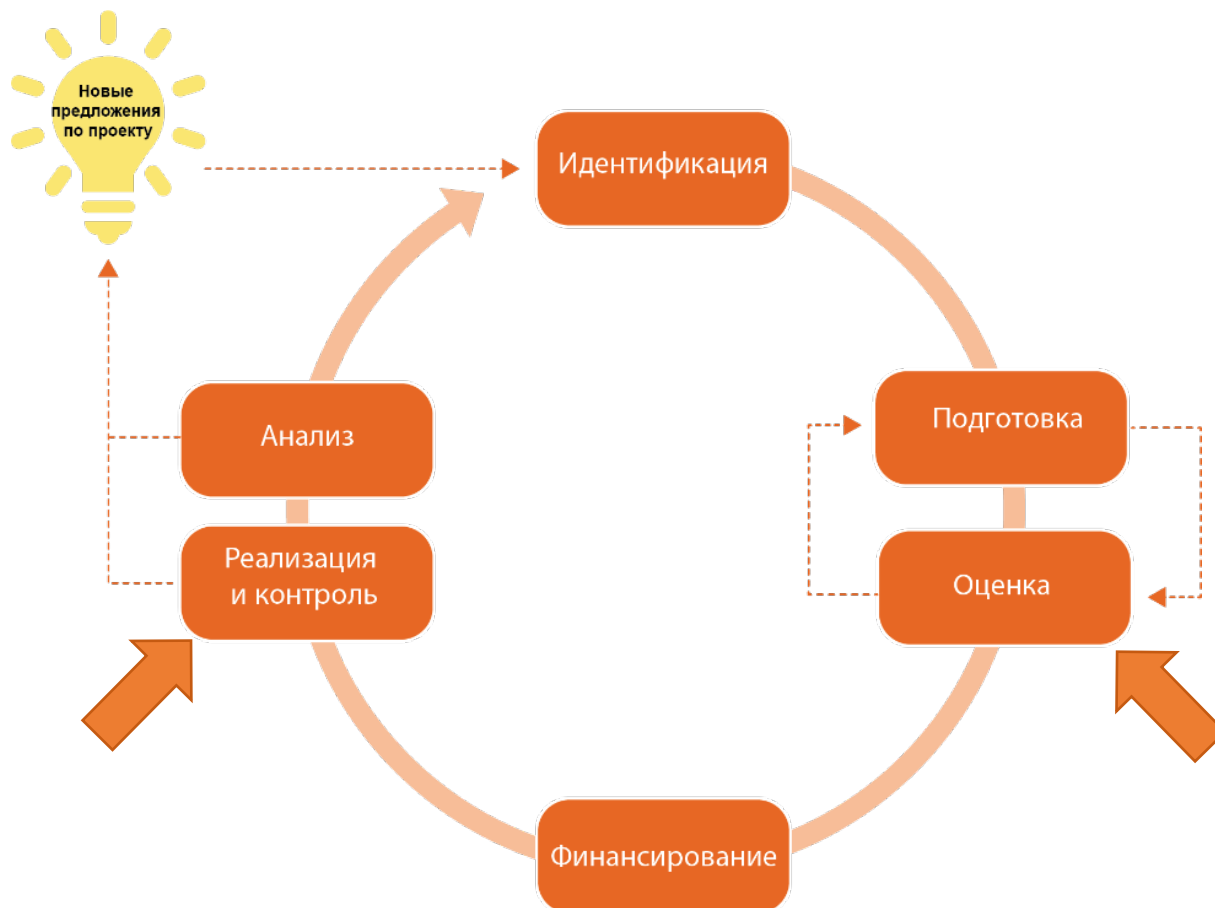


Экологические аспекты проектов по управлению ТБО

Valts Vilnītis

Руководитель группы реализации проекта WESCOOP

Проектный цикл



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Управление твердыми бытовыми отходами

