

## Consultation

- older people;
- young people;
- Lewisham Bridge School;
- disabled people;
- business community;
- Primary Care Trust staff; and
- tenants and residents associations



## Area profile



## Lewisham ... index of multiple deprivation



## Transport and health

- Air pollution
- Road traffic injuries
- Physical activity
- Community severance
- Noise
- Access/mobility
- Inequalities

from Transport & Health study group.  
Carrying out a health impact assessment of a transport policy.  
Guidance from the Transport & Health study group, 2000.  
Faculty of Public Health Medicine.



## What are the potential effects of the URL ... ?

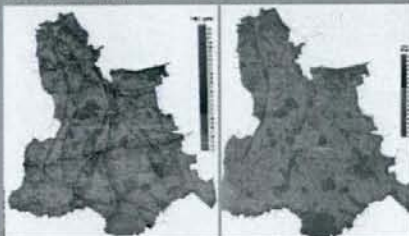
Health determinant	Construction	Operation
Air pollution	↑	↓
Road traffic injuries	↑	↓
Physical activity	↓	↑
Community severance	↑	↓
Noise	↑	↓
Access/mobility	↓	↑
Inequalities	↑	↓



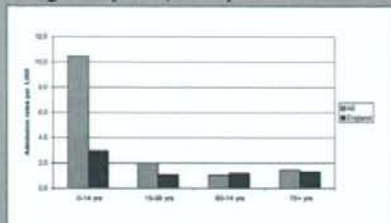
## Air quality

Annual mean  $\text{NO}_2$  (ppb) in 2005 in LB Lewisham

Daily mean  $\text{PM}_{10}$  concentrations in 2004 in LB Lewisham



Hospital admission rates for asthma  
in Neighbourhood 2 (2002/3) and  
England (2001/2002)



## Process #2 ...

### Recommendations

- Request that the project board require the developer to take note of, and act upon, the recommendations of the HIA
- Construction
- Communications
- Development of whole URL
- Projects



Ben Cave Associates Ltd

T 00 44 113 384 5645  
E [information@bcahealth.co.uk](mailto:information@bcahealth.co.uk)



## Application of rapid health impact assessment to the administration system change in a city in Japan



Kurume University School of Medicine-Department of Environmental medicine  
Michiko Hoshiko, Kunio Hara, Tatsuya Ishitake

## Background

- 1) The promotion of decentralization
  - A Core city
  - 35 Core Cities in the fiscal year of 2007
  - Kurume becoming a Core City in April 2008
- 2) None administration assessment
- 3) Growing recognition of the health care system



## Before and after the municipal merger of Kurume

On February 5, 2005

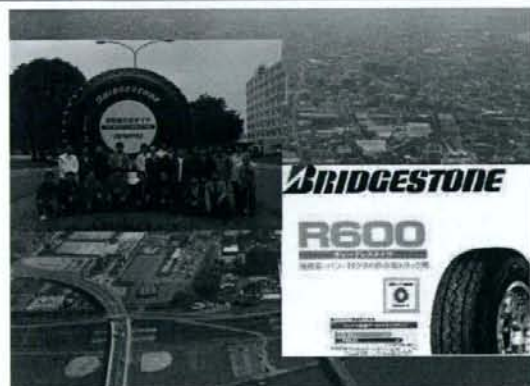
1 city and 4 towns merged



creating a modern Kurume city  
(with a population of 306,434 )

On April 1, 2008

Kurume city became a Core City



## Aim

To implement the health impact assessment on the policies of Kurume City, which becoming a Core City in April 2008



## Methods (determined by Rapid HIA)

### Screening

Evaluating whether HIA could be applied to examine the health effects of the policies of Kurume City implemented on becoming a Core City .

### Scoping

Designing HIA.(We selected Rapid HIA to submit a report to Kurume city by April 2008)  
Establishing the steering group consisted of 3 university researchers.

