

**Policy Measures to reduce the use of Plastic Bags
in Ho Chi Minh City
AIMING AT A SUSTAINABLE CONSUMPTION SOCIETY**



Le Van Khoa
HCMC WASTE RECYCLING FUND



Outline



- **Introduction**
- **Results of the Plastic bag use survey research**
- **Proposing possible solutions for plastic bag use reduction in HCMC**
- **Conclusions**

Worldwide...



Nearly 1000 billion plastic bags used worldwide each year (*Vincent Cobb, 2008*).

Single-use plastic bag related problems have been realized long ago. Many countries on the world have specific regulations on reducing plastic bag use.



Vietnam...



tuổi trẻ

Thời sự

THỨ BA 10-6-2008 5

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Hiểm họa môi trường từ túi nilông

Bài 1: Xài vô tội vạ!

Vì rẻ, được phát không nên túi nilông được thải ra môi trường tràn lan, không kiểm soát. Hầu hết người tiêu dùng đều cho rằng túi nilông tiện lợi nhưng không mấy ai nhận thức một cách đầy đủ về mối đe dọa do sản phẩm này gây ra.



KHOA HỌC

13

Túi nilông: Xài một, hại mười

Mỗi ngày ở VN có hàng triệu túi nilông bị thải ra sau khi sử dụng. Chúng không tự phân hủy và gây hại cho môi trường. Chúng tôi đã trao đổi với TS Nguyễn Trung Việt, Trưởng Phòng Quản lý chất thải rắn Sở Tài nguyên - Môi trường TPHCM, về vấn đề này

● Phóng viên: Trong tổng số rác thải ra ở TPHCM, rác túi nilông chiếm bao nhiêu phần trăm, thưa ông?



100

Đó là số người được hỏi đầu trả lời từ nilông rất tiện

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Chúng tôi có ý kiến

Hãy bớt dùng túi nilông!

(Nhào đục từ "Hiểm họa môi trường từ túi nilông", Tuổi Trẻ 10-6)

● Các em báo Tuổi Trẻ đã chuyển đi đúng thông tin về bản vẽ môi trường từ túi nilông. Rõ ràng đây là những cảnh báo rất hữu hiệu vì ảnh hưởng trực tiếp đến chất lượng môi trường sống của từng người dân. Các phiên tin những biện pháp cụ thể nhằm hạn chế việc sử dụng túi nilông về chi phí và cả nâng cao ý thức cộng đồng trong việc bảo vệ môi trường sống đang ngày bị



không làm được từ nilông thì có nhiều cách, trong đó thiết nghĩ các giải pháp sau nên được chú ý xem xét: 1. Đánh thuế với giá cao, người dùng sẽ xem xét kỹ đóng và sẽ tìm kiếm những vật liệu khác. 2. Thu phí môi trường, nếu chỉ ghi báo gọi bằng túi nilông thì làm thế nào thu những túi khác mà có thể được quan tâm sử dụng. 3. Tuyên truyền giáo dục các học sinh của các trường với

người dân hiểu nay cũng tăng lên rất nhiều. Và điều nguy hiểm hơn là túi nilông sẽ được vứt xuống kênh rạch hay những bãi rác vắng người qua. Với diện tích đất đai ngày hẹp, người ta chưa thấy được nguy cơ tiềm ẩn của loại rác này vậy. Nhưng trước mắt, một số em học đã bắt đầu hình thành những bao riêng.

NHẬT HUY

● Tôi ở nông thôn, trước đây

▶ Xem tiếp trang 5

Vietnam...



- **Used more than necessary**
- **Distributed for free by retailers**

Maximark System: 10 tons/month

Big C System: 20 tons/month

(Tuổi trẻ, 10/6/08)



(Vnexpress, 5/6/2008)

Map of Ho Chi Minh City and its Districts



Map Ho Chi Minh City
Rate 1 : 800 000



Background



- **Area = 2,095 km².**
Average population density = 3,067 pers/km²
- **Population = 6,424,519 million (2006)**
Male: 3,081,804 & Female: 3,342,715
- **Industry: 41,917 units**
12 industrial zones & 03 export processing zones
- **Domestic solid waste: 6,000-6,500 tons/day**
- **Hospital waste: 07 tons/day collected and treated**

Results of the Plastic bag use Survey Research

- Implemented: HCMC Waste Recycling Fund
- Time: 10-12/2007
- Research units:

Research unit	No. of questionnaires delivered	No. of answers received
Public people/inhabitants	300	300
Plastic manufacturer & recycler	184	39
Retailer (market, supermarket, shopping center)	116	36
Government Official	24	23

