



加强绿色引领

推进中国塑料加工业可持续高质量发展

Strengthening Green Leadership to Promote Sustainable and High-Quality Development of China's Plastics Processing Industry

王占杰 Wang Zhanjie

中国塑料加工工业协会 理事长 President, CPPIA

2024. 10. 31 中国南京
Oct 31, 2024 Nanjing, China

1、中国塑料加工业简介

1、 Introduction to China's Plastics Processing Industry

2、可持续发展工作及取得成绩

2. Achievements in Sustainable Development

3、中国主要相关政策

3. Major Related Policies in China

4、面临挑战和机遇

4. Challenges and Opportunities

5、可持续发展建议

5. Recommendations for Sustainable Development



中国塑料加工业简介 Introduction to China's Plastics Processing Industry

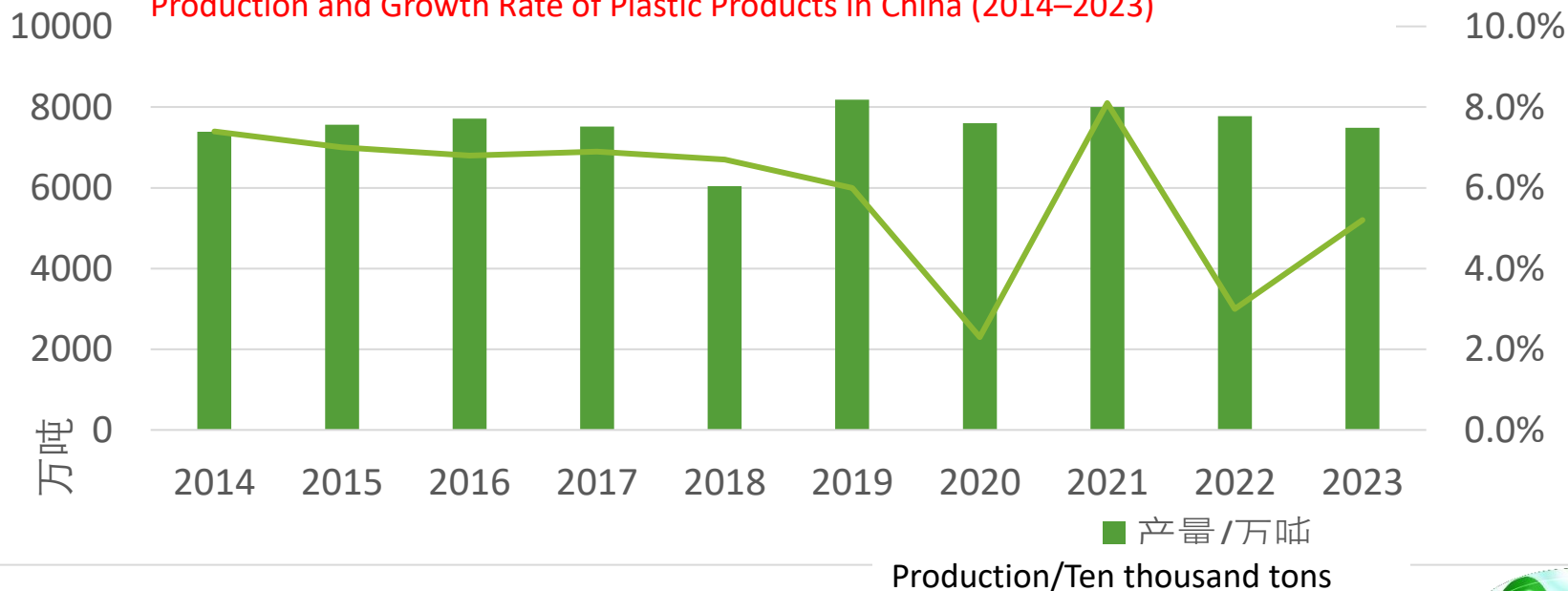
- 中国塑料制品最早生产追溯到20世纪初叶
- The production of plastic products in China dates back to the early 20th century.
- 1949年产量只有200余吨产量
- In 1949, the production volume was only over 200 tons.
- 1956年产量开始逐年上升
- Production began to increase annually starting from 1956.
- 1979年改革开放后，中国塑料制品产量以超过10%的速度增长，1996年产量达到1574.2万吨，跃居世界第二，2010年开始成为产量最高国家
- After the reform and opening-up in 1979, China's plastic production grew at a rate exceeding 10% annually, reaching 15.742 million tons in 1996, making it the second-largest producer in the world. In 2010, China became the largest plastic-producing country.
- 2016年以后产量低位增长，注重提升品种、品质、品牌，推进转型升级，行业逐步向高质量发展迈进。2023年实现7488万吨产量。
- After 2016, production growth slowed as the industry focused on improving variety, quality, and branding, promoting transformation and upgrading towards high-quality development. In 2023, the production reached 74.88 million tons.