## Assessment

### Policy analysis

- ① Nagasaki City office (became a Core City 1997), Fukuoka City office (became a Government-De creed City 1972)
- ② Mayor opinions of the Kurume city council, "visiting lecture" given by Kurume city officials
- ③ "Core City plan" of Kurume city

### Community profiling

- ① The population statistics and health statistics released by Kurume City
- ② "Health Center Guidebook" published by Kurume City
- ③ "FY2003 Health White Paper" published by Kitano Health and Welfare Center

### Collection of qualitative/quantitative data

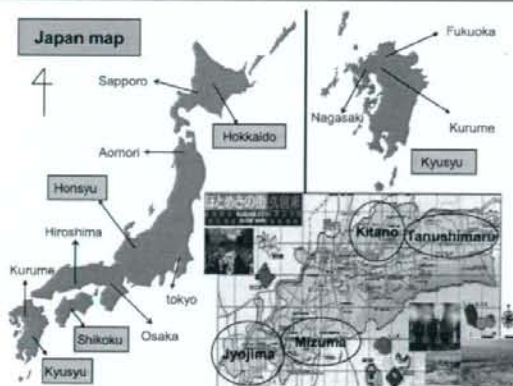
- ① The survey on 35 Core Cities
- ② Internet-based survey on residents of three areas (Kitano township, Kurume city, Aomori city)
- ③ Hearing Kurume City public health nurses

### Impact Assessment

Illustrating the direction of expected effects, positive or negative, and the likelihood of the future effects.

### Results reporting

Reporting the results, submitting a final report to Kurume City including recommendations to extend the positive aspects and to minimize the negative aspects.



## Result 1 Policy Analysis

- 1) The greatest advantage of becoming a Core City will be the establishment of a new public health center
- 2) Close coordination between health and welfare will provide an efficient community-based service.
- 3) Policies reflecting opinions on needs of the residents may be devised through the use of the community.

## Result 2 Community Profiling

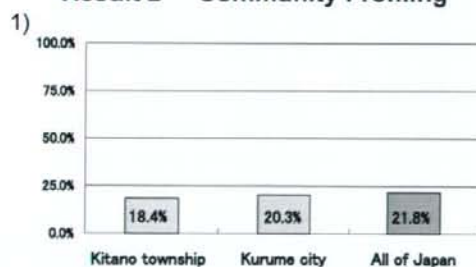


Fig.1 The age distribution of residents 65 years and older in three areas

2)

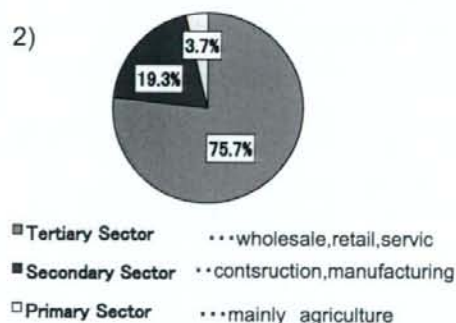


Fig.2 Kurume City's major industries

3) The Kurume new public health care system consists of 4 divisions.

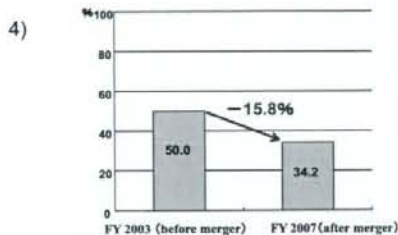


Fig 3. The consultation rate of health care checkups in Kitano township

Figure 4: The degree of change in health service operations between the cities with new public health centers and the cities with existing public health centers

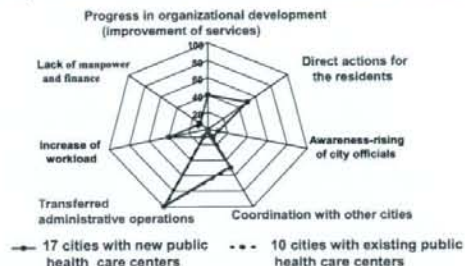
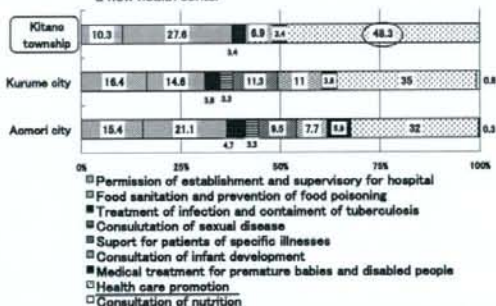


Figure 5: The degree of negative impacts of becoming a core city between the cities with new public health centers and the cities with existing public health centers