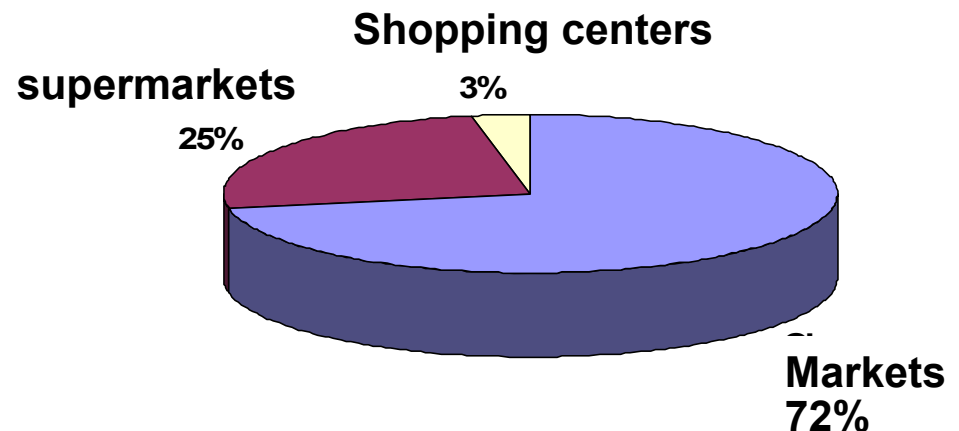
1. Number of plastic bag used



- **Base on the survey**

	No. in HCMC	Interviewed	# Questionnaires answered	Amount used (ton/day)
Markets	229	75	27	23
Supermarkets	78	29	5 (systems)	8
Shopping centers	17	12	4	1

⇒ Amount of plastic bag use estimated:
more than 30 tons/day



1. Amount of plastic bag used (cont.)

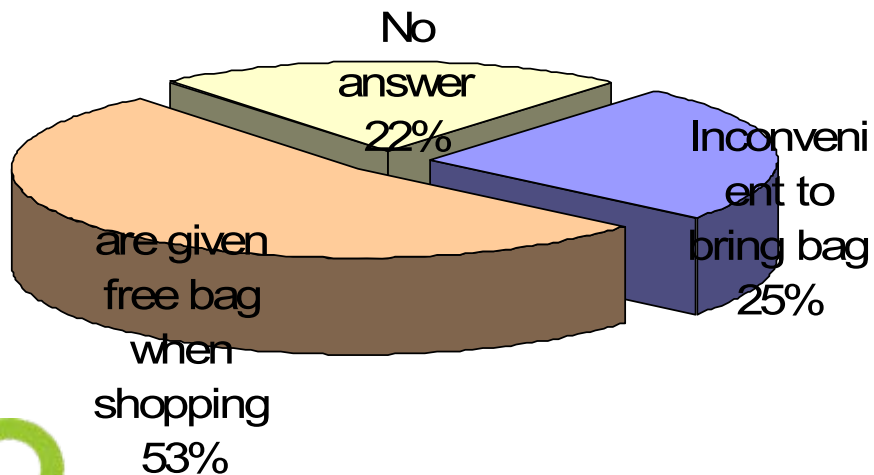


- **Base on the number of households:**
 - ≈ 1.3 million households in HCMC
 - consumed: 5-9 million plastic bags/day
 - equivalent to **34 – 60 ton/day**
- ⇒ **The amount of plastic bags used daily occupied only about 1% of solid wastes landfilled**
...but generate a lot number of environmental problems

