

Valuing and mainstreaming biodiversity and protected areas



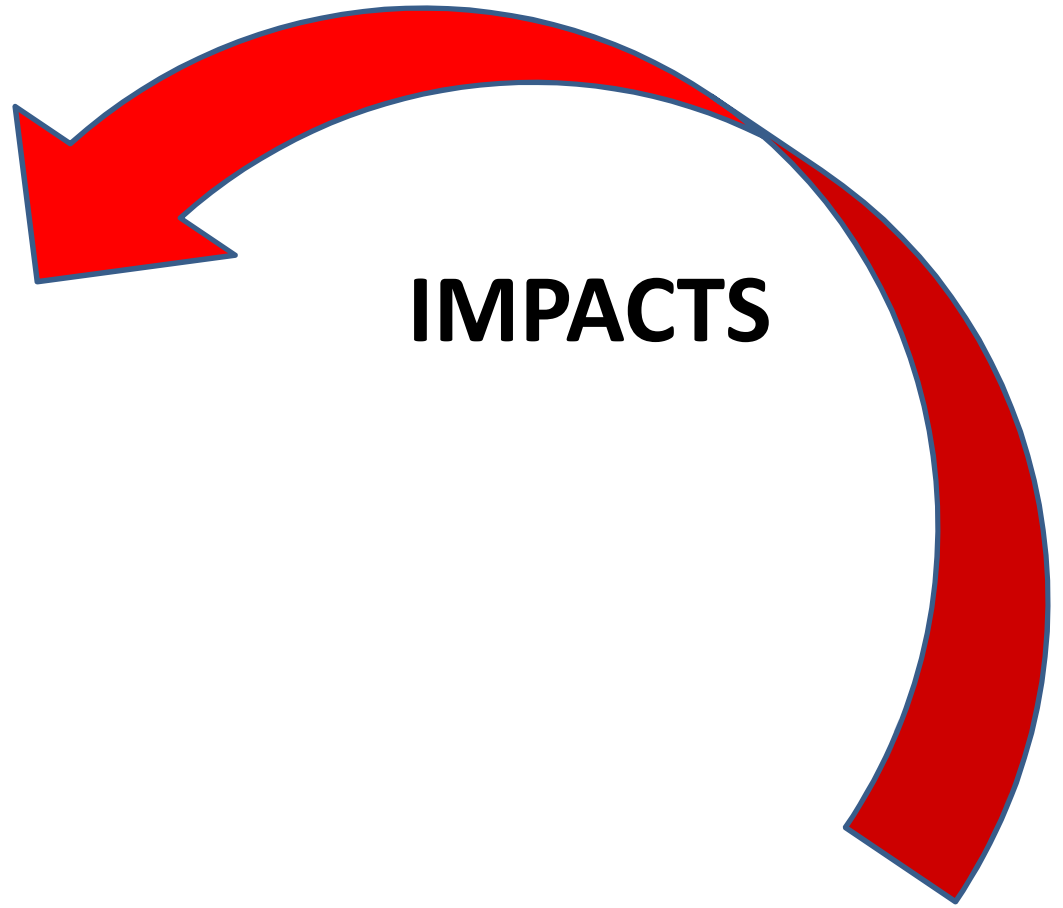
Jamison Ervin, UNDP

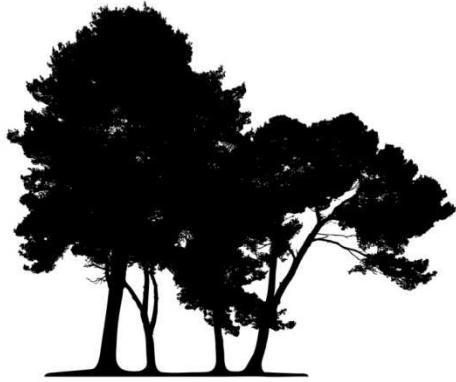