- ТБО
- Этапы: сбор – сортировка – перевозка – сортировка – переработка – захоронение
- От линейной экономики к экономике замкнутого цикла
- Экологические аспекты: производство – сбор – перевозка – переработка – захоронение на полигонах
- Энергия из отходов – за и против

Линейная экономика



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Линейная экономика в прошлом



...еще линейная экономика:



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...и еще линейная экономика:



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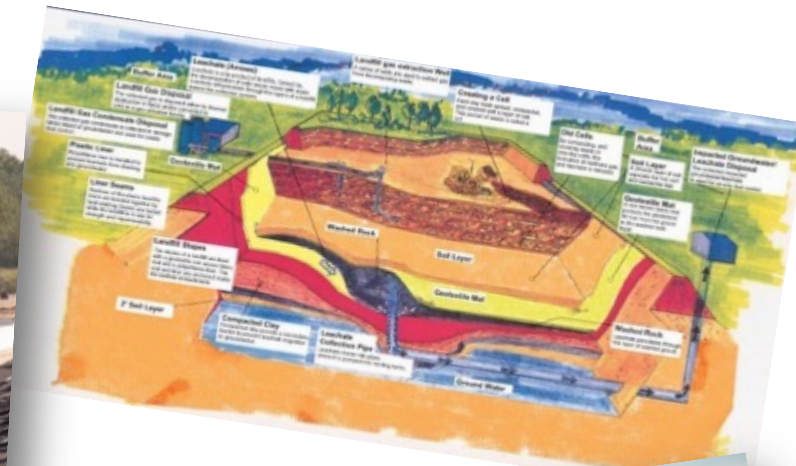


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...ТОЖЕ ЛИНЕЙНАЯ ЭКОНОМИКА:



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Линейная экономика



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Экономика замкнутого цикла



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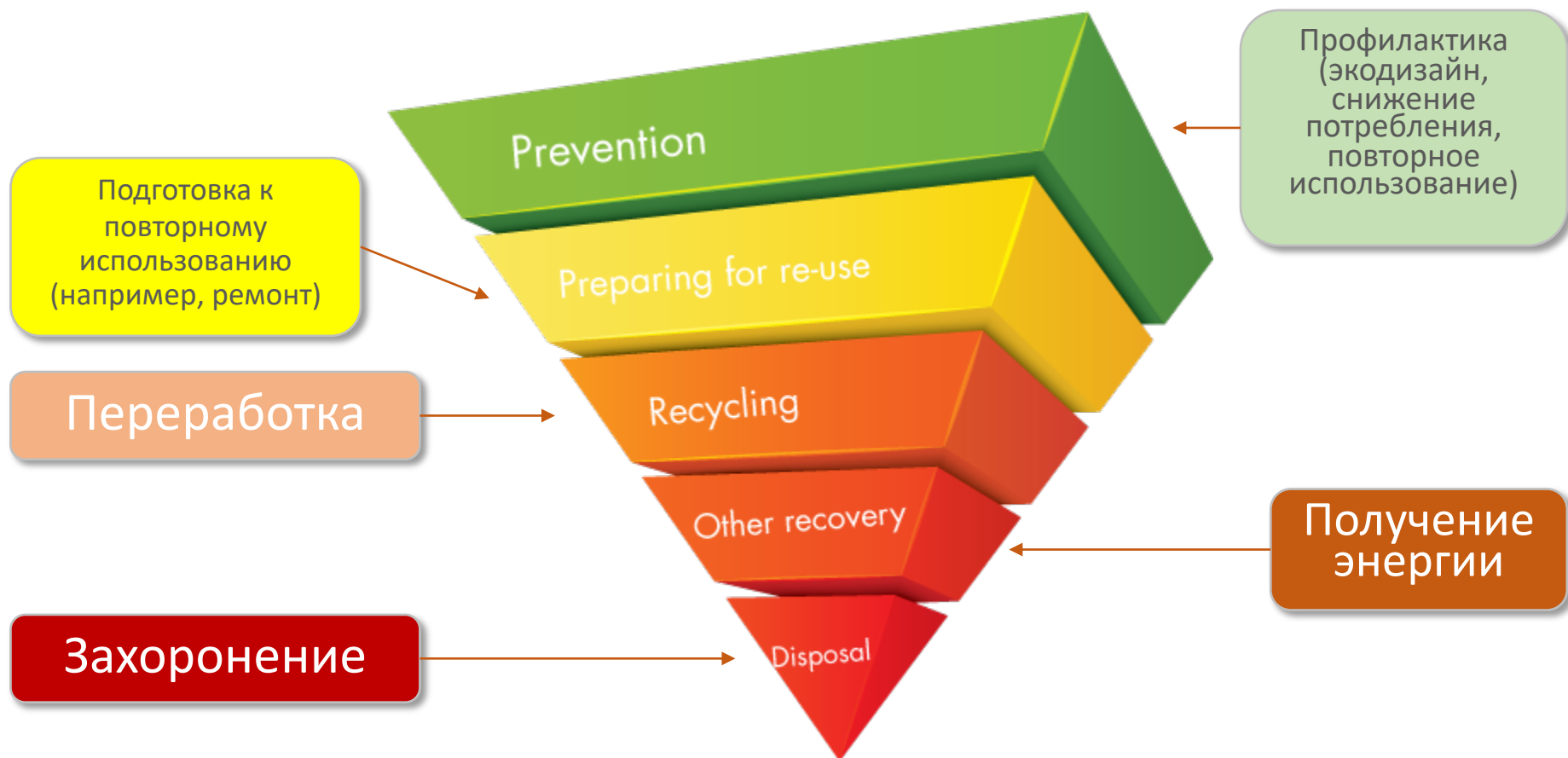