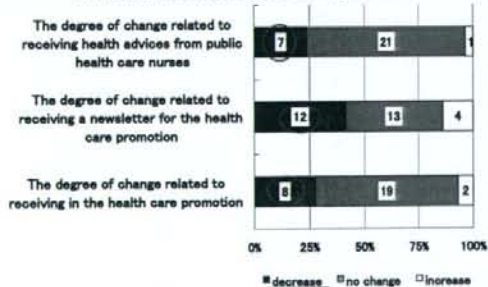
<Survey Conducted on Residents>

Figure 6: The degree of expectations of residents related to establishing a new health center



< The health-related information in Kitano township >

Figure7: The degree of change related to receiving health services in Kitano-machi before and after the merger in 2005



< Hearings from Kurume City

Public Health care Nurses >

1) Activity of Kitano's township Public Health Nurses  
 Before the merger, if resident didn't take the checkup, Kitano township's public health care nurses encouraged resident to take the checkup through making phone calls and home visits. Kitano township had an additional town-specific health checkup, which received higher rates of attendance at 61.5%, compare to Kurume with a rate of 33% .



The public health care system of Kurume city has began to run, referring to Kitano's system

## Result 4 Impact Assessment

Table 1: Expected impacts according to health determinants (for Kurume residents)

Health determinants	Expected impacts	Direction: Positive (P), Negative (N)	Likelihood: Definite (D), Probable (P), Speculative (S)
Individual lifestyle factors	Increase of visits and use of public health centers (e.g. infant development, nutrition, mental health and STD infection consultations)	P	D
	Speeding-up the application process for disabled people	P	D
	Increase in residents' participation in health promotion	P	P
	Increase in the consultation rate of health care checkup	P	P

Social/Regional influencing factors	Progress of health services to individuals and communities through visiting nursing by district	P	P
	Strengthening of communities through health activities	P	P
	The deterioration of health services and decline in the consultation rate of the health care checkup in Kitano township	N	D
Living/Labor condition factors	Improvement of living and sanitation from feral dogs control and waste management	P	D
	Independent development of the city renovation	P	P
Social/Economic/Cultural/Environmental factors	Streamlining of organizational administration	P	P
	Lack or insufficiency of residents' recognition of Core City	N	D

Table 2: Expected impacts according to health determinants (for Kurume officials)

Health determinants	Expected impacts	Direction: Positive (P), Negative (N)	Likelihood: Definite (D), Probable (P), Speculative (S)
Individual Lifestyle factors	Challenging new things	P	D
Social/Regional influencing factors	Strengthening the connection with in the community	P	P
	Decrease of family time due to increase of workload	N	D
Living/Labor condition factors	Satisfaction in doing new tasks	P	D
	Strengthening of the coordination with other sections	P	D
	Administrative enhancement through increasing of human resources	P	D
	Increase of workload and overtime work	N	D
Social/Economic/Cultural/Environmental factors	Increase in recognition of the Core City	P	P
	Shortage of funds due to reduce tax allocations	N	P

## Recommendations

### 1) Extending the positive impacts

- Introducing district-based assignment of public health nurses.
- Encouragement of residential participation in health activities.
- Creation of a community space determined by school districts.

### 2) Minimizing the negative impacts

- Utilizing the features and the distinctiveness of districts with enhanced health services and a high rate of health examination attendance in other school districts.
- Developing public health nurses to each school district and actively conducting district-specific health activities
- Establishing a system to increase officials or consult the state regarding the shortage of human resources and insufficient funds on the part of the administrative body

## Conclusion

We were able to assess health impacts on policy, from an extended viewpoint, from individual to social, distinguishing positive and negative aspects, although the HIA criteria were not considered in full. This HIA study has proven that HIA can be applied in Japan.



## Application plan of HIA to the transformation of management style in a municipal hospital

Kunio HARA, Michiko Hoshiko, Tatsuya Ishitake

Kurume University School of Medicine  
Department of Environmental Medicine

## Backgrounds-1

- In Japan, decentralization has been promoted by Japanese national government for a decade.
- Japanese government has delegated national-level authorities to municipal governments and has required fiscal soundness of municipal governments, especially municipal hospitals, at the same time.
- Since the fiscal condition of many municipal hospitals are not so well, many municipal hospitals staying in red are required to change the management style.

## Backgrounds-2

- The management styles recommended by the Japanese government are (1) privatization, (2) owned by the municipal government but delegated to private corporate managers, (3) to be independent administrative institution.
- Another management style is (4) to be municipal hospital, which is present style (municipal-direct-management style).