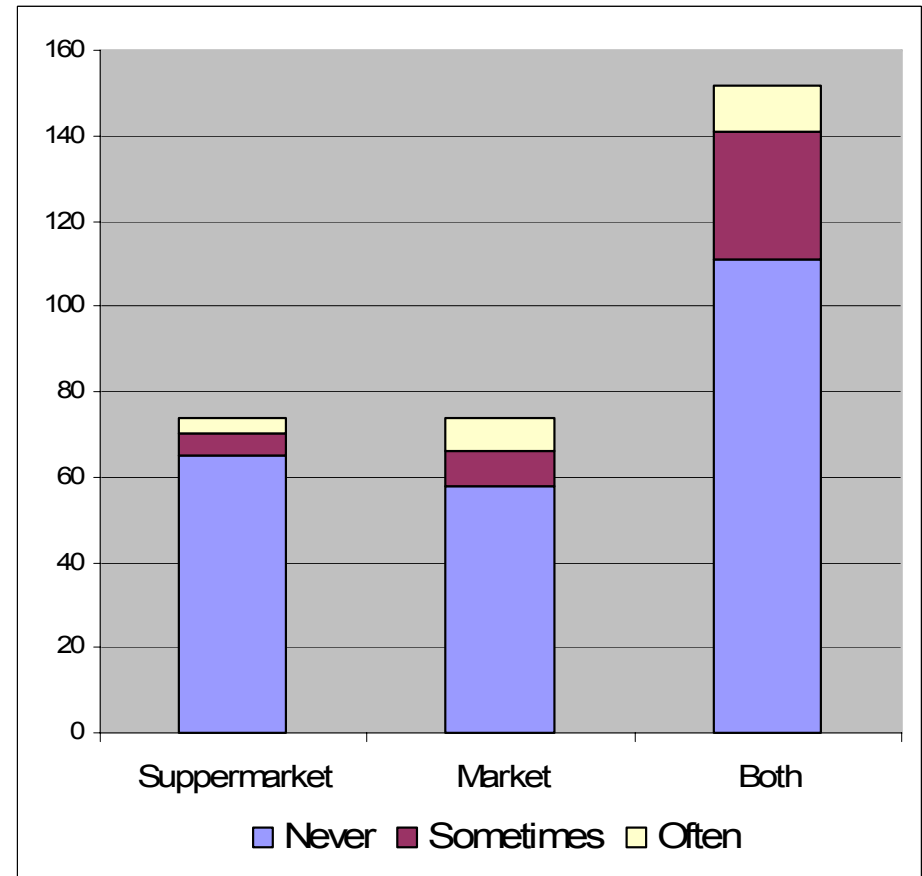
2. Habit of using plastic bags



- Most of people do not bring their own bags when shopping (only 7% do)
- Reasons: given for free by retailers (53%) and inconvenient to bring when shopping (25%)



Reason not to bring own bags when shopping

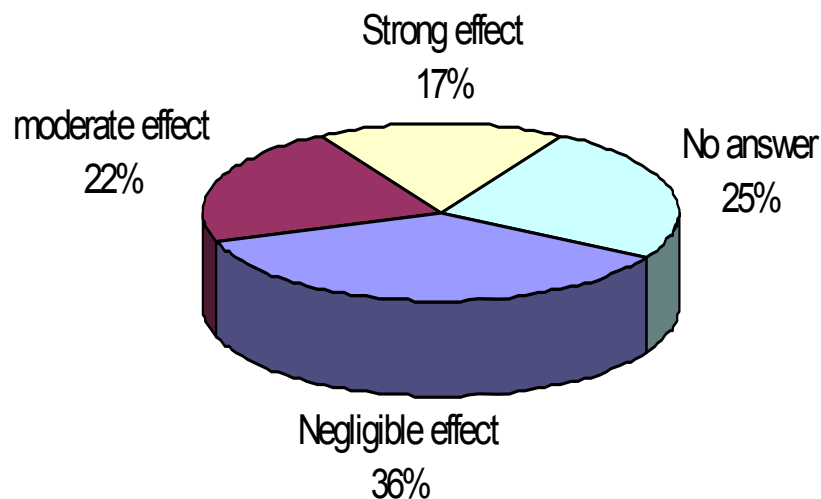


Habit of bringing own bag when shopping

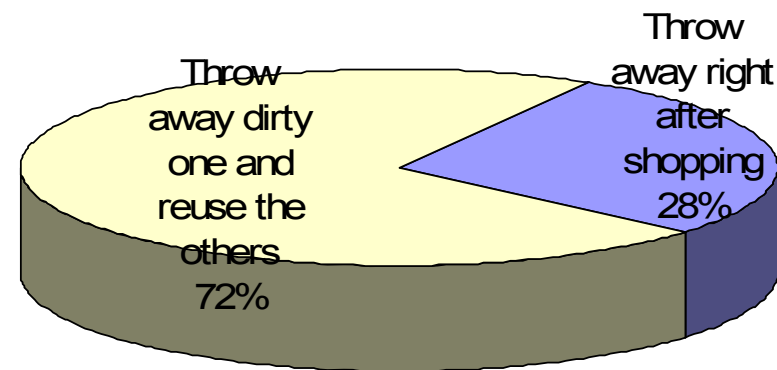
2. Habit of using plastic bags (cont.)



- Only 17% of supermarkets consider giving free plastic bags highly affect their profit



- About $\frac{3}{4}$ households keep plastic bags for reusing in their house



Habit of reusing plastic bags

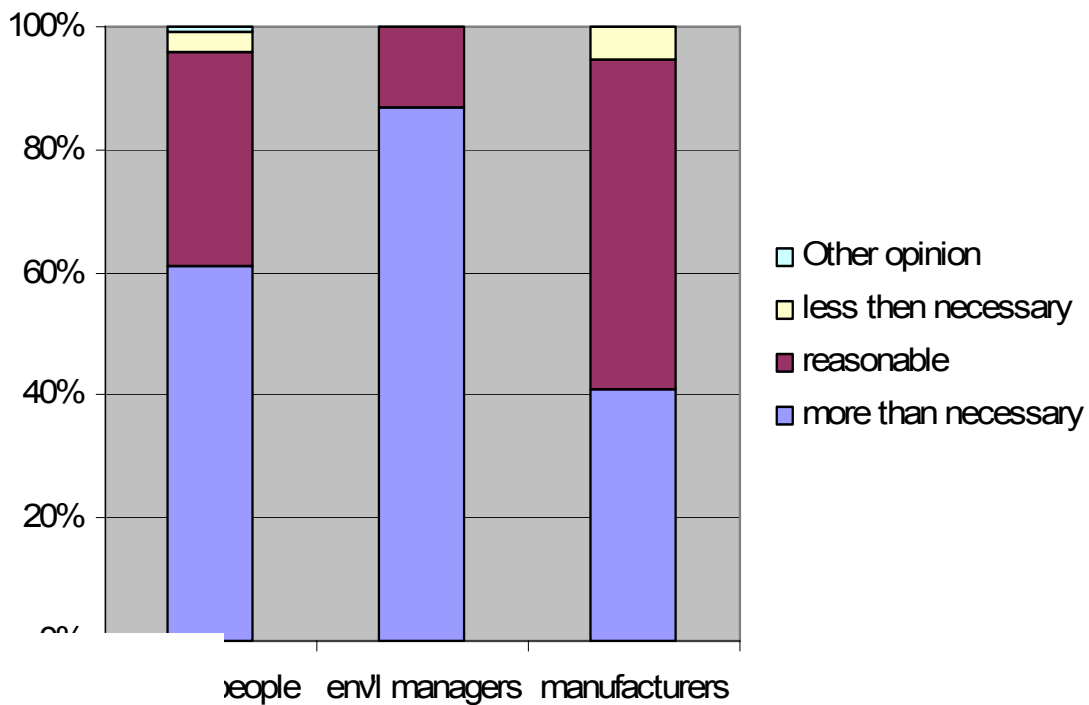
Supermarket opinion on giving free plastic bags