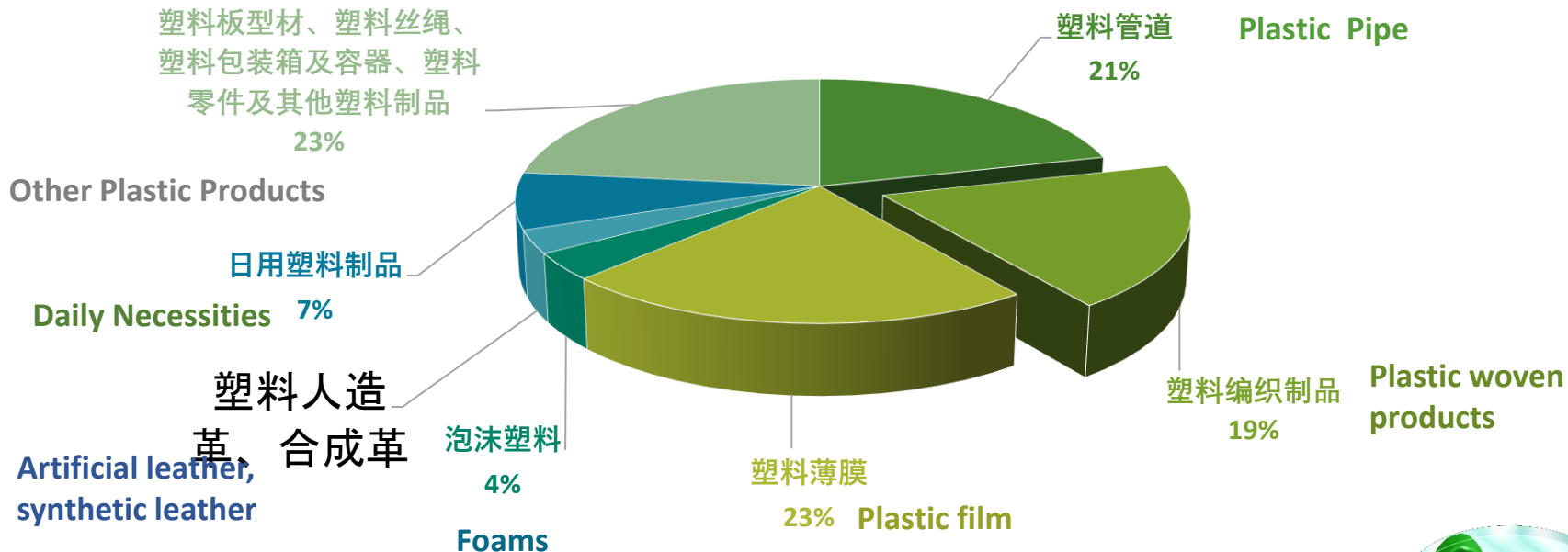
中国塑料加工业简介 Introduction to China's Plastics Processing Industry

2014-2023年中国塑料制品产量及增长率

Production and Growth Rate of Plastic Products in China (2014-2023)