## O city hospital

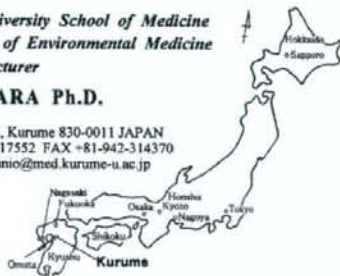
- 18 diagnosis and treatment departments
- 350 beds



*Kurume University School of Medicine  
Department of Environmental Medicine  
Lecturer*

**Kunio HARA Ph.D.**

67 Asahi-machi, Kurume 830-0011 JAPAN  
TEL +81-942-317552 FAX +81-942-314370  
E-mail hara\_kunio@med.kurume-u.ac.jp



## Backgrounds-3

The population of O city is about 126,000. O city used to be a very famous for coal city, and the population was about 200,000 forty years ago.

- There are 4 big hospitals in O city. One is a municipal hospital. The others are private hospitals.
- The O city hospital used to be in red, but has run in the black over the past 3 years.
- But the national government leads O city government to transform the management style in the hospital.

### Backgrounds-4

- The O city mayor announced that he wanted to start new style hospital, independent administrative institution, on 1st April 2010.
- The independent management institution, the new city hospital, is still supported by O city government in finance, but the present municipal employees will not be municipal officials any more.

### Backgrounds-5

- The O city labor union, which organizes O city employees more than 99 %, consulted us to evaluate the effect of the transformation of management style in the O city hospital.
- The union has agreed with the transformation itself in late December 2008.

### Independent administrative style

- The mayor: Chief executive officer
- The administrative director: Chief operating officer

### Rules of Independent administrative institution

The municipal government provides the capital fund.

- The mayor makes the company constitution.
- The mayor assigns an administrative director.
- The mayor makes medium-term goals.
- The local assembly approves the company constitution.
- The administrative director makes a medium-term plan.
- The administrative director employs staff.
- The review committee evaluates performance.

### Hypothesis

- The transformation of management style in the O city hospital must effects on the health of citizens, patients and hospital staff positively and negatively.

### Objective

- To evaluate the effects of the transformation of management style in O city hospital on the health of citizens, patients and municipal employees by using comprehensive HIA methodology.



## Schematic diagram of our study design

Screening	We have already decided.
Scoping	Establish a steering group Making a plan
Assessment	Literature survey Interview/ Questionnaire Workshop/ Symposium
Reporting	Workshop report as the final report

## Our plans-1

- Establish a steering group consisting citizens, NGO members, union members, emergency medical technicians, representatives of hospital staff, city authorities, and so on in early March.
- Interview the director of the O city hospital and administrative hospital staff.
- Interview the director of Naha city, which has already transformed its hospital to a independent administrative institution in 2008, and administrative hospital staff.

## Our plans-2

- Conduct questionnaire surveys on the levels of recognition and utilization in O city citizens and Okinawa city citizens by using Internet.
- If possible, Conduct questionnaire surveys on the levels of recognition and utilization in O city citizens and Naha city citizens by using union members' networks.

## Our plans-3

- Conduct a half-day workshop in May 2009.
- Host a symposium in September 2009.
- Publish the final report in September 2009.
- Total procedure and method: Using a toolkit made according to "European Policy Health Impact Assessment Guideline."
- Workshop: Modifying the method presented by "Rapid Health Impact Assessment for Royal Liverpool and Broadgreen University Hospitals Trust\_ 'A New Service for Liverpool, World Class Hospitals, World Class Services' "

## Health Impact Assessment 日本における展望

産業医科大学 公衆衛生学教室

藤野善久

### 本日の話題

- 「健康」とは？
- 公衆衛生の視点からみた、健康影響とは？

### HIAの定義(1)

- " a combination of procedures, methods, and tools by which a policy, a program or a project may be judged as to its potential effects on health of a population and the distribution of effects within the population"  
– WHO Gothenburg paper
- 政策、施策、事業が潜在的に集団に与える健康影響や、集団中の属性による影響の違いなどについて判断するための一連のプロセス、方法、およびツールのことである。

### HIAの定義(2)

- 意思決定過程に情報を提供し、支援すること
- 健康影響を予測すること
- (利害関係者の参加的アプローチと合意形成)  
– by Dr John Kennm