35000 ha of forest store over 1.4 billion gallons of water per day, serving more than 8 million people daily

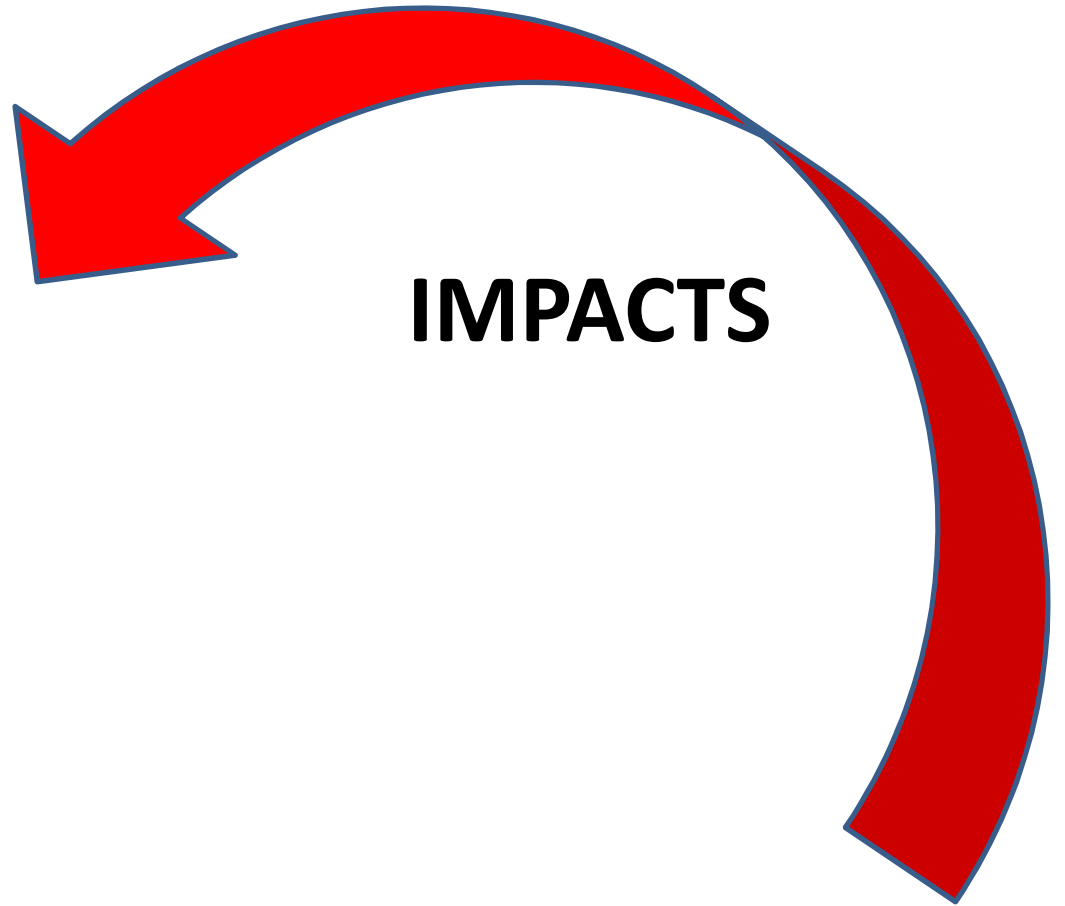