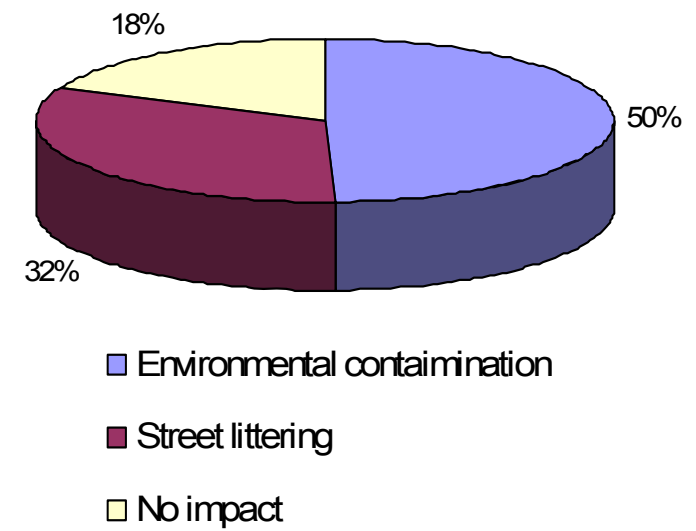
3. Opinions on current status of using plastic bags

- Except for manufactures, more than 60% interviewees thinks plastic bags are overused

- More than 80% of public people realize adverse effects of using plastic bag



Opinion on plastic bag use

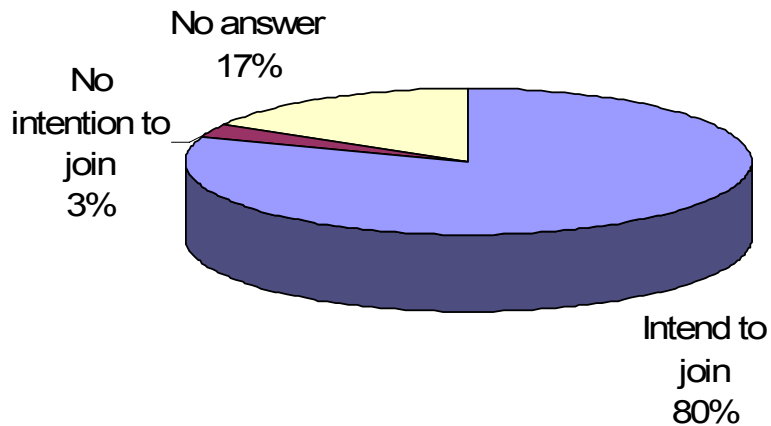


Opinions on adverse effects of using plastic bags

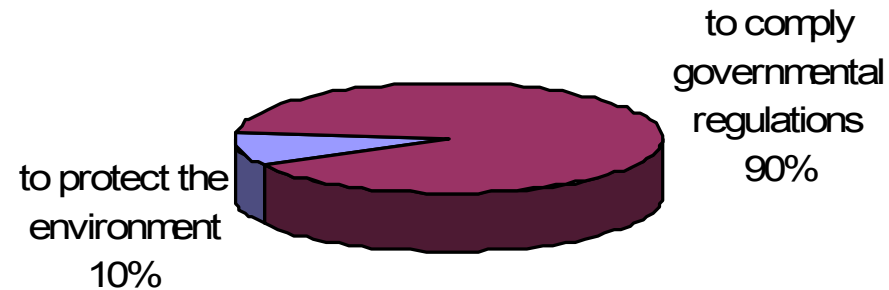
4. Willingness to reduce using plastic bags

Supermarkets, shopping center..