+

- 格差の評価と是正

## 健康格差とHealth Inequality Impact Assessment (HIIA)



- HIIAのうち、特に格差に着目したものをHIIAと呼ぶことがある。
- 集団全体の影響評価ではなく、特に不利益を受ける集団を把握、認識する。
- 社会的に不利な集団は、一般的に、様々な変化において不利な影響を受けやすいという認識がある。

## 利用されている分野

- 都市計画、地域開発
- 雇用
- 農業食料
- 住宅
- 教育
- 社会保障
- 保健医療
- London Health Strategy
- 年休法案(米)のHIIA
  - 「The California Healthy Families, Healthy Workplaces Act」
- 犯罪抑止
- アルコール乱用防止
- 空港、ダム、廃棄物埋め立て処分場の建設などの大型事業

## 海外におけるHIIA事例の分類： 公衆衛生における位置付け

- ① 法律・制度による要求：
  - Health Act (Thailand)
  - EIAの一部として(EUアムステルダム条約)
  - 開発許可にかかる要求事項 (i.e. 英国都市計画法)
  - オーストラリアの生物多様性保護法、ニュージーランドの資源管理法
  - London health strategy (Greater London Authority Act)カプラン市議
- ② 合意形成・民主主義・住民参加
- ③ 政策決定者の意思決定:オランダ
- ④ 意思表示・意見広告(ロビー活動):  
Healthy Public Policy: WHO欧州
- ⑤ Healthy city(健康的な都市政策)
  - 健康を重視した政策
  - Healthy city(健康的な都市政策)
  - ポピュラーシジョンアローチ

## HIIAの特徴

- 計画段階からの実施(Strategic)
- 便益と不利益を予測
- 広義の「健康」を取り扱う
- 社会的健康規定要因
- 影響を受ける集団の把握
  - 特に不利な集団を把握
- 予測 < 住民参加・合意形成
- 技術的 < 民主主義
- 量的データおよび質的データの活用
- 部署間連携(non-health sectorでの活用)

## HIAの手順



Figure 3.1: HIA Procedure

このようなプロセスを社会制度として整備することが重要  
EIAでの経験を参考とすべき

## HIA普及の背景

- 環境分野
  - EUTAMS（アムステルダム条約）
  - 「すべての公共政策、事業について健康保護が高レベルで達成されなければならない」
  - 「キエフ議定書」健康を含めたSEA議定書
  - 「健康を含めた環境」という表現
- 公衆衛生部分野
  - 政策優先課題としての格差
    - “Our Healthier Nation”, “Adhesion Report”, “Closing the gap in a generation” by WHO Commission on the Social Determinants of Health
    - New Public Health, Healthy Public Policy
    - 集団の健康の達成には、健康政策だけでなく、例えば、教育、雇用、住宅など、あらゆる生活環境・政策からのアプローチが重要
    - 社会医学の発展
      - 社会的、経済的要因が健康に影響を与えているとの検証が進んだ。

## HIAの基礎

- 健康の定義
  - 「健康とは、身体的、精神的、社会的に完全に良好な状態であり、単に病気がないとか虚弱でないということではない・・・」(WHO)

## HIAの基礎：何が「健康」か？

- 伊藤ハム：トルエン検出 工場の商品からも検出
- 伊藤ハム東京工場（千葉県柏市）が生活協同組合連合会ユニコーン事業連合（横浜市）の委託で製造した商品の一部からトルエンが検出された問題で、柏市保健所は31日、工場に残っていた商品からもトルエンを検出したと発表した。
- 保健所によると、商品は「COO・OPあらびきポークウインナー」（賞味期限11月4日）。同連合から回収した1袋と工場から回収した3袋の計4検体を県衛生研究所に委託して検査。このうち、工場の1袋から62.7ppm、連合の1袋から11.8ppmのトルエンを検出した。同保健所は濃度について「ただちに健康への影響はない」と話している。

— 毎日新聞 2008年10月31日 東京夕刊

## 健康とは？

- ・ 日本国憲法(第二十五條)
- ・ すべて国民は、健康で文化的な最低限度の生活を営む権利を有する。
- ・ 2. 国は、すべての生活部面について、社会福祉、社会保障及び公衆衛生の向上及び増進に努めなければならない。

### 教育基本法(第一章 教育の目的及び理念)

- ・ (教育の目的) 第一條 教育は、人格の完成を目指し、平和で民主的な国家及び社会の形成者として必要な資質を備えた心身ともに健康な国民の育成を期して行われなければならない。