The cost is \$320 million, BUT this investment avoids \$6 billion in water treatment costs (plus \$300 million/year in operating costs)



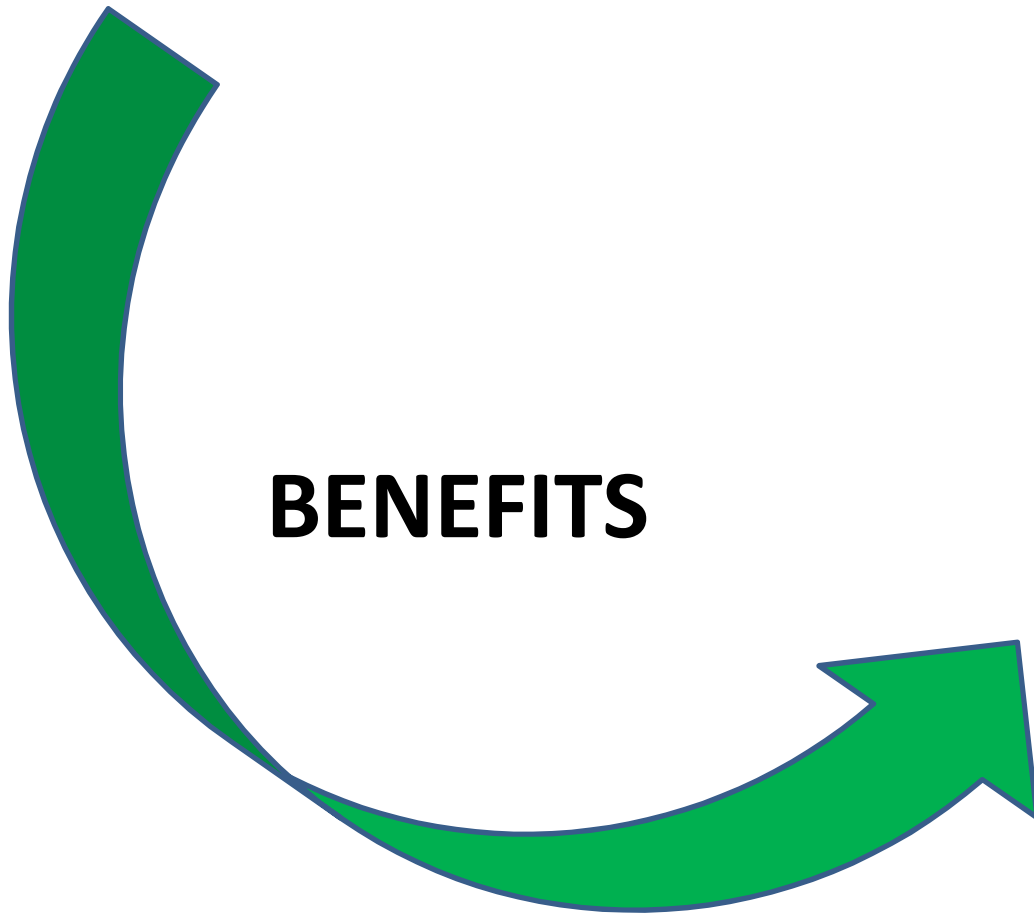


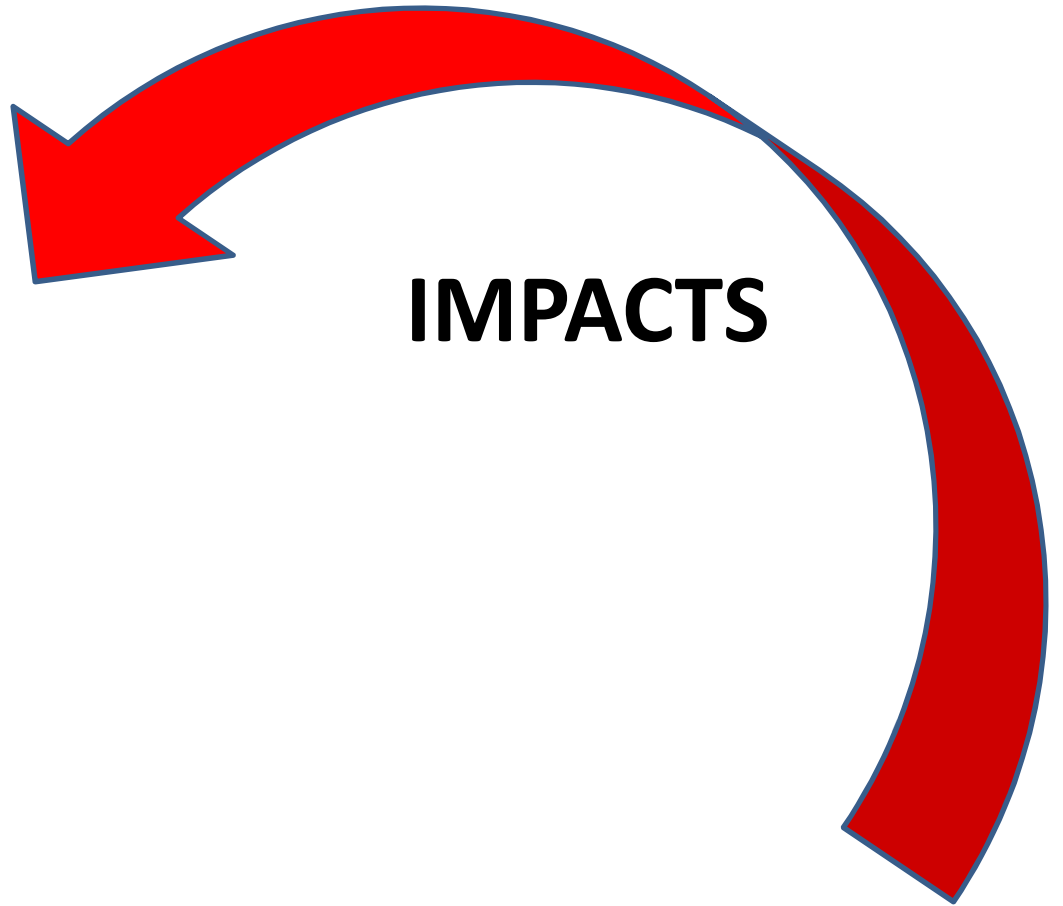
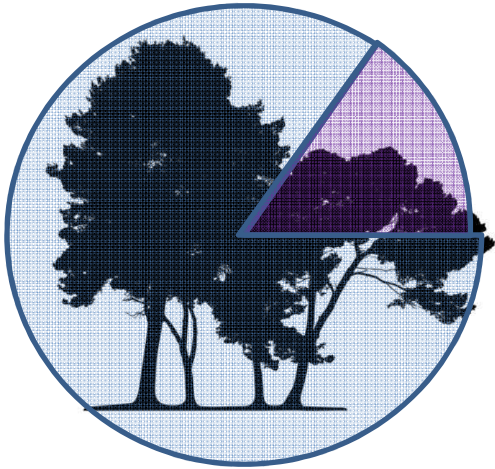


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