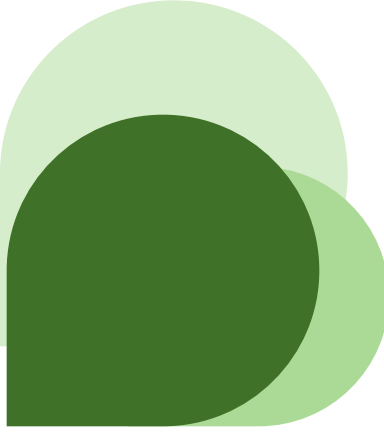




輔導醫院推動環境 友善醫院之規劃



環境品質文教基金會

研究發展部主任兼研究員：鄭份展

報告日期：2011/09/30



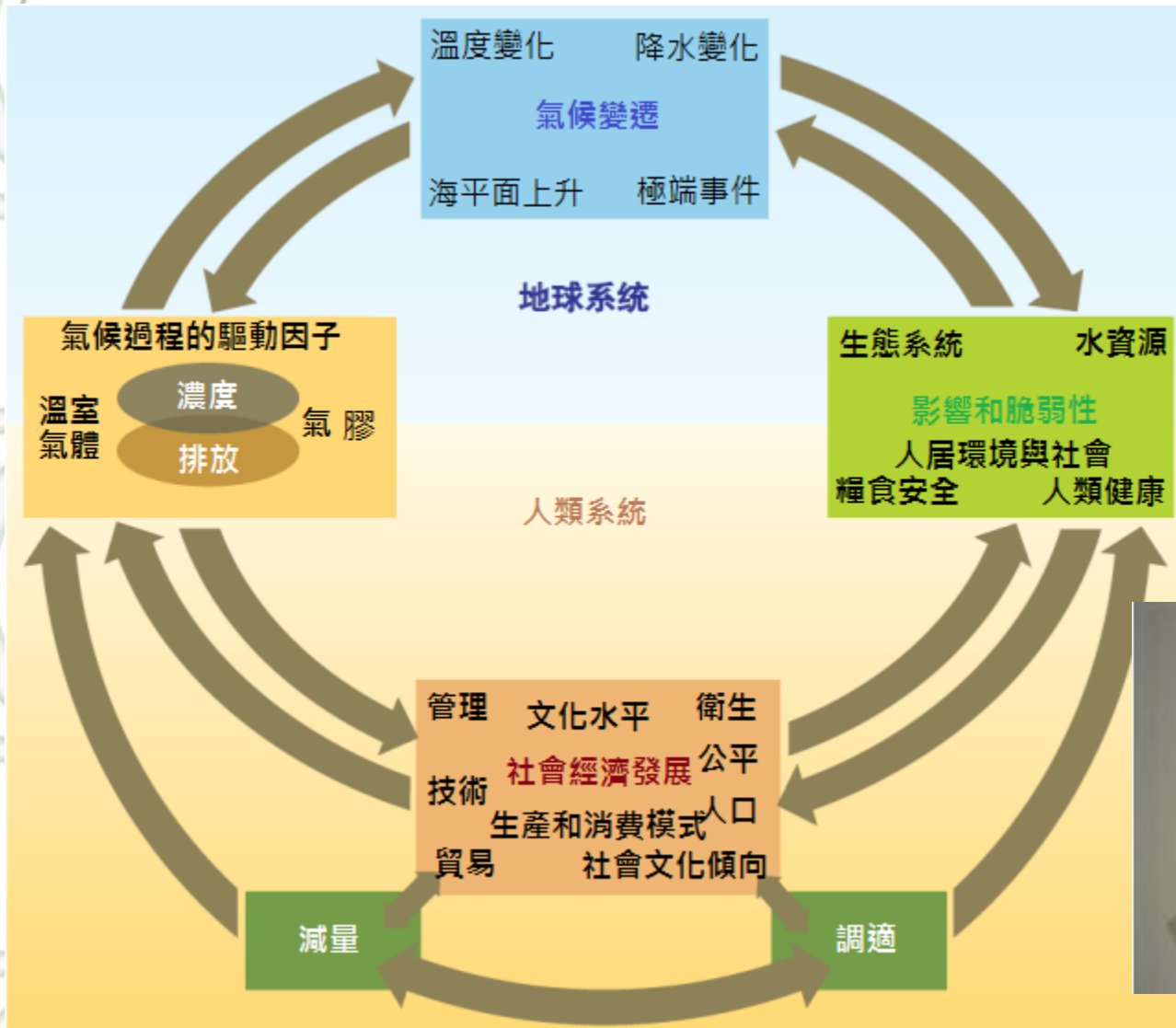
醫院與環境

- 醫學期刊刺絡針 (The Lancet) - 21世紀人類健康的最大威脅就是全球暖化，呼籲醫界正視危機，同時引領民眾做好抗暖化的準備。 2009/05/16 (Costello et al.,2009)
- 全球暖化與全民健康高峰論壇 - 暖化與醫學的科學面與倫理觀 - 呼籲從吃素做起，健康抗暖救地球。 2010/01/23
- 減碳救地球，醫界做先鋒 - 128家醫院宣誓，2020年將較2007年減少碳排放量13%。 2010/10/23
- 越來越多團體體認到醫院與環境息息相關。