2023年主要制品占比情况



可持续发展工作及取得成绩

● 中国塑料加工工业协会开展的主要工作 Key Initiatives by the CPPIA

- 引领塑料加工行业绿色可持续发展 **Leading the green and sustainable development of the plastics processing industry**
- 发布《塑料加工业“十四五”发展规划指导意见》和《塑料加工业“十四五”科技创新指导意见》，近年持续发布《中国塑料加工业绿色发展报告》
Issued the "14th Five-Year Plan Development Guiding Opinions for the Plastics Processing Industry" and the "14th Five-Year Plan Technology Innovation Guiding Opinions for the Plastics Processing Industry." In recent years, it has continuously published the "China Plastics Processing Industry Green Development Report."
- 提出功能化、轻量化、精密化、生态化、智能化的发展方向 **Proposed functionalization, lightweighting, precision, eco-friendliness, and intelligence development directions**
- 举办多场中国塑料技术创新与可持续发展交流及展览会 **Hosted numerous China Plastics Technology Innovation and Sustainable Development Conferences and Exhibitions.**
- 联合外卖平台组织推荐“易回收、易再生”塑料包装容器、降解塑料包装 **Partnered with food delivery platforms to recommend "easy-to-recycle, easy-to-regenerate" plastic packaging containers and degradation-friendly plastic packaging recommendations.**
- 成立以院士牵头的“废弃塑料回收及高值化利用”工作组和专家、企业参加的“海洋废塑料防治”工作组 **Established working groups led by academicians on "Recycling and High-Value Utilization of Waste Plastics" and "Prevention of Marine Plastic Waste," involving experts and enterprises.**
- 与中国轻工业联合会、中国石油和化学工业联合会、中国包装联合会联合发布《加快塑料污染治理，推进生态文明建设》倡议书
- 与中国石油和化学工业联合会、中国物资再生协会共同牵头绿色再生塑料供应链联合工作组，上下游产业链携手推进中国塑料循环经济；
- 与全国30家地方塑料行业协会、商会、学会共同签署、发布《关于塑料加工行业全面推行绿色生产方式的倡议书》

Jointly issued the "Proposal to Accelerate Plastic Pollution Control and Promote Ecological Civilization Construction" with the China Light Industry Association, China Petroleum and Chemical Industry Federation, and China Packaging Federation.

Formed a Green Recycled Plastics Supply Chain Working Group, with participation from upstream and downstream industries, to advance China's plastic circular economy.

Signed and released the "Proposal for Comprehensive Implementation of Green Production Methods in the Plastics Processing Industry" together with 30 local plastics industry associations, chambers of commerce, and academic societies.



可持续发展工作及取得成绩

● 中国塑料加工工业协会开展的主要工作 Key Initiatives by the CPPIA

- 引领塑料加工行业绿色可持续发展 **Leading the green and sustainable development of the plastics processing industry**
- 发布《塑料加工业“十四五”发展规划指导意见》和《塑料加工业“十四五”科技创新指导意见》，近年持续发布《中国塑料加工业绿色发展报告》
Issued the "14th Five-Year Plan Development Guiding Opinions for the Plastics Processing Industry" and the "14th Five-Year Plan Technology Innovation Guiding Opinions for the Plastics Processing Industry." In recent years, it has continuously published the "China Plastics Processing Industry Green Development Report."
- 提出功能化、轻量化、精密化、生态化、智能化的发展方向 **Proposed functionalization, lightweighting, precision, eco-friendliness, and intelligence development directions**
- 举办多场中国塑料技术创新与可持续发展交流及展览会 **Hosted numerous China Plastics Technology Innovation and Sustainable Development Conferences and Exhibitions.**
- 联合外卖平台组织推荐“易回收、易再生”塑料包装容器、降解塑料包装 **Partnered with food delivery platforms to recommend "easy-to-recycle, easy-to-regenerate" plastic packaging containers and degradation-friendly plastic packaging recommendations.**
- 成立以院士牵头的“废弃塑料回收及高值化利用”工作组和专家、企业参加的“海洋废塑料防治”工作组 **Established working groups led by academicians on "Recycling and High-Value Utilization of Waste Plastics" and "Prevention of Marine Plastic Waste," involving experts and enterprises.**
- 与中国轻工业联合会、中国石油和化学工业联合会、中国包装联合会联合发布《加快塑料污染治理，推进生态文明建设》倡议书
- 与中国石油和化学工业联合会、中国物资再生协会共同牵头绿色再生塑料供应链联合工作组，上下游产业链携手推进中国塑料循环经济；
- 与全国30家地方塑料行业协会、商会、学会共同签署、发布《关于塑料加工行业全面推行绿色生产方式的倡议书》

Jointly issued the "Proposal to Accelerate Plastic Pollution Control and Promote Ecological Civilization Construction" with the China Light Industry Association, China Petroleum and Chemical Industry Federation, and China Packaging Federation.