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Иерархия методов управления отходами («пирамида»)



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Этапы: сбор



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Этапы: раздельный сбор



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Этапы: перевозка; выбор места



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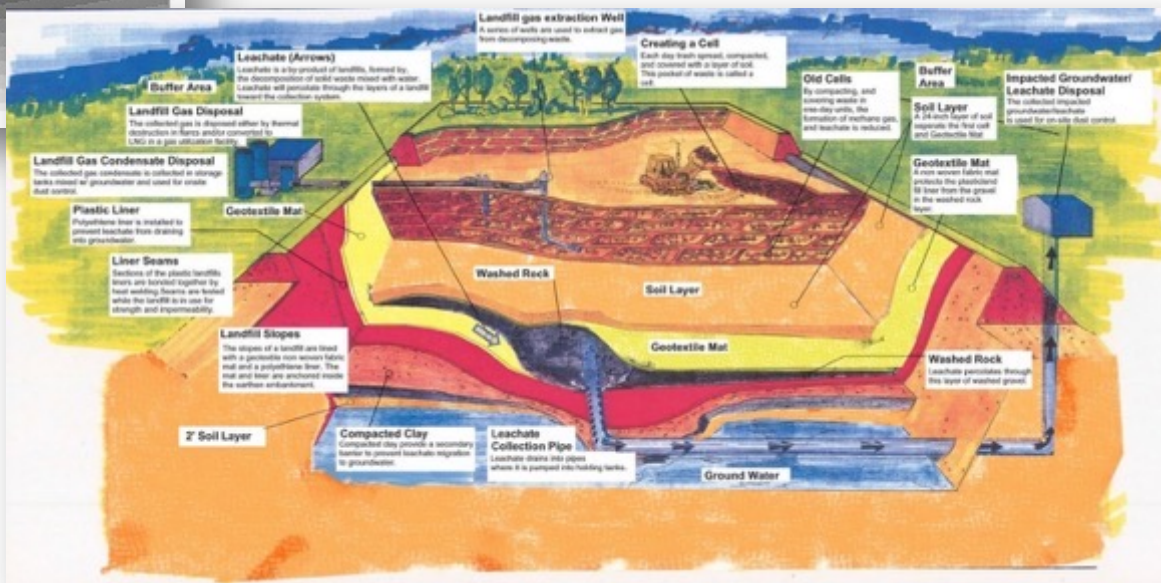
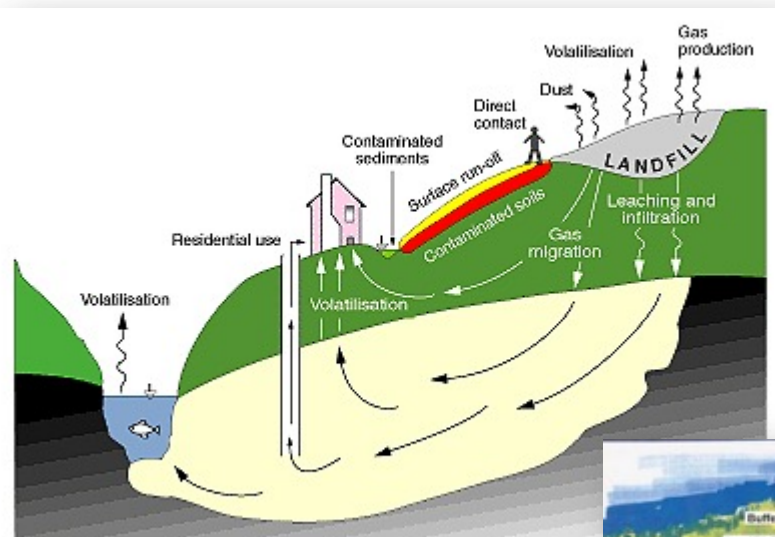
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Этапы: (еще одна) сортировка