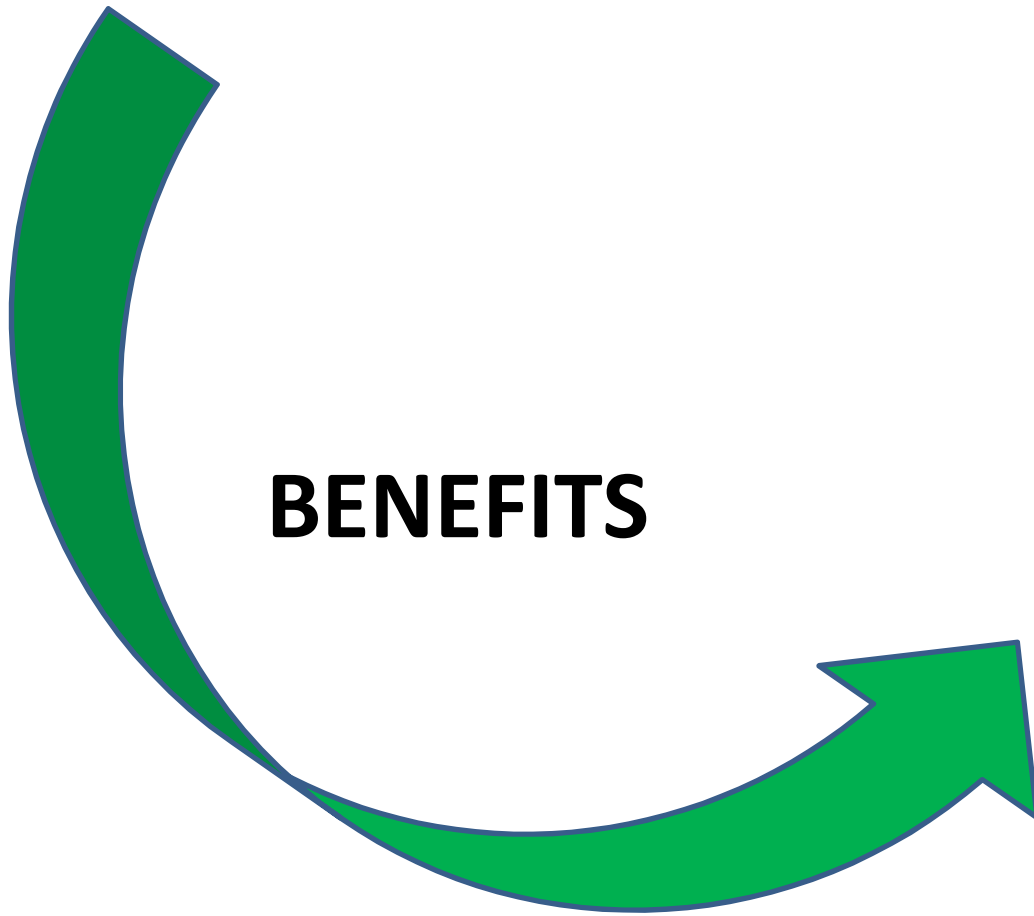


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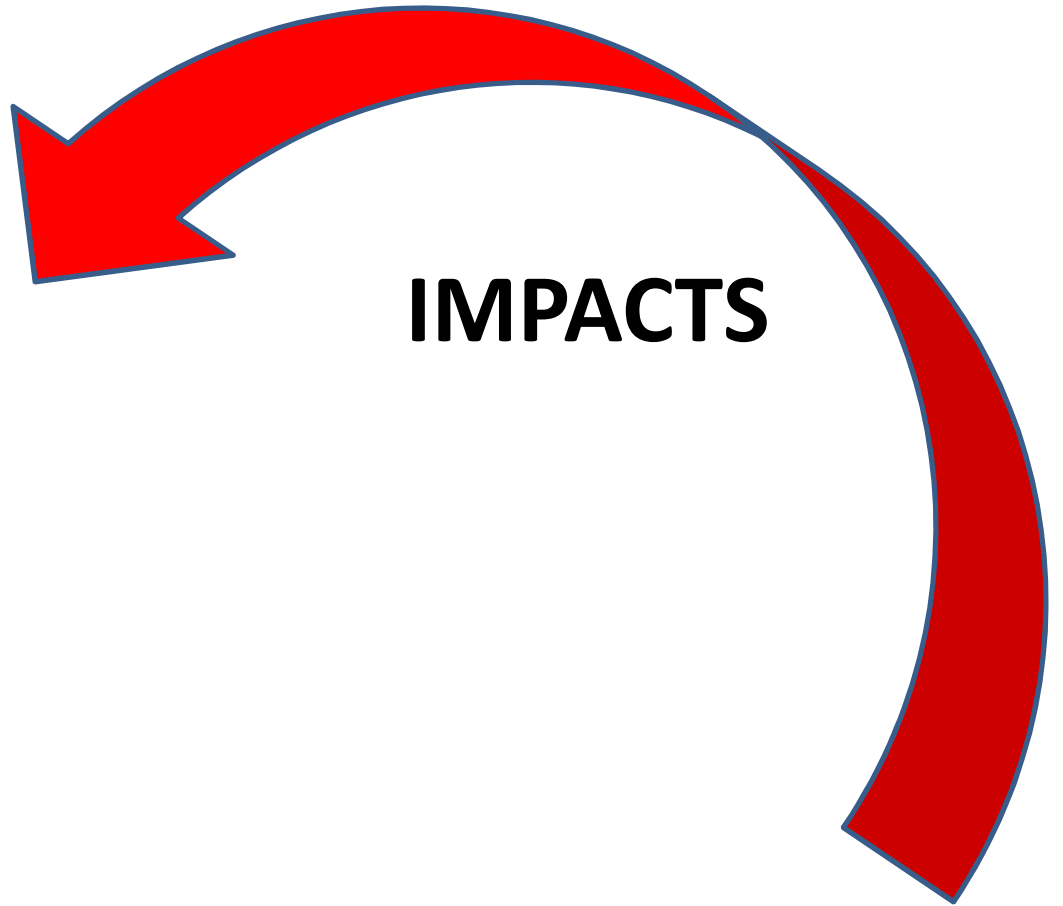