Formed a Green Recycled Plastics Supply Chain Working Group, with participation from upstream and downstream industries, to advance China's plastic circular economy.

Signed and released the "Proposal for Comprehensive Implementation of Green Production Methods in the Plastics Processing Industry" together with 30 local plastics industry associations, chambers of commerce, and academic societies.



可持续发展工作及取得成绩 Sustainable Development Efforts and Achievements

● 清洁低碳生产 Clean and Low-Carbon Production



When extruding or injection molding, install exhaust collection hoods.

挤出、注塑加工时
加废气收集罩



人造革合成革绿色生产

Artificial leather, synthetic leather green production

(1) 严格依照标准控制生产过程的VOC排放，绝大部分塑料制品加工过程挥发性有机污染物（VOC）和粉尘排放量很低，符合中国相关排放标准要求。

Strictly controlling VOC emissions in production processes according to standards. The emissions of VOCs and dust during the processing of most plastic products are very low, meeting China's relevant emission standards.

(2) 推广使用加工节能技术和装备，实现生产高效运行和节能降耗。

Promoting the use of energy-saving technologies and equipment for efficient production and energy conservation.

(3) 通过技术进步，成功实现有些产品有机溶剂在制造单元的减量使用、循环利用或能量回收。

Through technological advancements, some products have successfully reduced the use of organic solvents in manufacturing, achieved recycling, or energy recovery.

(4) 加大绿电使用比例，继续推进塑料加工业节能减排。

Increasing the proportion of green electricity usage and continuing to advance energy conservation and emission reduction in the plastics processing industry.



可持续发展工作及取得成绩 Sustainable Development Efforts and Achievements

●绿色设计 Green Design

从塑料全生命周期的视角开展绿色设计 Implementing green design from a life cycle perspective of plastics

●减量化（节约材料、能源）、单材化（容易回收）、资源化（长寿命，可重复使用）。

●Reduction (saving materials, energy), single-material use (easy recycling), resource-based design (long life, reusable)。

- 开发环境友好型发泡剂生产轻质塑料，减少原料使用，例如微发泡技术。
- 开发轻量化（50mm）高强度共挤膜，可用于10kg重型包装，实现减材。
- 复合膜功能性单材化技术创新，有效解决回收利用难问题。
- Developing environmentally friendly blowing agents to produce lightweight plastics and reduce material use, such as micro-foaming technology.
- Developing lightweight (50mm) high-strength co-extrusion films for use in 10kg heavy-duty packaging to achieve material reduction.
- Innovating functional single-material technology for composite films to solve recycling challenges effectively.

● 环境友好型材料和助剂应用 Applying environmentally friendly materials and additives.

➢ 注重“绿色、低碳、清洁”塑料助剂产品的研发及应用

- Emphasizing the research, development, and application of "green, low-carbon, clean" plastic additives.



可持续发展工作及取得成绩 Sustainable Development Efforts and Achievements

● 废弃物处置 Waste Disposal

● 可循环、易回收、可降解

● Recyclable, Easy-to-Recycle, Degradable



(1) 最早成体系和规模生产、使用再生塑料。现已形成一批再生塑料回收加工集散地和回收料交易市场；

(2) 处理废弃塑料量最大国家，PET回收率超过90%，EPS回收率超过80%；

(3) 建成年产3万吨PET回收再生装置；

(4) 2023年回收1890万吨塑料。

(1) China was one of the first countries to systematically and massively produce and use recycled plastics. Currently, several recycling processing hubs and recycled materials trading markets have been formed.