Экологические аспекты захоронения



Экологические аспекты сжигания отходов



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Энергия из отходов – за и против

- Большие мусоросжигательные заводы: уходят в прошлое



- Биогаз – отопление, топливо
- Биогаз – биохимическая переработка
- Топливо из органических отходов, которые иначе нельзя утилизировать (RDF – топливо, полученное из отходов)



Если нужна дополнительная информация, ...

- ...смотрите здесь: <https://wecoop.eu/ru/regional-knowledge-centre/eu-policies-regulations/>. Экономика замкнутого цикла и отходы – политика и нормативные акты Европейского Союза
- и здесь: <https://wecoop.eu/wp-content/uploads/2020/04/Circular-Economy-brochure-RU.pdf>. Брошюра об экономике замкнутого цикла
- посмотрите фильм: <https://youtu.be/anqWde9teuU> и почитайте здесь: <https://www.getlini.lv/ru>. Пример успешной рекультивации старой свалки
- про Бишкек: <http://ekois.net/otsenka-vozdjeystviya-bishkekского-poligona-tverdyh-bytovykh-othodov-na-okruzhayushhuyu-sredu/>
- про переработку биогаза – последние новости: <https://meduza.io/feature/2021/11/27/amerikanskies-uchenye-rasschitali-kak-vygodno-prevraschat-gaz-so-svalok-v-korm-dlya-lososya-zaodno-eto-pomozhet-borotsya-s-izmeneniem-klimata>
- сжигание отходов в Вене: <https://positionen.wienenergie.at/en/projects/>

В презентации использованы иллюстрации из следующих источников:

- <https://en.wikipedia.org/>
- <https://www.letsrecycle.com/>
- Modern Disposal Services (<https://www.moderncorporation.com/>)
- Petts, J and Edulgee, G. Environmental Impact Assessment for Waste Treatment and Disposal Facilities. p 229. John Wiley and Sons, Chichester. 1994)
- <http://agreenerpathenv180.blogspot.com/2011/09/frank-r-bowerman-landfill-irvine-ca.html>
- Karaşan, Ali & Ilbahar, Esra & Kahraman, Cengiz. (2019). A novel pythagorean fuzzy AHP and its application to landfill site selection problem. Soft Computing. 23. 10953–10968
- AKI Press
- Thai News Net
- RECYCLING Magazine
- <https://www.pinterest.com/>
- Фото Владимира Ушакова
- Фото проекта WECOOP
- Фото автора

Спасибо!

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