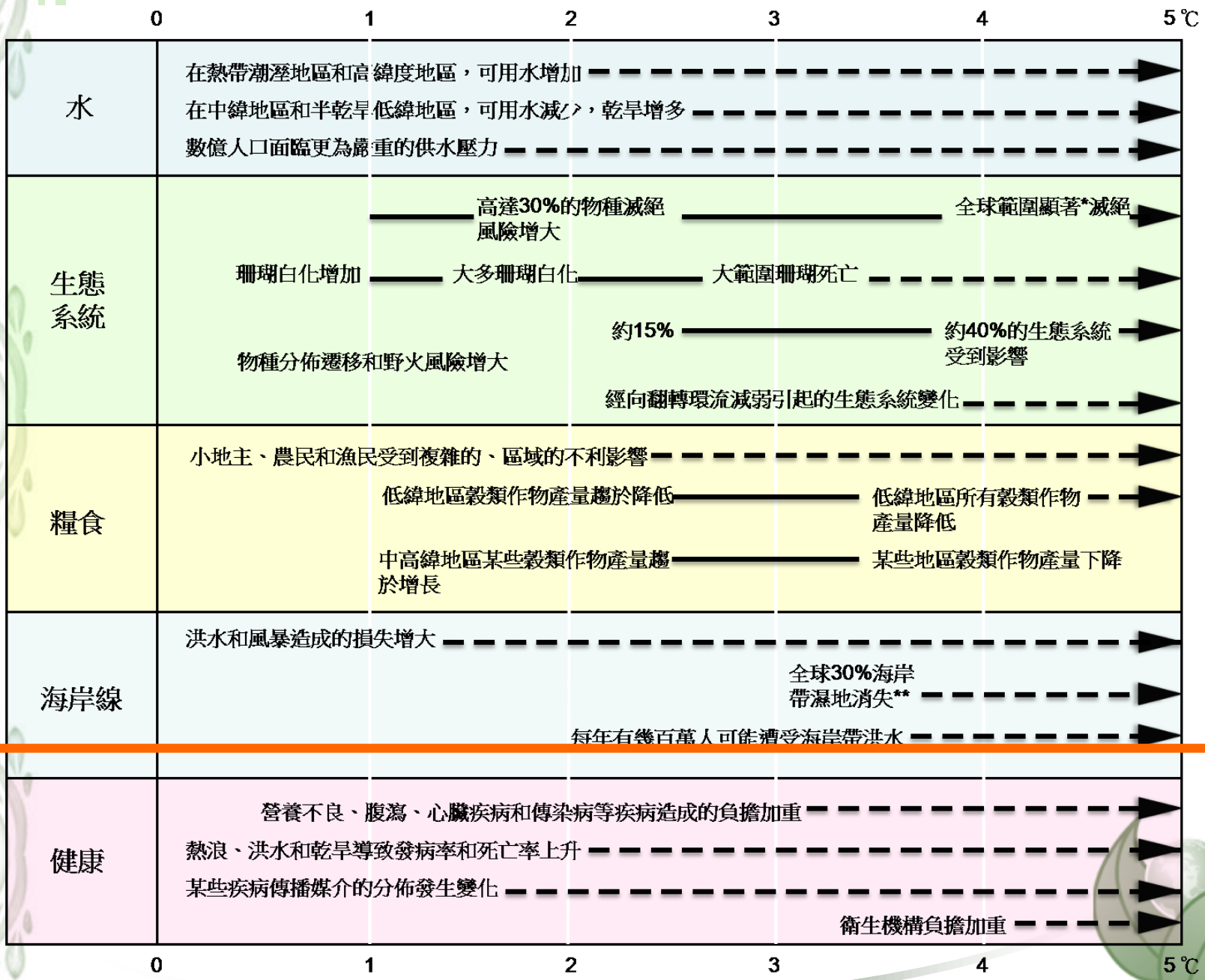
<http://www.libertytimes.com.tw/2010/new/oct/24/today-health5.htm>

氣候變遷人為驅動因素、影響和回饋

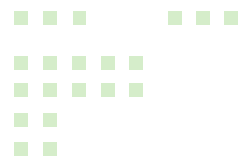


修改自 IPCC，氣候變遷2007：綜合報告。政府間氣候變遷專門委員會第四次評估報告。





修改自 IPCC，2007：氣候變遷2007：綜合報告。政府間氣候變遷專門委員會第四次評估報告。



在氣候與環境變遷下
醫療體系是受害者，但也是加害者

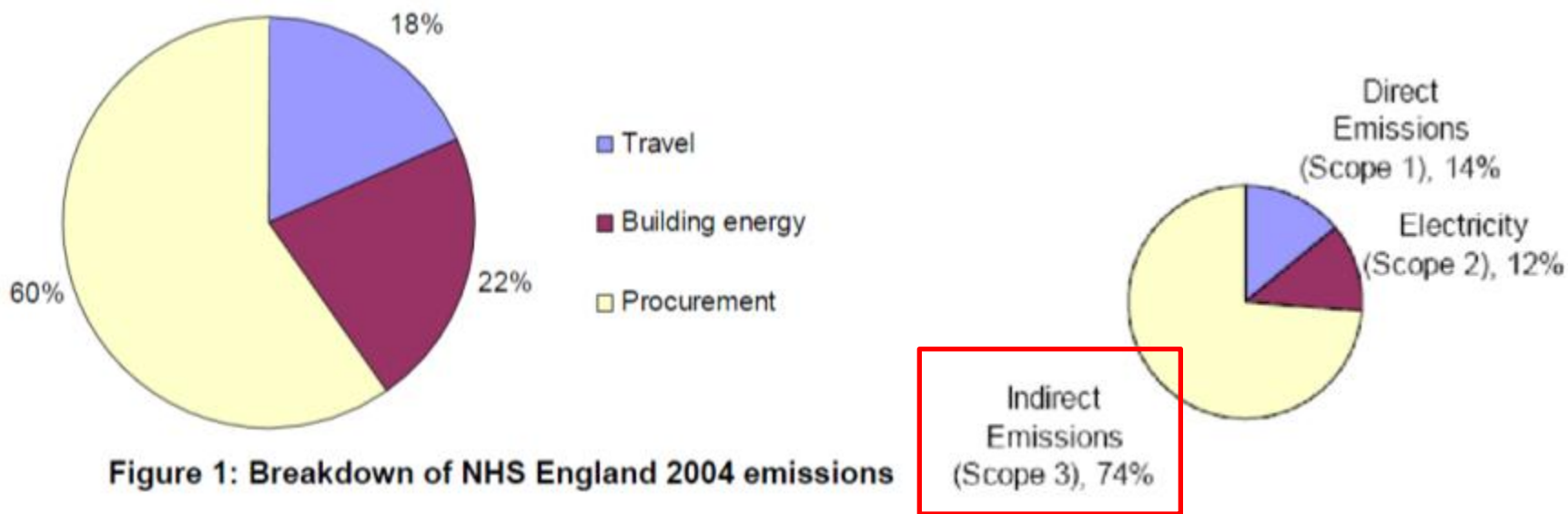


醫院與環境 – 直接碳排放

- 2009年服務業部門電力消費量451.8億度電，約占全國總電力消費量2,208億度電之20.5%。
- 依2010年能源查核資料，醫院類能源大用戶共140家、電力消費20.6億度電，約占服務業部門電力消費量4.6%，總年能源消費量15.2%，16種建築物用途分類中排名第二。