- Most supermarket, shopping center intend to join the Plastic bag use reduction program
- ➔
- But only if the government has regulations on this

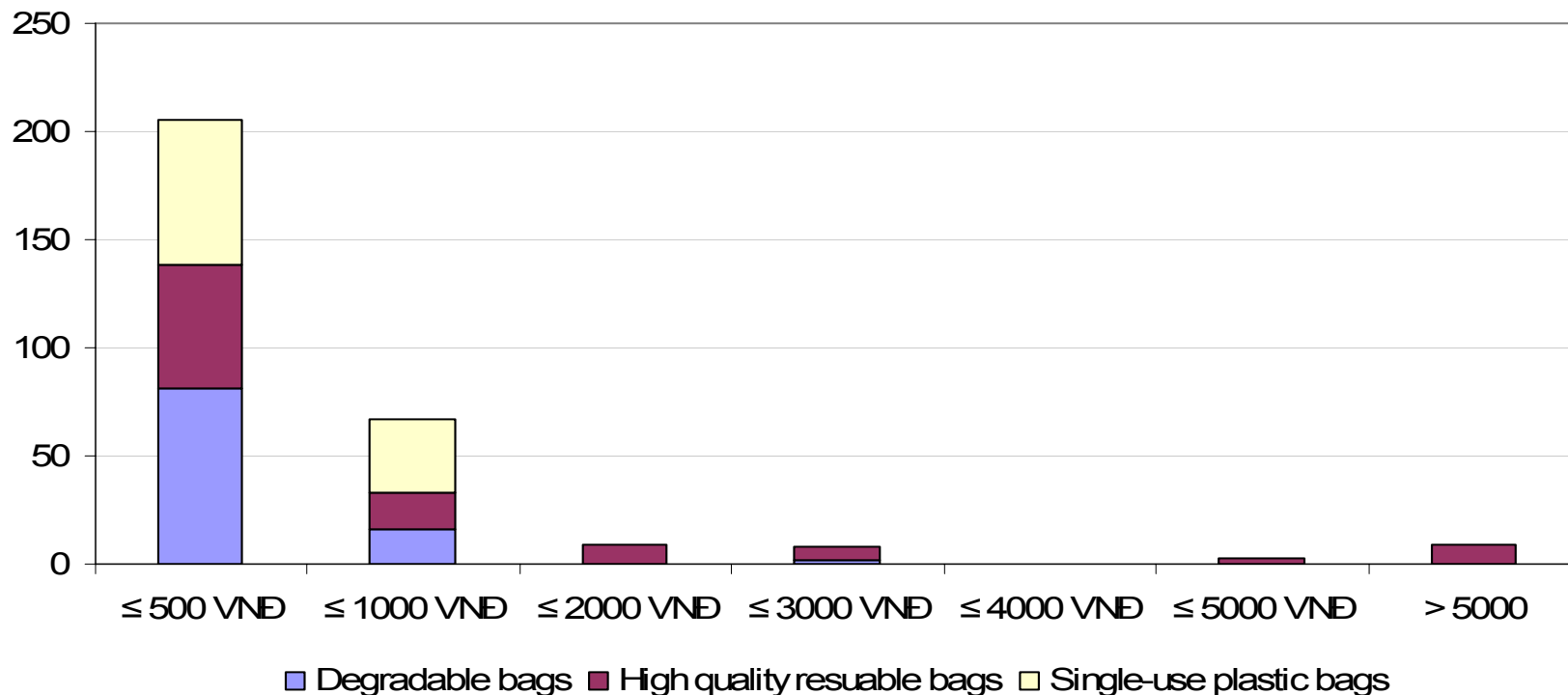


Opinion on Plastic bag reduction Program



Reason to reduce plastic bag use

4. Willingness to reduce using plastic bags (cont.)



Most of public people agree to pay <500 VND for carrying bags;
With the price >4000 VND, all people choose high quality reusable bag.