(2) China processes the largest volume of waste plastics, with PET recycling rates exceeding 90% and EPS recycling rates over 80% ;

(3) Established a 30,000-ton annual capacity PET recycling and regeneration facility.

(4) In 2023, China recycled 18.9 million tons of plastic.



可持续发展工作及取得成绩 Sustainable Development Efforts and Achievements

●再生塑料生产及应用 Production and Application of Recycled Plastics

大力提升塑料废弃物回收利用水平，科学增加回收料使用比例。

Greatly enhancing the recycling and utilization of plastic waste, scientifically increasing the usage ratio of recycled materials.

- 回收PS料用于生产PS相框、XPS保温隔热材料、广告KT板等
- 回收PET饮料瓶生产纤维 Using recycled PS materials to produce PS photo frames, XPS insulation materials, advertising KT boards, etc.
- 回收PE、PP用于生产塑木制品、塑料花盆、节水灌溉器材及包装材料等 Using recycled PET bottles to produce fibers.
- 聚氨酯类的汽车仪表盘废弃后粉碎制造再生日用品

Using recycled PE, PP to produce plastic-wood products, plastic flowerpots, water-saving irrigation equipment, and packaging materials.

Polyurethane-based car dashboards are crushed to make regenerated daily products after disposal.



再生塑料



可持续发展工作及取得成绩 Sustainable Development Efforts and Achievements

●可降解塑料研发及推广

Research and Promotion of Degradable Plastics

- 主要应用在难回收且容易泄露到环境中的场合
替代一些一次性塑料制品
- PBAT、PLA、PHA等
- 预计2024年中国生物降解塑料产能将达到300多万吨
- Mainly used in situations where recovery is difficult, and leakage into the environment is likely.
- PBAT、PLA、PHA, etc.
- China's biodegradable plastic capacity is expected to reach over 3 million tons by 2024.



可持续发展工作及取得成绩 Sustainable Development Efforts and Achievements

● 发挥塑料制品节能减碳等功能化优势

Leveraging Plastics' Functional Advantages in Energy-Saving and Carbon Reduction

- 推广复合材料在航天航空上应用
- 推动车用塑料应用比例
- 农用薄膜应用使作物增产
- 塑料节水器材推进高效节水和设施农业自动化进程
- PVC门窗和有机保温材料在建筑保温领域的贡献
- 各种功能性薄膜节能减碳.....
- Promoting the application of composite materials in aerospace.
- Increasing the proportion of plastics used in automobiles.
- Agricultural films increase crop yields.
- Plastic water-saving equipment promotes efficient water use and automation in facility agriculture.
- PVC windows and organic insulation materials contribute to building insulation.
- Various functional films save energy and reduce carbon emissions.



可持续发展工作及取得成绩 Sustainable Development Efforts and Achievements

● 标准化助力绿色化发展

● Standardization Supporting Green Development

- 制订绿色工厂、绿色产品评价标准
- 启动《塑料制品污染物排放治理指南》、《塑料制品工业大气污染防治可行技术指南》等相关团标制定
- 构建塑料全生命周期的碳足迹核算体系，完善碳足迹跟踪、核算机制，组织制定《塑料制品碳足迹通则》国家标准
- 推动国家及地方相关部门制定、修订促进塑料绿色可持续发展相关政策法规及标准文件。

- Establishing green factory and green product evaluation standards.
- Initiating the development of group standards such as the "Guide for Pollution Emission Control of Plastic Products" and the "Feasible Technology Guide for Air Pollution Control in the Plastic Products Industry."
- Building a carbon footprint accounting system for the full life cycle of plastics, improving carbon footprint tracking and accounting mechanisms, and organizing the development of national standards for the "General Rules for Carbon Footprint of Plastic Products."
- Promoting the development and revision of relevant policies, regulations, and standards to foster green and sustainable development of plastics.