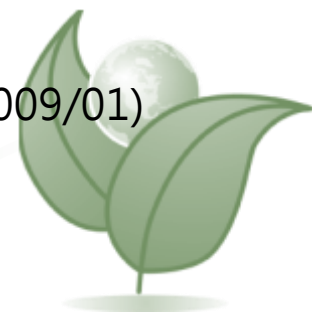
建築物用途	家數	電力(億度)	燃料油(公秉)	液化石油氣(公噸)	天然氣(千立方公尺)	汽油(公秉)	柴油(公秉)	合計(千公秉油當量)	占比(%)
學校	243	22.6	2,080	136,891	8,080,823	1,762,637	7,623	581.0	15.9
醫院	140	20.6	17,467	493	15,944	661	6,650	328.2	15.2
車站及軌道	58	17.3	-	-	-	6,421	3,906	434.1	11.9

醫院與環境 – 間接碳排放



- 直接排放(如院內能源生產，醫院車隊交通排放)
- 電力 - 間接排放(其他地區電力)
- 其他間接排放(如採購、病患與家屬交通排放)

NHS England Carbon Emissions: Carbon Footprint modelling to 2020 (2009/01)



但，醫療機構對氣候變遷可以是重要及領導者的角色。

醫院可透過參考政策指引(初稿)與操作建議(初稿)，逐步邁向環境友善。



醫院推動因應全球氣候變遷與環境永續之政策指引(初稿)

- 一、醫院在協助國際社會減緩與調適氣候變遷的影響與其對人類健康造成的風險上扮演著關鍵角色；醫院整體政策，應將因應全球氣候變遷與環境永續納入考量。
- 二、為彰顯醫院對於「首要之務就是不可傷害」(First, Do No Harm)的神聖承諾，醫院有責任從自身做起，其治療、消耗物品與賴以運作的建築均不可傷害人類健康與環境。
- 三、依世界衛生組織(WHO)與無害醫療國際組織(Health Care Without Harm)之建議，醫院可從能源效率、綠建築設計、替代能源發電、運輸、食物、廢棄物與水等七大面向著手，因應氣候變遷並邁向環境永續。



醫院推動因應全球氣候變遷與環境永續之政策指引(初稿)

- 四、醫院推動因應全球氣候變遷與環境永續措施時，應同時考量醫護人員、病人與家屬、社區之需求與影響；並以對病人有利之方式為原則。
- 五、醫院應建立環境永續之可測量、報告與查證(Measurable, Reportable and Verifiable, MRV)的機制，因應未來醫院環境永續評鑑機制之實行。
- 六、醫院應設立因應全球氣候變遷與環境永續之委員會，組織上需考慮委員會層級，以期能發揮協調統合之作用，並監督執行之成效。



醫院推動環境友善之操作建議（初稿）

- 醫院除被動面對氣候及環境變遷帶來的健康衝擊外，亦有責任在節能減碳等減緩氣候變化的策略上，扮演更正面積極的角色來減低對環境的危害。
- 2009年，世界衛生組織與Health Care Without Harm組織共同合作並開發研究，提出報告建議可從7大面向：能源效率、綠建築設計、替代能源發電、運輸、食物、廢棄物與水開始努力，邁向氣候友善 (climate-friendly)。除省時、省錢外，並兼具健康、環境和社會的共同利益。



7大面向的積極作法

能源效率(Energy Efficiency)

透過提高能源效率和養護設備措施，來降低能源消耗與成本。

- 建立中央監控系統，將電力、給排水、空調、照明、火警、發電機、鍋爐、醫療氣體及水處理等系統作最佳控制
- 檢視目前能源消耗並標示可導入節能措施的方向 (設置專職管理人員與節能組織)
- 實施能源稽核並設置目標
- 優先採購節能與低碳產品
- 降低「待機中」能源使用 (更新電腦設備系統)
- 教育員工、病患與訪客有關節約能源之策略與作法

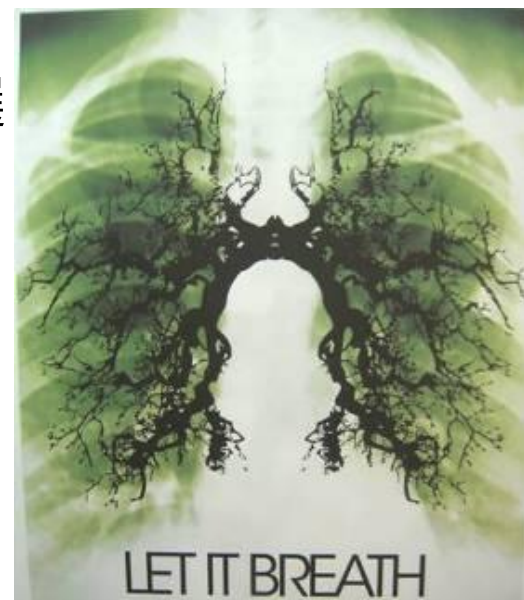


7大面向的積極作法

綠建築設計(Green Building Design)

建立適應當地氣候條件之醫院，以減少能源和資源的需求。

- 建造符合綠建築標章之醫療院所
- 選址時思考院所成立對整體運輸之衝擊
- 使用在地草木與植栽，在地耐旱植物更是首選
- 使用在地與地區性建材，建材現地回收
- 抵銷興建院所時的碳排放
- 採購有國際公認驗證標章的林木產品
- 建築材料採用綠建材標章之建材
- 使用綠屋頂 (多種植被以降溫)



7大面向的積極作法

替代能源發電(Alternative Energy Generation)