### 環境影響評価法(第一章 総則)

- ・ (目的) 第一條 この法律は、土地の形状の変更…を行う事業者がその事業の実施に当たりあらかじめ環境影響評価を行うようその手続等によって行われた環境影響評価の結果を…事業の内容に照する決定に反映させるための措置をとること等により…もって現在及び将来の国民の健康で文化的な生活の確保に資することを目的とする。

## 「健康影響」 by Google (08/02/02)

- ・ 大気汚染と健康影響(疫学調査情報) - 独立行政法人環境再生保全機構

- ・ 厚生労働省:ボスフェーノールがヒトの健康に与える影響について

- ・ 厚生労働省:ダイオキシン類による健康影響等の調査結果について(平成…)

- ・ 石綿の健康影響に関する検討会

- ・ 食品成分有効性評価及び健康影響評価

## HIAの基盤： HIAで扱う「健康」

- ・ がん、呼吸器疾患、中毒
- ・ 精神科疾患、ストレス、不安、安寧
- ・ 社会参加、尊敬
- ・ 社会的健康規定要因  
(間接的な健康規定要因)

## HIAの基盤： Social Determinants of Health

- ・ 社会経済的地位： 学歴、収入、職業
- ・ 家庭、両親の Social Class
- ・ 経済格差・貧困
- ・ 交通
- ・ 雇用・失業
- ・ 社会参加
- ・ 社会組織とストレス
- ・ 出生早期、生活史
- ・ 宗教、信仰、信条

## 社会的健康規定要因と政策分野

• ほとんど全ての分野における政策が、社会的健康規定要因を介して直接・間接的に健康に影響を及ぼす。

• しかしながら、「保健・医療」以外の政策分野において、健康を検討する機会は少ない



## SEAガイドラインにおける主な評価項目の選定の考え方

- 大気環境
- 水環境
- 土壌環境・その他
- 動物・植物・生態系
- 景観
- ふれ合い活動の場
- 廃棄物等
- 温室効果ガス等

健康影響、社会的健康規定要因  
という観点が入っていない

## 環境影響評価法：「健康」の評価項目

環境要素の区分	
大気環境	大気質 騒音 振動 電磁界 その他
水環境	水質 底下水 その他
環境の自然的構成要素の良好な状態の保持	土壌環境・地質 その他 生物の多様性の確保及び自然環境の体系的保全 人と自然との豊かな関係の維持
環境への負荷	建物 動物 植物 その他 土壌 その他 騒音 振動 電磁界 その他 廃棄物等 温室効果ガス等

## 埼玉県戦略的環境影響評価実施要項

環境面の調査、予測、評価に係る環境要素の範囲

環境要素	環境面の調査、予測、評価の項目の例
物質資源	天然資源の消費、廃棄物等の排出量等
地球環境	温室効果ガス等
大気環境	大気質、騒音、振動、電磁界等
水環境	水質(地下水含む)、水環境(又は水害)等
土壌・地盤環境	土壌、地盤沈下、地象
自然環境	ダイオキシン類等 (大気、水、土壌等の環境要素ごとの存在の圧かに、化学物質の排出・移動量を大気、水、土壌の環境媒体別断面的に予測・評価する場合に適用できる。)
人と自然とのふれあ	動物、植物、動植物の生態・生育繁殖、生態系等
生活環境	景観、自然とのふれあいの場、史跡・文化財
安全環境	日照障害、電磁障害、風害 防災、安全(治水、土地の安定性等)

### 埼玉県戦略的環境影響評価実施要項

関連する社会経済面の調査、推計に係る社会経済要素の範囲		
社会経済要素	内容	調査、推計項目の例
事業に係る費用等	事業に係る費用、期間等	概算事業費、事業期間、維持管理の難易、事業採算性など
事業の効果	事業実施による経済的な影響	事業整備効果、経済逆な影響
社会的な影響	事業実施による社会的な影響	地域分析、住民の移転、地域社会への影響、地域交通など

### 所沢市北秋津地区土地区画整理事業

- ・ 地域分断の緩和および地域交通の改善の定性的な評価
  - － 鉄道による地域分断の解消
  - － 地域交通の変化
  - － 渋滞緩和
  - － 緊急車両の通行などの防災性の向上
- ・ 事業による経済的な効果
  - － 経済規模拡大など便益
  - － 人口増に伴う購買力の増加
  - － 工事に伴う雇用促進の便益