可持续发展工作及取得成绩 Sustainable Development Efforts and Achievements

- 积极参加塑料国际文书谈判相关工作
- Actively Participating in International Negotiations on Plastic-Related Instruments



中国可持续发展政策 China's sustainable development policy

● 近年中国部分重要相关政策 Key Recent Policies in China

- 《2024—2025年节能降碳行动方案》
 - 《关于加快推动制造业绿色化发展指导意见》
 - 《关于完整准确全面贯彻新发展理念做好碳达峰碳中和工作的意见》
 - 《“十四五”塑料污染治理行动方案》
 - 《“十四五”循环经济发展规划的通知》
 - 《“十四五”工业绿色发展规划》
-
- *2024-2025 Energy Conservation and Carbon Reduction Action Plan*
 - *Guiding Opinions on Accelerating the Green Development of Manufacturing*
 - *Opinions on Fully, Accurately, and Comprehensively Implementing the New Development Concept and Effectively Achieving Carbon Peak and Carbon Neutrality*
 - *14th Five-Year Action Plan for Plastic Pollution Control*
 - *Notice on the 14th Five-Year Plan for the Development of a Circular Economy*
 - *Industrial Green Development Plan of the 14th Five Year Plan*

.....

● 挑战 Challenges

- 1、对废旧塑料回收利用的政策支持有待加强；
- 2、塑料加工全链条应对塑料污染治理工作的能力不足；
- 3、废弃塑料的回收利用水平有待提高；
- 4、降解塑料研发及应用尚需加强；
- 5、对塑料的科学准确宣传力度不够。



1. Policy support for recycling waste plastics needs to be strengthened.
2. The ability of the entire plastics processing chain to address plastic pollution control is insufficient.
3. The level of plastic waste recycling and utilization needs improvement.
4. Research and application of degradable plastics require enhancement.
5. Insufficient efforts in scientifically promoting accurate awareness of plastics.

● 机遇 Opportunities

- 1、政府、社会高度重视。习近平总书记指出：“绿色发展是高质量发展的底色，新质生产力本身就是绿色生产力”。
- 2、产业整合加速有利于推进绿色水平提升；
- 3、绿色政策有力推动行业绿色发展；
- 4、塑料废弃物污染治理推动产业升级；
- 5、新技术、新业态与塑料加工业互相促进，融合发展



1. The government and society place great importance on green development. President Xi Jinping has emphasized, "Green development is the foundation of high-quality development, and new productive forces are inherently green."
2. Accelerating industry integration contributes to advancing green development levels.
3. Green policies strongly promote the industry's green development.
4. Plastic waste pollution control drives industry upgrading.
5. New technologies and new business models are mutually promoting and integrating with the plastics processing industry.

可持续发展建议 Recommendations for Sustainable Development

- 1、规划双碳目标，加快低碳发展
- 2、加快结构调整，促进绿色升级
- 3、推行清洁生产，减少环境污染
- 4、加强绿色设计，推动可持续发展
- 5、倡导循环经济，推进回收利用
- 6、加强技术研究，提升降解塑料水平
- 7、注重绿色法规，优化标准体系
- 8、完善绿色支撑，强化平台建设
- 9、加强社会宣传，科学引导应用
- 10、培育产业集群，助推园区建设
- 11、支持公约谈判，履行绿色责任

1. Plan for dual carbon goals and accelerate low-carbon development.
2. Accelerate structural adjustments to promote green upgrades.
3. Implement clean production to reduce environmental pollution.
4. Strengthen green design to promote sustainable development.
5. Advocate for a circular economy and promote recycling.
6. Enhance research to improve degradable plastic technology.
7. Focus on green regulations and optimize the standards system.
8. Improve green support and strengthen platform construction.
9. Strengthen social awareness and scientifically guide applications.
10. Cultivate industry clusters and promote the construction of green parks.
11. Support international negotiations and fulfill green responsibilities.





Thanks!

展会中有相关展示，
欢迎大家参观交流

There are relevant exhibitions in the
exhibition, welcome to visit and exchange



中国塑料加工工业协会

China Plastics Processing Industry Association

地址：北京市朝阳区东三环南路98号高和蓝峰大厦918室

Address: Room 918, Gaohe Lanfeng Building, 98 East Third Ring
Road South, Chaoyang District, Beijing

网址(Web) : www.cppia.com.cn

手机(Hanphone) : 13911517486

电话(Tel) : 010-65221868

邮箱(Email) : wang006006@126.com