生產和/或使用清潔、可再生能源，確保可靠和彈性的供電操作。

- 現場設置再生能源，如太陽能板、風力渦輪發電機
- 採用汽電共生設施 (廢熱廢水再利用)
- 採購可再生發電電力(如綠色電力購買制度已建立)



7大面向的積極作法

運輸(Transportation)

鼓勵使用低碳排放運具(步行、自行車或環保車輛)，促進員工、病人及社區使用公共運輸，並盡量減少員工和病人運送。

- 購買省油、油電混合或非石油動力等清潔能源車輛，降低醫院車隊排放量
- 將使用上述清潔能源車輛，納入採購或供應商評比原則
- 鼓勵醫院員工與病人使用大眾運輸、共乘或腳踏車；如財務許可，提供津貼
- 向當地供應商採購 (減少運輸成本與碳排放)
- 制訂在院所範圍內停(候)車熄火政策
- 提供清潔能源車輛優先權(路權或停車權)，如計程車招呼站，清潔能源車專用停車位
- 培訓省油駕駛



7大面向的積極作法

廢棄物(Waste)

廢棄物減量、重複利用、回收與堆肥；提供焚化以外替代方案。

- 減量、再使用、回收與堆肥；採用取代垃圾焚燒的方法
- 貫徹廢棄物分類，定期實施廢棄物處理相關教育課程
- 實施資源回收(包含麻醉氣體)與堆肥
- 購買回收、再利用且最低度包裝的產品
- 廢棄物處理在地優先(含服務商)

水(Water)

節約用水；如有安全替代品存在時，不使用瓶裝水。

- 定期監測水的使用並修復漏水
- 設置節水設施(省水水龍頭與馬桶)
- 花園造景採用耐旱植物
- 雨水儲存並加以利用
- 停止採購販賣瓶裝水



7大面向的積極作法

食物(Food)

- 可持續的提供當地糧食給員工和病人。
 - 兼顧病人營養需求下，減少菜單上的肉量
 - 購買在地且季節性的食物(與在地農漁會、小農合作)
 - 盡可能採購有機食物
 - 在院所內種植食物
 - 避免飲食服務產生的廢棄物 (使用環保餐具、不製造廚餘)
 - 將廚餘製成堆肥
- 七大面向除提倡減少能源消耗帶來之直接碳排放外，更導入間接碳排放概念（如食物里程），望藉由醫院體系進行擴散。



美國最綠色的醫院建築 - 戴爾兒童醫療中心，奧斯丁，德州

- 2009年成為美國綠色建築委員會領先能源與環境設計新建築規劃 (LEED-NC 2.1) 第一個白金級認證醫院(<http://www.dellchildrens.net/>)

能源

- 室內走廊裝天窗，超過 80% 的非臨床空間，採自然光
- 動態/自然光感應器，將關掉不必要的燈光

綠建築

- 任何低於12%的投資回報設計將被捨棄
- 47,000噸的穆勒機場跑道材料重複使用在建築上
- 採用低碳建材，40%的水泥被粉煤灰取代
- 92%的建築垃圾於興建現場回收

交通 - 推動共乘及替代燃料汽車停車場

- 停車場新停車標誌，優先提供給共乘或清潔車輛 (如混合動力，電動，生物柴油和天然氣車輛)



種下希望－聖瑪莉癌症中心，綠灣，威斯康辛

綠建築/水

- 2009年威斯康辛州最大綠屋頂計畫，綠化面積達16,000平方公尺。
- 投入經費約\$450,000，每年可降低空調與供熱開銷約10-50%。
- 一般屋頂壽命約20年，綠屋頂可保持至少50年。
- 結合雨水收集系統，截流近99%的雨水，除了綠屋頂自己使用外，還可提供景觀用水。
- 提供癌症病人舒適散步空間。



Source: St. Mary's Hospital, [Environmental Stewardship Report 2009](#)

http://www.stmgb.org/pdf/file/Final_Enviro%20brochure11-16-2009--for%20WEB-pages%20in%20order.pdf

自然醫院 - 美世醫院，特倫頓，新澤西州，美國



綠建築

- 康復花園：1600m長的天然小徑蜿蜒曲折貫穿于院區內。不僅有助於病人情緒的穩定，而且可以提升治療效果，比如減少止痛藥的服用量或者是幫助病人儘快康復出院。
- 採用綠屋頂，有效阻滯暴雨水，降低醫院供熱和空調費用，收集雨水又可用於醫院內康復花園的灌溉養護。

交通

- 為了減少停車位數量和車輛停放區域的污染，為來訪者提供車架式自行車停放區及高乘載專用停車位（HOV parking）。

食物

- 院區內現存林地被保留並得到保護，同時將有4.8萬平方公尺的農耕地交由當地農民進行開發種植，並供應醫院飲食。



環境友善七大面向推動案例

水 嘉義長庚紀念醫院

- RO系統排放水回收：RO純水設備逆滲透排放水回收，作為灌溉、沖馬桶使用，節省自來水用量並降低能源耗損。
- 回收蒸氣冷凝水：蒸汽冷凝水回收至儲存槽，利用蒸氣動力送回鍋爐軟水儲槽，供鍋爐給水使用並提高給水溫度。

廢棄物 佛教慈濟綜合醫院大林分院

- 執行醫療廢棄物分類並減量：針對生物醫療廢棄物平均產生量前三大單位，由環保專責人員/護理人員，共同進行減量探討。
- 設置環境管理委員會：積極對全院醫護主管與人員、清潔人員和病患訪客做教育訓練及宣導，並訂定廢棄物分類獎懲規定。
- 餐廳廚餘再利用：廚餘製成肥料，並推出DIY課程。
- 寶特瓶回收品再利用：透過社區回收站與當地居民互動，回收寶特瓶製成環保毯。



環境友善七大面向推動案例

食物 Kaiser Permanente Medical Groups

- Healthy Eating/Active Living 倡議：秉持健康飲食促進健康生活原則，支持集團各醫院所在地的農夫市集、推廣永續飲食系統、減少運送食物產生的碳足跡、採購當地當季食材作院內餐飲用並向當地社區、學校及青年團體宣導。
(<https://www.kaiserpermanente.org/>)