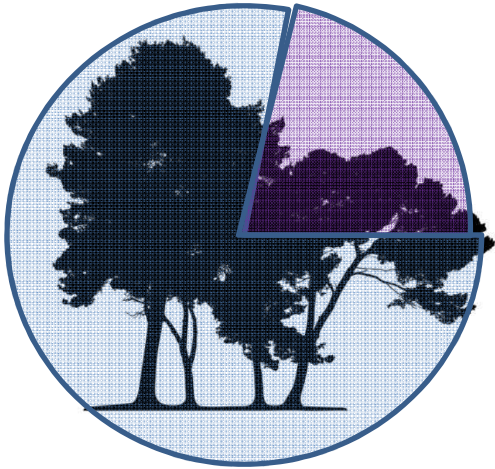




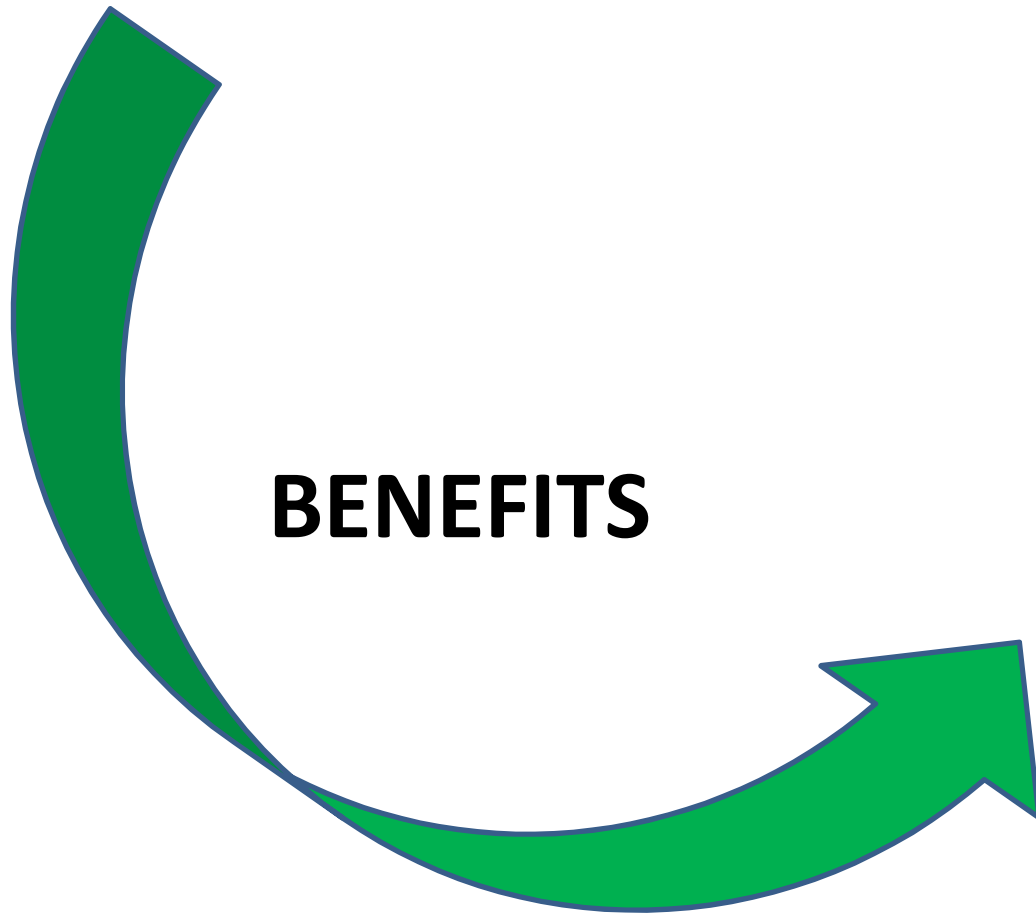
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