### 県の国資源循環工場第Ⅱ期事業基本構想

- ・ 社会的な影響に関する評価
  - － 経済波及効果
  - － 雇用創出効果
- ・ 地域社会・文化への影響
  - － 地域社会の意見の反映
  - － 観光への影響
  - － 地域資源を用いた公園整備
  - － 地元雇用の拡大
  - － 地元イメージアップ

### 県の国資源循環工場第Ⅱ期事業基本構想

- ・ 道路環境に関する環境配慮
  - ・ 「廃棄物の受け入れ時間と小学生・中学生の下校時間が重なるため、とくに運転手の注意を喚起することが重要である。なお、工業団地用地に民間企業施設が立地した際には、小学生・中学生の登下校時間と工業団地の発生集中交通量の通行時間が重なるため、さらにきめ細かい交通安全対策を行う必要がある。」

## EIAにおける健康

- EIAおよびSEAにおける健康影響
    - 生物の一種としてのヒトへの影響
    - 「ヒト」の解釈によって異なる
  - 開発に関する39のEIA調査(英国)
    - 72% 人の健康に関する目次、章なし
    - 49% 健康に関する記述が全くなし
    - 28% 詳細な人への健康影響についての記述
- British Medical Association, Health and Environmental Impact Assessment: an Integrated Approach, London, 1998

## HIA in EIA/SEA



## HIA in EIA/SEA



- Health and wellbeing health improvement, health services and health inequalities papers from the SA/SEA of the draft further alterations to the London Plan
- prepared for the Greater London Authority and the London Health Commission
- Ben Cave Associates Ltd

## ちなみに国内のSEAでは

- 「戦略的環境アセスメント導入ガイドラインのあらまし」
- 「戦略的環境アセスメント導入ガイドライン」
  - 環境省総合環境政策局 環境影響評価課(H19)
- 「健康」という言葉は含まれていない







## HIAの今後の展望(前向きに)

- 保健医療分野
  - HIAを歓迎する風潮がある
  - 社会医学、社会的健康規定要因という体系の確立
    - 格差、非正規雇用といった問題の裏在化
  - Healthy Public Policy
    - ホドムレーションアローチ
  - 政策提言のツール
    - 近年、学会単位での意見表明、提言が活発になっている
- 環境分野
  - 世界の潮流からすれば、近い将来にEIA/SEAIにおいて「健康」の議論は避けられない
  - 環境分野からのsubcontractとしてのHIAも出てくるのでは
- 法制化する国が増えている

## HIA communityと能力開発

- HIA community
  - IAVA (International Association for Impact Assessment) (現会長は東工大の原科教授)
  - International HIA conference (過去9回開催)
  - Asia Oceania HIA conference (過去2回開催)
  - 日本公衆衛生学会HIA自由集会
- HIA能力開発
  - それぞれ学会の前に、トレーニングコース(1-2day)
  - Liverpool IMPACT - International Health Impact Assessment Consortium(5 days)
- 研究班による取り組み
  - 産業医科大学コアカリにおけるHIAトレーニング(2 day)
  - JICAの「持続可能な発展のための職業・環境保健でネージメント集団研修コース」でのHIA講義(1コマ)

## Health in Strategic Environmental Assessment

Ben Cave

14<sup>th</sup> November 2009

[www.beahealth.co.uk](http://www.beahealth.co.uk)



## Outline

- What do we mean by health and HIA?
- What is Strategic Environmental Assessment (SEA)?
- How can you address health in SEA?
- An example: the London Plan



## International Association for Impact Assessment

- an international forum for advancing innovation and for advancing the practice and science of impact assessment in applications ranging from local to global;
- it was founded in 1980;
- it has approximately 1,500 members with 2,500 affiliated members in 120 countries;
- a network of practitioners and users of various types of impact assessment (industry and consultants, academics, government, multi-lateral funding institutions); and
- it holds an annual international conference (Seoul, Korea 2007; Perth, WA 2008; Accra, Ghana 2009; Europe 2010).

... visit [www.iaia.org](http://www.iaia.org)



## The main determinants of health



Dahlgren, G. and Whitehead, M.  
Policies and strategies to promote  
social equity in health.  
1991. Stockholm, Institute for  
Future Studies.