- 國民低碳飲食選擇參考手冊 (2011/03)
- http://greenevent.epa.gov.tw/diet_1.asp

目錄

準備篇

溫室效應是什麼？和飲食有什麼關係？讓本篇為

食材選購篇

出門採購低碳食材的教戰守則。

餐飲製備篇

低碳食材也要低碳烹調。烹調及食用方面的低碳

食用與廢棄篇

如何處理沒吃完的食物？教您如何重複利用食物

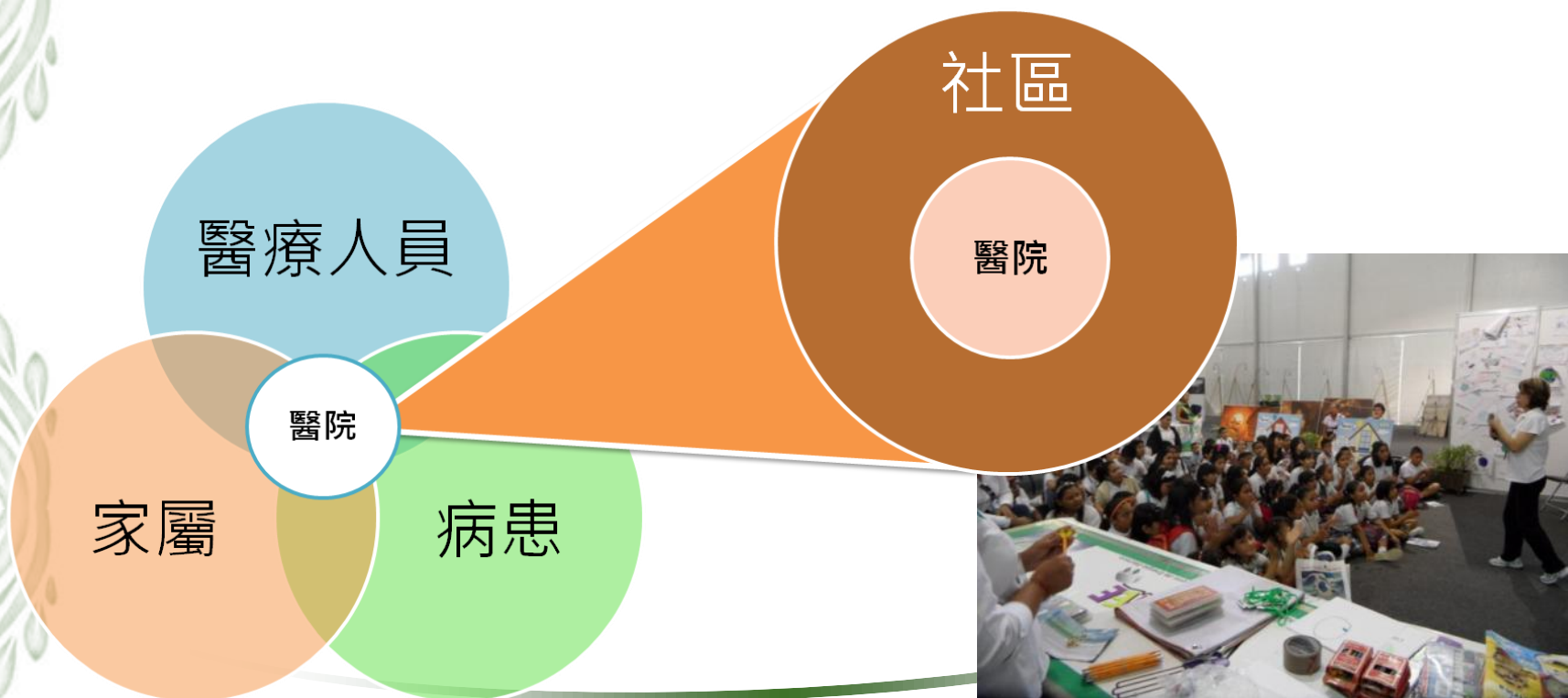
附錄

早午晚低碳菜單實戰演練。您也能如法炮製屬於



醫院可以是環境友善中心

- 更重要的是，醫院連結著醫療人員、家屬與病患，是社區的一份子；由於專業形象，一舉一動都是社區觀摩對象。
- 7大面向之推廣與擴散，由醫院進行將事半功倍。



輔導醫院推動環境友善醫院之規劃

- 一、推動環境友善醫院輔導工作坊
邀請醫院代表分享環境友善推動工作並現場訪查，提供同儕交流與專家對話之場域。
- 二、設立環境友善資訊網與網路輔導團
設立網頁提供相關訊息，並線上回覆相關問題。

來信請寄至 info.eqpf@msa.hinet.net

標題請註明：“環境友善醫院問題”

如有相關建議，亦請不吝指導



環境友善醫院資訊網(持續更新)

- 環境友善資訊網 <http://www.envi.org.tw/eh/index.htm>
- 緣起與理念
 - 環境與健康
 - 氣候變遷與醫療照護
 - 臺灣醫院可以扮演領導的角色
- 邁向環境友善醫院
 - 環境友善醫院面面觀
 - 環境友善醫院的案例
- 環境友善醫院Q&A
- 環境友善工具與他山之石



環境友善醫院Q&A

醫院提問

- 依七大面向分類
- 敘述不明確，再詢問



草擬回覆

- 諮詢國內專家

網路分享

- 電郵回覆發問者
- 定期更新於資訊網



環境友善工具與他山之石

環境友善工具的種類

- 量化調查表、指標(如油汽水廢電)
- 自我查核表(如Check list, HPH Manual)
- 其他推廣教育工具(如計算器)



1 Standard Management Policy

The organization has a written policy for health promotion. The policy is implemented as part of the overall organization quality improvement system, aiming at improving health outcomes. This policy is aimed at patients, relatives and staff.

Objective

To describe the framework for the organization's activities concerning health promotion as an integral part of the organization's quality management system.