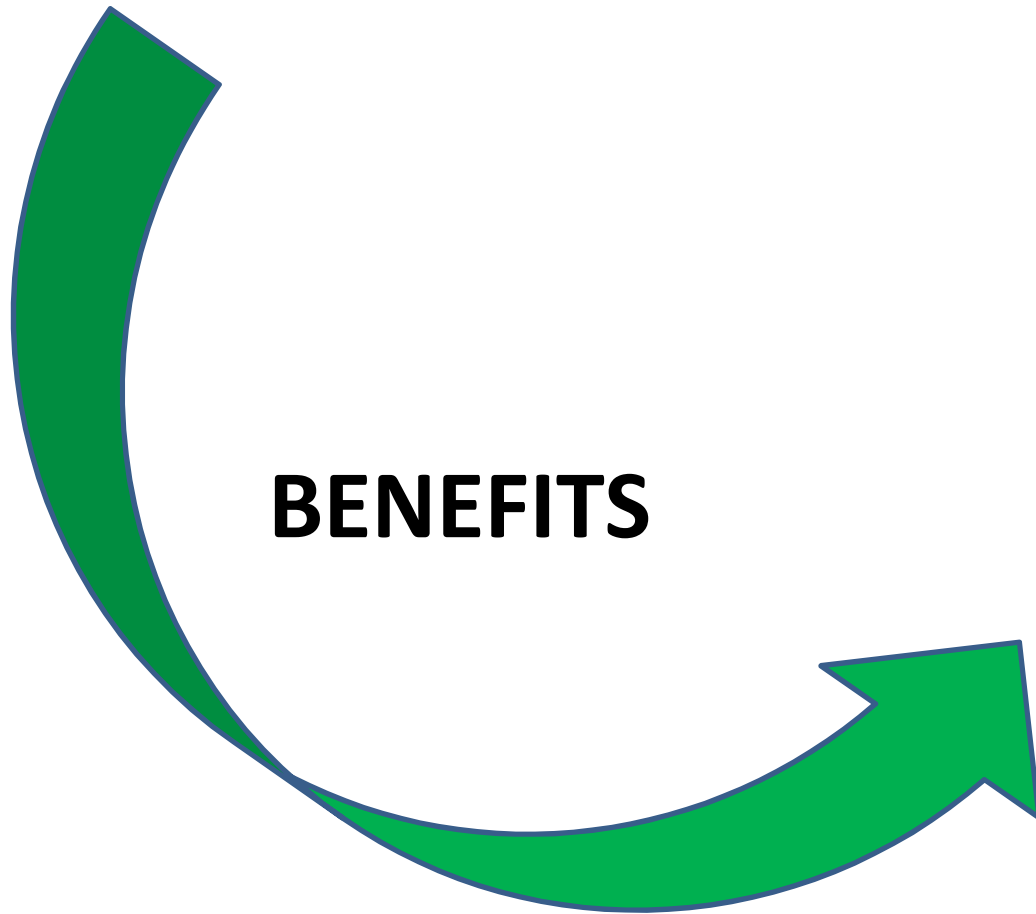
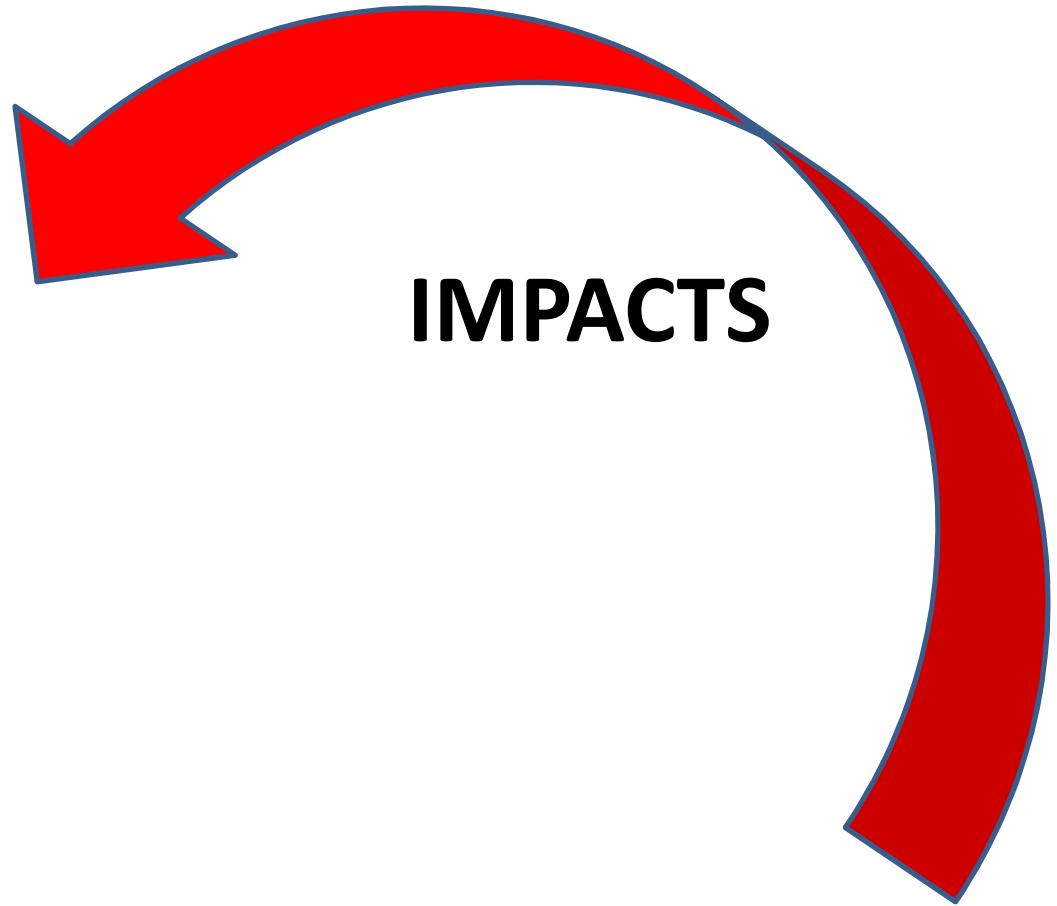
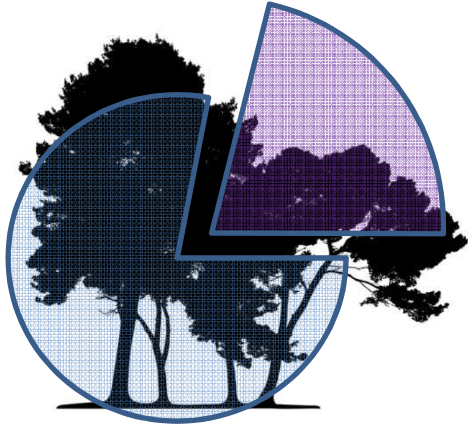
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