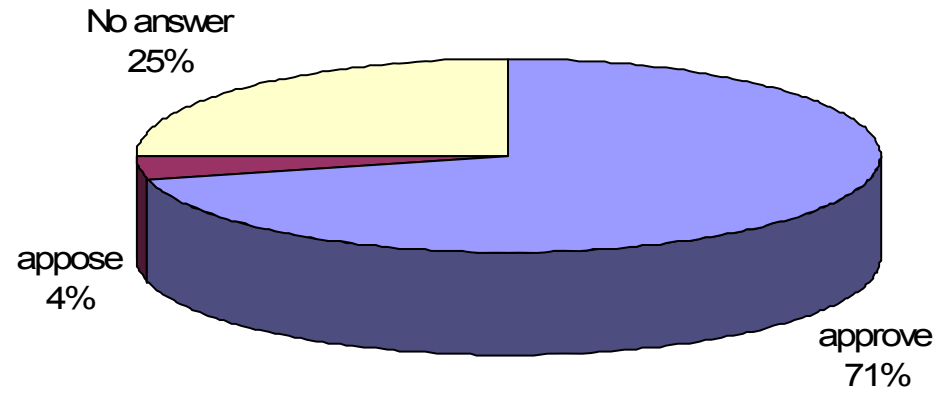


4. Willingness to reduce using plastic bags (cont.)

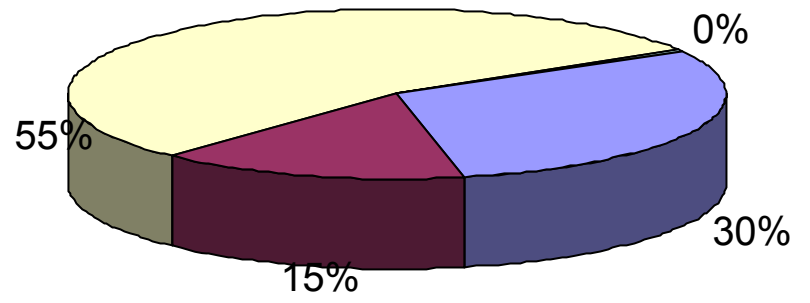
Public people

- Most of public people support Program of Reducing plastic bag use

- Only 15% will bring their own bags, 30% intend to pay for plastic bags



Opinion on Plastic bag reduction Program



- Pay for plastic bag
- Bring own bag
- Shop at other market/supermarket where still give free bags

Opinion on paying for plastic bags

Alternatives for plastic shopping bags

- Functional agencies set the policy to orientate the retailer and customers to shift from plastic bags other environmental-friendly bags voluntarily or mandatorily.
- Alternative bags: safe for environment, suitable to the local socio-economic conditions.



❖ *The handle paper bags:*



Advantage:

- Good design,
- Reusable,
- A way to advertise for shops,
- Completely recyclable (100% paper)

Disadvantage:

- Can not hold the wet or too heavy goods.

Proposals:



- Replacing plastic bags to paper bags at shopping centre, retail shops.
- Avoiding to influence of the turnover of shops although the price of paper bags is often more expensive than the plastic bags
- Design, size of paper bags are selected by shopping centers
- Applying the comprehensive regulations to the whole network to ensure fairness in competition.

Proposals (Cont)



- Shopping centers: commitment to stable prices of goods.
- Responsibility of functional agencies: explanations of the negative impacts to environment and the benefit of using paper bags.
- Extend to other retail shops when the program is stable.



❖ *Reusable textile bags:*



Advantage:

- Reusable,
- Good design, firm.

Disadvantage:

- High price, charge

Proposals:



- Don't force, just encourage using by the public education programs.
- Not suitable for shopping centers but suitable for supermarkets.
- Customers can get a discount if they use the textile bags in next shopping time.
- This alternative do not add to the expenses to supermarkets because it replace to the expenses of giving free plastic bags.

❖ *Biodegradable bags made from botanical materials*



- The most environmental-friendly solution
- High price → the using is still limited
- The quality of bags must be certificated by the functional agencies, some manufactures are introduced to system of shopping centers or supermarkets



Biodegradable plastic bags (cont)



- Setting a developmental strategies and policies to support the production and the consumption of environmental-friendly bags, release regulations, quality standards for all kind of environmental-friendly bags.
- Pay attention to the food shortage → unsympathetic opinions



❖ *Woven HDPE Reusable bags*



Advantages:

- Using easily
- Can be used immediately instead of testing and certificating like biodegradable bags.
- Low price



Woven HDPE reusable bag ('Swag bag')

(cont.)



- Metro Cash&Carry VN system has applied this solution and reduced plastic bag use.
- Introducing the environmental impacts of plastic bag to inhabitants.
- Incentive solutions for the customers:
 - Changing the old/rotten bag to the new one with lower price
 - The supermarkets collect old/rotten bags → recycle

Solutions proposed for plastic bags use management



- A part of Master Plan of Solid Waste Management according to 3R “Reduce – Reuse – Recycle” policy in Hochiminh city.
- Integrating some solutions in short-term and long-term.



❖ *The command-and-control solutions*



- Ban of get free plastic bags at the shopping centre and supper market.
- Limit producing, trading and consumption plastic bags at Hochiminh city.
- Set-up the collection and recycling system to plastic bags

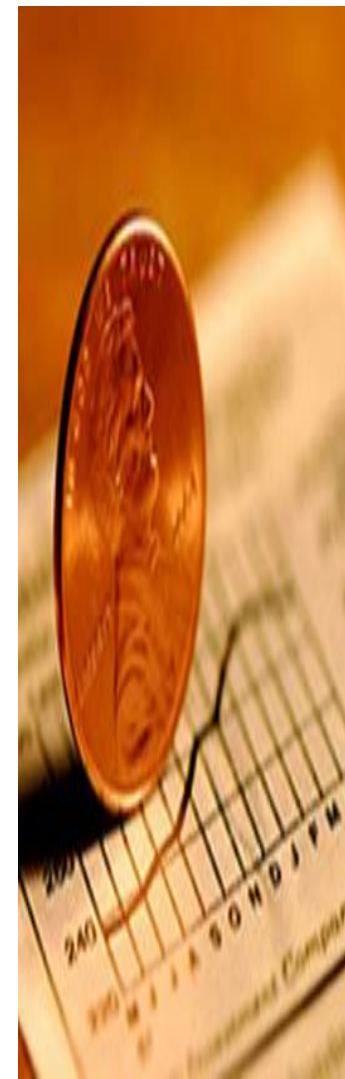


* *The economic solutions*

- Consumption fee: fee is charged on each plastic bag produced and included in production cost which is paid by consumers.
- Fee for collecting and recycling plastic bags: charging producers

❖ *The communication solutions*

- Encourage supermarkets, shopping centers... to voluntarily participate “The plastic bag use reduction program”.
- Set-up the propaganda for reducing plastic bag use, orientate consumers to reuse bags.