Substandards

1.1. The organization identifies responsibilities for health promotion.	Yes	Partly	No
1.1.1. The hospital's stated aims and mission include health promotion [Evidence: e.g. time-table for the action].	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments			
1.1.2. Minutes of the governing body reaffirm agreement within the past year to participate in the WHO HPH project [Evidence: e.g. date for the decision or for payment of the annual fee].	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments			



Environmental Checklist for Healthcare Facilities

- Greener Hospitals: Improving Environmental Performance (2003)
- 環境管理系統、能源、廢棄物、水、廢水、有害物質、空氣品質與環境偏好採購
- <http://www.bms.com/Documents/sustainability/download/s/greenh.pdf>

6. Environmental Checklist for Healthcare Facilities

This following checklist includes a number of elements of an environmental management system. By answering YES or NO to the various elements of the checklist, it is expected that you will become more knowledgeable about the current status of your environmental management system. A "YES" answer signifies that your facility's environmental management system already includes that particular element. A "NO" answer indicates that the element is not currently part of your environmental management system. The latter elements should be reviewed for applicability to your healthcare facility and incorporated into your environmental management system as appropriate.



Environmental Management System

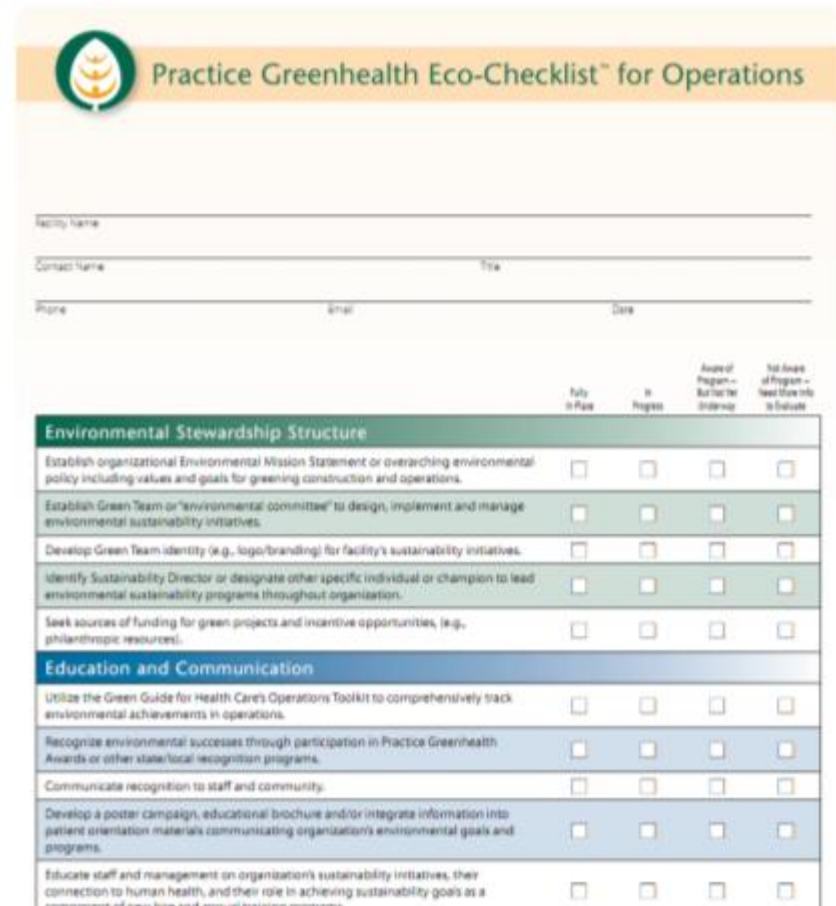
- | | |
|---|--|
| 1. Does your healthcare facility have a set of principles or guidelines? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| 2. If yes, do these guidelines include environmental protection? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| 3. Are these guidelines communicated not only internally to staff but also externally to the public? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| 4. Are tasks and responsibilities relating to environmental protection clearly defined and assigned to medical staff, nursing staff, engineering staff and the hospital administration? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| 5. Has your healthcare facility appointed a person with special responsibility for: waste, hazardous substances, effluent, energy, pollutants and harmful emissions, radiation safety, hygiene, others? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| 6. Are all members of the staff aware of their specific responsibilities relating to environmental protection? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| 7. Do you have working groups concerned with special topics such as energy, water, pollution prevention, and environmentally responsible purchasing? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| 8. Does your organization have a program to routinely leverage the value of new building design or major renovations to incorporate green principles (for example, energy, and water conservation) into design, construction, and operations? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| 9. Have you implemented an environmental management system? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| 10. Has your organization developed measurable annual environmental objectives/ goals? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| 11. Does your organization have a system in place to periodically evaluate your continued | <input type="checkbox"/> Yes <input type="checkbox"/> No |

Eco-Checklist™ for Operations

- Practice Greenhealth Eco-Checklist for Operations v.1 (2009)

- 環境管理系統、教育與傳播、環境偏好採購、廢棄物管理與減量、能源/水/氣候、食物系統、交通與化學物質管理。

- http://practicegreenhealth.org/pubs/EcoChecklist_R5.pdf



The form is titled "Practice Greenhealth Eco-Checklist™ for Operations" and includes a logo of a green plant. It contains fields for "Facility Name", "Contact Name", "Title", "Phone", "Email", and "Date". Below these fields is a table with four columns: "Not in Place", "In Progress", "Scope of Program - Partial or Ongoing", and "Not Scope of Program - Not Live or Not to Evaluate". The table is divided into two main sections: "Environmental Stewardship Structure" and "Education and Communication".

