records	Good liaison between Education/Health authorities and project coordinators

Objective 1: Promote Greek diet in shools

	Project Description	Key indicators	Means of verification	Assumptions
Output 1	The pilot project which places Nutrition & Dietetics undergraduates in primary schools (University of Athens) will have been extended to all primary schools in Athens, to improve nutrition education.	No. of students enrolled in N&D yearly No. of university students giving nutrition promotion talks. No. of hours per term allocated to nutrition education in primary schools No. of activities related to food and nutrition. % improvement in knowledge and awareness of nutrition amongst pupils & teachers	University records School records/ timetables Quiz Staff evaluation forms Internal project evaluation records	Pilot study is effective University of Athens and the schools are willing to continue with the programme Culturally acceptable Parents', teachers' & children's co-operation Undergraduates are supervised by university staff member during lesson KAP(knowledge-attitude-practice)is effective

Objective 1: Promote trad diet in shools

	Project Description	Key indicators	Means of verification	Assumptions
Output 2	The accessibility of healthy snacks such as fruit and vegetables in schools will have been increased.	% increase in uptake of fruit & vegetables in schools % decrease in sales of 'unhealthy snacks' (foods high in saturated fats & sugar) Improvement in pupils concentration and behaviour Improvement in children's grades	Sales records Observational survey on healthy snack consumption % reduction in 'unhealthy' snack litter (wrappers) Programme's records (to form part of health intervention evaluation) Observational/ staff feedback School's records Internal project evaluation records	Culturally acceptable Parents', teachers' & children's co-operation KAP is effective Schools have facilities to sell foods Co-operation of canteen owners Fruits & vegetables accessible to canteen owners to purchase Storage capacity

Objective 2: Increase physical activity amongst Athens school children

	Project Description	Key indicators	Means of verification	Assumptions
Goal	To reduce obesity in Greece	Prevalence of obesity in Greece	Secondary data European union (EU) data National Institute of Child Health (Greece)	
Purpose	To reduce the prevalence of overweight and obesity in Primary school children, aged 6-12 years, in Athens by 10% in 6 years.	% Reduction in the prevalence of obesity in children.	Surveys Growth charts/ BMI measurements School records Secondary data	Data is available, reliable & representative Data has been triangulated Baseline data is available Stability of macro level factors
Objective 2	To increase physical activity in public primary school children in Athens	No. of schools actively engaged in programme	Local Council/ Ministry of Education records Internal project evaluation records	Good liaison between Education/Health authorities and project coordinators

Objective 2: Increase physical activity amongst Athens school children

	Project Description	Key indicators	Means of verification	Assumptions
Output 1	Physical education undergraduate students will have been placed in all primary schools to teach the importance and benefits of regular physical activity (theory & practical).	No. of students enrolled in Physical education degrees/ diplomas yearly No. of university students participating in physical education programme No. of hours per term allocated to physical education No. of activities related to PA per week. % improvement in knowledge and awareness of the importance & benefits of PA amongst pupils & teachers	University records School records/ timetables Quizzes Staff evaluation forms Internal project evaluation records	Culturally acceptable Parents', teachers' & children's co-operation KAP (knowledge-attitude-practice)is effective Schools/ councils have facilities University of Athens, Faculty of Physical Education are willing to comply Undergraduates are supervised by university staff member during lesson

Objective 2: Increase physical activity amongst Athens school children

	Project Description	Key indicators	Means of verification	Assumptions
Output 2	Increasing accessibility to facilities (ie. parks, open spaces, Olympic facilities)	% increase in uptake of sport/ activities in schools No. of areas available for PA No. of sports equipment in school % increase in sports budget Improvement in pupils PA level	School sports records Internal project evaluation records School financial accounts Observational/ staff feedback	Culturally acceptable Parents', teachers' & children's co-operation KAP is effective Schools have facilities for PA

Scientific evidence

- Manios et al. (2002)
  - School-based intervention in Crete
  - Case-control study over 6 years
  - Biological & behavioural parameters measured
  - Biochemical & anthrop. Indices significantly better than CG
  - Significantly lower increase in total energy, fat & sfa in IG than CG
- Lock et al. (2005)
  - Estimated impact of increasing F&V consumption to 600g/ day on the global burden of disease
  - Would reduce total worldwide burden by 1.8%
  - Ischaemic heart disease 31%, Ischaemic stroke 19%
  - Cancers: stomach 19%, oesophageal 20%, lung 12%, colorectal 2%

Summary

- University of Athens and Institute of child health, are key players in studying childhood obesity trends and therefore potential partners in school intervention strategy
- Low cost required due to lack of investment in nutrition by the government
- ‘Life course approach’: tackling child obesity prevents adult obesity

Potential funders

- MoE
- MoH
- Industry (olive oil)
- European Network of Health Promoting School:
  - WHO (and Member States)
  - EU
  - CE (Council of Europe)
  - Philanthropic Funders