❖ *Other solutions*



- Promoting studies/projects on the environmental-friendly bags.



1. Ban retail shops distributing freely plastic bags for customer



- Target: force the retail shops to request their customers to pay for plastic bags or change to other bags in order to alter customer's habit.
- Implementation route:
 - *Phase 1*: ban big supermarkets, shopping centers distributing plastic bags which is thinner 0.1mm.
 - *Phase 2*: ban small and medium supermarkets, shopping centers, storekeepers in big markets distributing plastic bags which is thinner 0.1mm.

1. (cont)



- Objects influenced by regulation will be extended gradually.
- Campaigns of improving public awareness of negative impacts on environment by bag using, the reasons to release regulations through media, leaflet,...
- Releasing regulations which has fine enclosely to reinforce implementation validity

2. Tax of using plastic bag



- Target: Change consumption habit of customers
- Don't apply to:
 - ✓ Fresh food wrapping plastic (meat, fish, vegetable)
 - ✓ In-store packaging plastic
 - ✓ Reusable plastic bag
 - ✓ Plastic bag using for other targets which environmental friendly bag can't replace.
 - ✓ Price of plastic bag $> 5,000\text{VND}/\text{bag}$

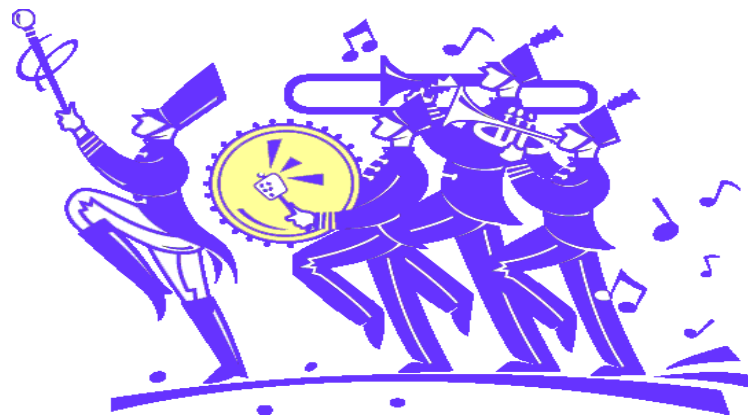
2. (cont)



- Mechanism:
 - Apply to producers/distributors of plastic bag, the fee is charged on each plastic bag produced and included in production cost which is paid by retailer/consumer.
- Impact directly and change retailer/customer's habits on plastic bags using.
- Tax must be high enough to change retailer/consumer's habit on plastic bag using.
- Charging on producers/distributors and transfer to Environmental Protection Fund of Hochiminh City.

3. Encourage distributors/retailers to participate in program of plastic bag use reduction

- Target: encourage distributors/retailers (start at supermarket systems, big shopping centers then others) participate in program of Plastic bag use reduction.



3. (cont.)



- Participants should develop their own plan:
 - Supply customers with environmental-friendly bags instead of plastic bags
 - Have propagandize program to increase staff and customers' awareness of reducing, reusing and recycling plastic bags
 - Train cashiers on solutions to limit number of free plastic bags given.

3. (cont.)



- Organize system to take back plastic bags for recycling
- Have financial incentives to encourage customers in reusing plastic bags or bringing their own carrying bags.
- Report the target and implementation results of reducing giving free plastic bags periodically.





❖ *Solutions of reducing plastic bag use:*

- Reduce a little money in the bill or give coupon or accumulative points → encourage customers in bringing their own carrying bags
- With reusable plastic bags: taking back and changing a new one for customers when the current one is damaged.
- Set up the collecting sites for disposable plastic bags in supermarkets or department stores
- Encourage customers to bring disposable plastic bags back to supermarkets or department stores by giving accumulative points which can be changed into coupons

3. (cont.)



- To encourage the retailers (supermarket, department stores...) to participate in the Program, following factors should be taken into concern:
 - The campaign plan is prepared in detailed and thoroughly;
 - The instructions in Code of Conduct should be specific and clear.
 - Accompanied with the propagandizing and campaign plan, the target and significance of the plan should be introduced clearly before and while the plan is implemented.

3. (cont.)



- Have incentives to encourage by specific interests;
- Management agencies should cooperate with the environmental organizations and the business association;



4. Propagandizing to increase community's awareness



- Integral solution
- Should be organize frequently and periodically through the propagandizing campaigns
- People addressed:
 - ✓ Customers
 - ✓ Retailers
 - ✓ Plastic bag manufactures

4. (cont.)