	Not in Place	In Progress	Scope of Program - Partial or Ongoing	Not Scope of Program - Not Live or Not to Evaluate
Environmental Stewardship Structure				
Establish organizational Environmental Mission Statement or overarching environmental policy including values and goals for greening construction and operations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Establish Green Team or "environmental committee" to design, implement and manage environmental sustainability initiatives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Develop Green Team identity (e.g., logo/branding) for facility's sustainability initiatives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Identify Sustainability Director or designate other specific individual or champion to lead environmental sustainability programs throughout organization.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Seek sources of funding for green projects and incentive opportunities (e.g., philanthropic resources).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Education and Communication				
Utilize the Green Guide for Health Care's Operators Toolkit to comprehensively track environmental achievements in operations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Recognize environmental successes through participation in Practice Greenhealth Awards or other state/local recognition programs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Communicate recognition to staff and community.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Develop a poster campaign, educational brochure and/or integrate information into patient orientation materials communicating organization's environmental goals and programs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Educate staff and management on organization's sustainability initiatives, their connection to human health, and their role in achieving sustainability goals as a component of their line and scope of practice activities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



環境友善工具

- 推廣教育工具

碳足跡計算器

研發者：環境品質文教基金會

大家耳熟能詳的碳足跡計算器(溫室氣體計算器)，環品會自2006年已經開發並推廣運用。碳足跡計算器依照臺灣在地一般大眾的生活習慣與方式，將溫室氣體的可能產生來源分為「交通運輸」、「家庭耗能」、「廢棄物產生」、「祭祀活動」、「外出用餐」與「烤肉活動」六大類，依序回答問題後，便可計算各人每月溫室氣體排放量。

最後，您還可以透過回答「減量行動」，瞭解生活中的改變，對整體溫室氣體排放量的影響。

現在，就請您開始操作碳足跡計算器，計算您的碳足跡。



水足跡計算器

研發者：環境品質文教基金會

來，國際環境議題焦點逐漸由CO₂（二氧化碳）擴大到H₂O（水），可見水的重要性與日俱增。日常生活中無所不在，台灣雖然有豐沛的雨量，但因地形地貌因素，造成儲水不易，被列為缺水地區之一。台灣水資源分佈不均且逐漸匱乏，但民眾卻鮮少意識此一危機。

加深國人對於水資源之重視，2010年環品會著手研發水足跡計算器，水足跡計算器主要包含住、行、育與樂等6大項目，除計算生活中之直接用水外，更估算間接用水，勾勒出台灣地區整體水足跡輪廓。

可透過水足跡計算器了解到，相對於全球的平均用水，其水足跡之大小如何，使個人可掌握在消費過程中直接與間接使用的用水量，並充分了解個人生活對於水資源的消耗與依賴度。

現在，您可以開始操作水足跡計算器，計算您的水足跡。



Environment Tools Directory

The screenshot shows the homepage of the EnvironmentTools directory. At the top, there is a blue header with the logo and a navigation menu. Below the header, there is a search bar and a login section. The main content area features a large orange banner with the text "Have you ever wondered what ONE TONNE OF CO₂ actually equates to...?". Below this, there is a welcome message and a search bar. The "Featured Tools" section is a table listing various environmental accounting software tools.

Tool name	Description	Reviews
Footprint Reporter	Footprint Reporter is a quick and easy carbon footprinting tool to help organisations measure, report and reduce their...	★★★★★ 5 reviews
IHS - EHS and Sustainability	IHS has been helping organizations achieve their EHS and sustainability goals for decades with the most deployed ente...	★★★★★ 0 reviews
Enablon Energy & Carbon Management Suite	Recently ranked as one of the world's top ten Energy and Carbon calculation platforms*, Enablon offers one of the w...	★★★★★ 0 reviews
Nems Accounter	Nems Accounter is an environmental accounting and management system. The system is tailor-made for the energy industr...	★★★★★ 0 reviews
Carbon Counter	Landmark's Carbon Counter guides companies through the CRC scheme, stores all of the information required by the...	★★★★★ 0 reviews

- 超過500種以上環境工具
- <http://www.environmenttools.co.uk/>



Health Care Without Harm, HCWH

- 廢棄物管理
- 毒性物質
- 健康食物系統
- 綠建築與能源
- 氣候與健康
- 綠色採購
- 藥物問題

The screenshot shows the homepage of the Health Care Without Harm (HCWH) website. At the top, there is a navigation bar with tabs for 'US & Canada', 'Europe', 'Southeast Asia', 'America Latina', and 'Global Projects'. Below this is a large banner image featuring the HCWH logo (a globe with a stethoscope) and various photos of healthcare settings, including a patient in a hospital bed, a doctor, and environmental elements like a recycling bin and solar panels. A secondary navigation bar contains links for 'Home', 'About', 'Newsletters', 'Press Room', 'Events', 'Resources', 'Get Involved', 'Subscribe', 'Donate', and 'Log in'. The main content area is divided into several sections: 'ISSUES' with a list of topics like 'Waste Management', 'Toxic Materials', and 'Green Building and Energy'; a 'United States and Canada' section with a headline 'Health Care Without Harm: Leading the global movement for environmentally responsible health care' and a paragraph of text; a 'HCWH News' section with two news items dated September 17, 2011 and August 11, 2011; a 'please donate' button; and a 'Health Care Research Collaborative Reports' section with an image of a folder. A search bar is located in the top right corner. At the bottom left, there is a 'SELECT A REGION' dropdown menu with options for 'US and Canada', 'Europe', and 'Southeast Asia'. The footer contains the text 'ALL HCWH NEWS'.

- <http://www.noharm.org/>



ISSUES PVC and Phthalates



Home

About

Newsletters

Press Room

Events

Resources

Get Involved

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Login

ISSUES

- Waste Management
- Toxic Materials
 - Mercury
 - **PVC and Phthalates**

The Issue
Phthalates and DEHP
Dioxin: Poison Byproduct
Scientific Reports
Policies and Resolutions
Alternatives
Case Studies
Tools and Resources

- Flame Retardants
- Electronics
- Cleaners and Pesticides
- Safer Chemicals
- Healthy Food Systems
- Green Building and Energy
- Climate and Health
- Green Purchasing
- Pharmaceuticals



Gary Cohen, Uncommon Hero
HCWH's co-founder Gary Cohen

Alternatives to PVC and DEHP

- ▶ Alternatives to PVC and DEHP
- ▶ Take Action to Reduce PVC and DEHP

Medical devices and other products that do not contain vinyl plastic or phthalates are available for use — and many health care facilities are switching to these safer alternatives.

Alternatives to PVC and DEHP

- ▶ Medical Devices (pdf)
- ▶ The Neonatal Intensive Care Unit (NICU) (pdf)
- ▶ Building Materials for Health Care (pdf)

Take Action to Reduce PVC and DEHP

HCWH has developed these tools to help health care workers take action to reduce PVC and DEHP:

- ▶ DEHP Exposures During the Medical Care of Infants: A Cause for Concern, Pub 3-6 (pdf)
- ▶ A Summary of the FDA Safety Assessment of DEHP Released from PVC Medical Devices, Pub 3-8 (pdf)
- ▶ The Weight of the Evidence on DEHP: Exposures Are a Cause for Concern, Especially During Medical Care, Pub 3-11 (pdf)
- ▶ Why Health Care is Moving Away From the Hazardous Plastic Polyvinyl Chloride, Pub 3-19 (pdf)
- ▶ PVC Medical Devices Containing DEHP: Guidelines for an Audit, Pub 3-13 (pdf)

 search

TAKE ACTION

- ▶ **Join our list of leading hospitals that are reducing PVC and DEHP!**

A growing number of hospitals are undertaking efforts to reduce PVC and DEHP use in their facilities, demonstrating the growing market shift away from this problematic material.

To add the name of your institution to this list of health care leaders promoting healthier purchasing choices, please contact info@hcwh.org.

Key Resources

- ▶ Alternatives to PVC and DEHP
- ▶ Find out more about PVC-Free Building Materials (pdf)
- ▶ Health Care Institutions Moving Away from PVC/DEHP (pdf)
List compiled by Health Care Without Harm
- ▶ Neonatal Exposure to DEHP and Opportunities for Prevention (pdf)

SHARE

HPH & ENVIRONMENT

The International HPH Network

The International HPH Secretariat  WHO CC for Evidence-Based Health Promotion in Hospitals & Health Services

HOME ABOUT EVENTS NEWS LIBRARY TOOLS MEMBERS

HPH & ENVIRONMENT

Last updated 18 August 2011 | By Michelle |  

Environment related mortality stems from a multitude of factors - including unsafe water, air pollution, waste disposal, toxic substances and so forth. The health care sector plays a major part in global environment, and thus we, as health professionals, can make a real change for the better. Hospitals are among the most intensive energy-consuming buildings and byproducts of health care industries include toxins, hazardous substances, polluted water, massive amounts of waste etc.

The International Network of Health Promoting Hospitals and Health Services (HPH) focuses on actively promoting the health of patients, staff, communities and environment – wherever possible and however possible. Doing so naturally entails harnessing the tremendous positive potential inherent in furthering a more environmentally friendly health care sector globally.

In light of the critical need for further development, documentation and dissemination of evidence-based environmental activities and initiatives in hospital and health service settings, the HPH Environment Task Force has been established.

On this page you will soon be able to find further information and documents from the Task Force, and it is our hope that these will be of good use to you in your health promotion work.

Mission & Objectives

The Task Force on HPH, Climate, and Environment presents the terms of references directly to the mission of the International HPH Network. The proposed Task Force thereby adds to better health gain by promoting the health for patients, their families, staffs, and the environment, as well as improving quality of health care.

Purpose: The International HPH Network will develop and encourage more environment friendly hospitals and health services within countries, regions, and internationally.

Objectives:

- To set up norms and standards for environment friendly hospitals & health services
- Advocate evidence-based policy and set up best practice examples regarding environment friendly HPH hospitals
- To monitor the development of health promotion regarding environment friendly intervention in hospitals & health services.

[Proposal for Task Force on HPH and Environment](#)

Conference Information

[2010 International Conference Report in Taiwan](#)

Conference Presentations

Presentations from Symposium at 18th International Conference in April 2010 in Manchester, UK:

1. [Transforming Health Care for the 21st Century \(Mr. Gary Cohen\).pdf](#)
2. [Terms of Reference & Activities \(Prof. Hanne Tonnesen\).pdf](#)

Presentations from International Conference on HPH Environment in October 2010 in Taiwan:

1. [Becoming Environment Friendly Hospitals \(Dr. Shy-Ti Chinou\) - online streaming video at BHP's English website](#)
2. [Linking HPH Strategy to Promote Environmental Sustainability \(Prof. Hanne Tonnesen\).pdf](#)
3. [Integrating Environment-Friendliness into Sustainability and Quality of Health Promoting Hospitals \(Prof. Jurgen Pelkonen\).pdf](#)
4. [A New Era of Healthier Hospital Management: The Sustainable Hospital \(Prof. Peter Orris\).pdf](#)
5. [Environmentally Friendly Policies & Initiatives Experience on Khoo Teck Puat Hospital Singapore \(Ms. Gladys Wong\).pdf](#)

Presentations from Symposium at 19th International Conference in June 2011 in Turku, Finland:

1. [Transforming Healthcare for the 21st Century.pdf \(Ms. Anja Lehto\)](#)
2. [A Journey to Sustainable Health.pdf \(Ms. Sonia Roschnik\)](#)
3. [Raising awareness on environment issues in implementing the HPH concept at the MUMC.pdf \(Ms. Marie-France Noel\)](#)
4. [A Garden in a Hospital. A Hospital in a Garden.pdf \(Dr. Michael TK Wong\)](#)
5. [Green Hospital in Taiwan – safe-guarding Lives and Environment.pdf \(Dr. You-Chen Chao\)](#)

Publications

"*Green Hospital, Green Life, Green Planet Experience Sharing on Green Hospital*" can be download from [here](#) (BHP, DOH, Taiwan website)

Reference for Hospitals (provided by HCWH)

- [Healthier Hospitals Initiative Agenda.pdf](#)
- [Healthy Hospitals Healthy Planet Healthy People: Addressing Climate Change in Health Care Settings.pdf](#)
- [Climate Change and the Role of Health Care Professionals: Education, Mitigation, Adaptation.pdf](#)
- [Tools and websites for measuring footprint.pdf](#)
- [Safer Chemicals: Hospital policies](#)
- [Sustainable Hospitals](#)
- [Faithfully Healing the Earth: Climate Change & Catholic Healthcare.pdf](#)

Task Force Members



感謝聆聽，請大家多多使用
環境友善資訊網與網路輔導團

來信請寄至 info.eqpf@msa.hinet.net
標題請註明：“環境友善醫院問題”
如有相關建議，請不吝指導