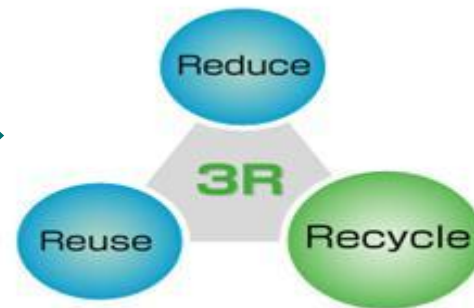


❖ *Propagandizing content:*

- Adverse effects on socio-economy, environment and public health;
- Orientate consumers toward environmental-friendly bags and reusable bags;
- Measures to reduce using and reuse plastic bags in daily life;
- Meaning of plastic bags separation and recycling.

5. Additional solutions – Technical solutions

- Investments are needed for:
 - Technical solutions for developing and producing carrying bags that replace plastic bags
 - Technical solutions for recycling plastic bags



6. Additional solutions – Setting collecting system



- Playing important role in collecting and recycling plastic bags;
- The currently widely used plastic bag are single-use HDPE bag with low value;
- Management agency co-ordinates with the markets, supermarkets, department stores, residential areas, tenement houses... to arrange the special collected sites for plastic bags.

6. (cont.)



- Encourage the customers to bring plastic bags to get accumulative points for coupons based on the number bags brought.
- Co-ordinate to arrange collecting sites at supermarkets, department stores at the beginning period, then widen to all the city areas.
- Plastic bag recycling companies are responsible for operating and maintaining the collecting sites (or tendering to take over the plastic bags collecting)

Evaluation of the plastic bag use reduction solutions



Table. Evaluation of the plastic bag use reduction solutions [3]

Solutions	Advantages	Disadvantages	Applicability
Put a ban on free distribution of plastic bag	<ul style="list-style-type: none">- Reduce significantly the amount of consumed plastic bag in short-term- Reduce environmental problems related to plastic bags- Not much money needed	<ul style="list-style-type: none">- May have objection from manufacturers, retailers and consumers- Need time to build up the law and put into effect	<ul style="list-style-type: none">-Can not apply on large scale in present condition-More effective if applied on nation-wide scale

Table . (cont.)



Solutions	Advantages	Disadvantages	Applicability
Tax on plastic bag consumption	<ul style="list-style-type: none"> - Affect directly the habit of disposable plastic bag using; reduce the amount of plastic bag consumed - Reduce the problems related to plastic bags - Make money for environmental activities 	<ul style="list-style-type: none"> -Need to organize the charging system - Need time to build-up and to establish the tax regulations 	<ul style="list-style-type: none"> - Properly effective when apply on nation-wide scale
Do research on alternative bag	<ul style="list-style-type: none"> - Have alternative bags which is environmental friendly 	<ul style="list-style-type: none"> -much money and time needed -May be unsuccessful 	<ul style="list-style-type: none"> Can deploy immediately

Table. (cont.)



Solution	Advantages	Disadvantages	Applicability
Encourage the retailers to voluntarily reduce plastic bags using by joining Code of Conduct Program	<ul style="list-style-type: none">- Easy to have the approval- Retailer can choose their objective and way of conduct in reducing plastic bag use- Awareness on Plastic bag use reduction can be reinforced continuously	<ul style="list-style-type: none">- Need time to propagandize and to persuade the retailers- May take time to recognize the program effect- Money to conduct is paid by retailers	<ul style="list-style-type: none">- Feasible in present condition

Table. (cont.)



Solution	Advantages	Disadvantages	Applicability
Propagandize to improve the public awareness	<ul style="list-style-type: none">- Improve the public awareness to reduce plastic bag use	<ul style="list-style-type: none">- much money and time needed- Difficult to evaluate the effect	<ul style="list-style-type: none">- Should be implemented immediately
Set up a network of plastic bags collecting and recycling	<ul style="list-style-type: none">- Enhance the plastic bags collecting and recycling- Reduce the harm of plastic waste- Improve the public awareness	<ul style="list-style-type: none">- Need the cooperation between the environmental agencies and related organizations- Need money for investing and maintaining the system	<ul style="list-style-type: none">- Can be deployed simultaneously with the Program of Plastic bag reduction Code of Conduct for retailers

Conclusions



- Due to their functionality, cheapness and availability, plastic bags are used widely and more than necessary; over-consumption is one of main causes which create waste and effect to environment and society.
- The public has started to realize adverse effects of overusing plastic bags and most support the Plastic bag use reduction program;
- The plastic bag use reduction program should start at retailers (supermarket, shopping center) which are now giving free plastic bags.

Conclusions (cont.)



- The plastic bag use reduction program is as one measure of 3R policy. Applying 3R approach in production and consumption is very necessary in the development process aiming to Sustainable Consumption and Production (SCP) in HCM City
- In short term, it should pay attention to main environmental priorities then SCP objects will be extended in future.
- Institutionalizing standards and criteria on environmental-friendly living style and introducing reasonable consumption models at the same time.



**Thank you
for your attention!**