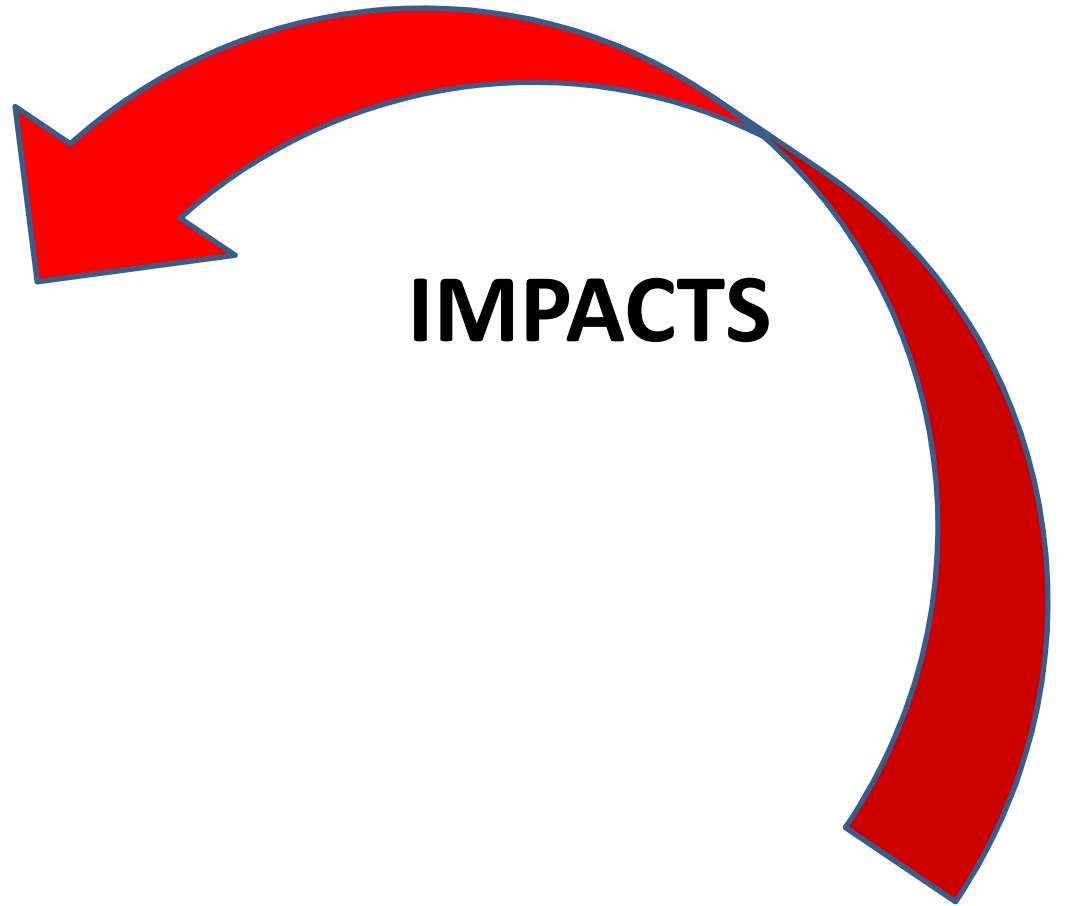
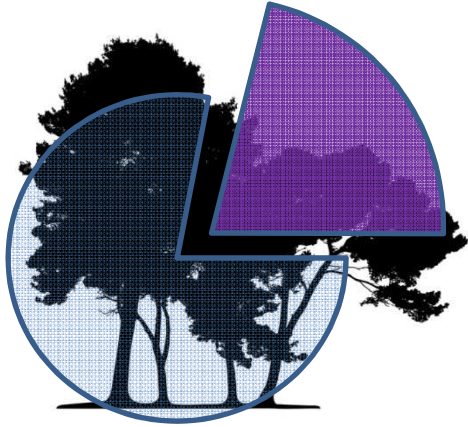
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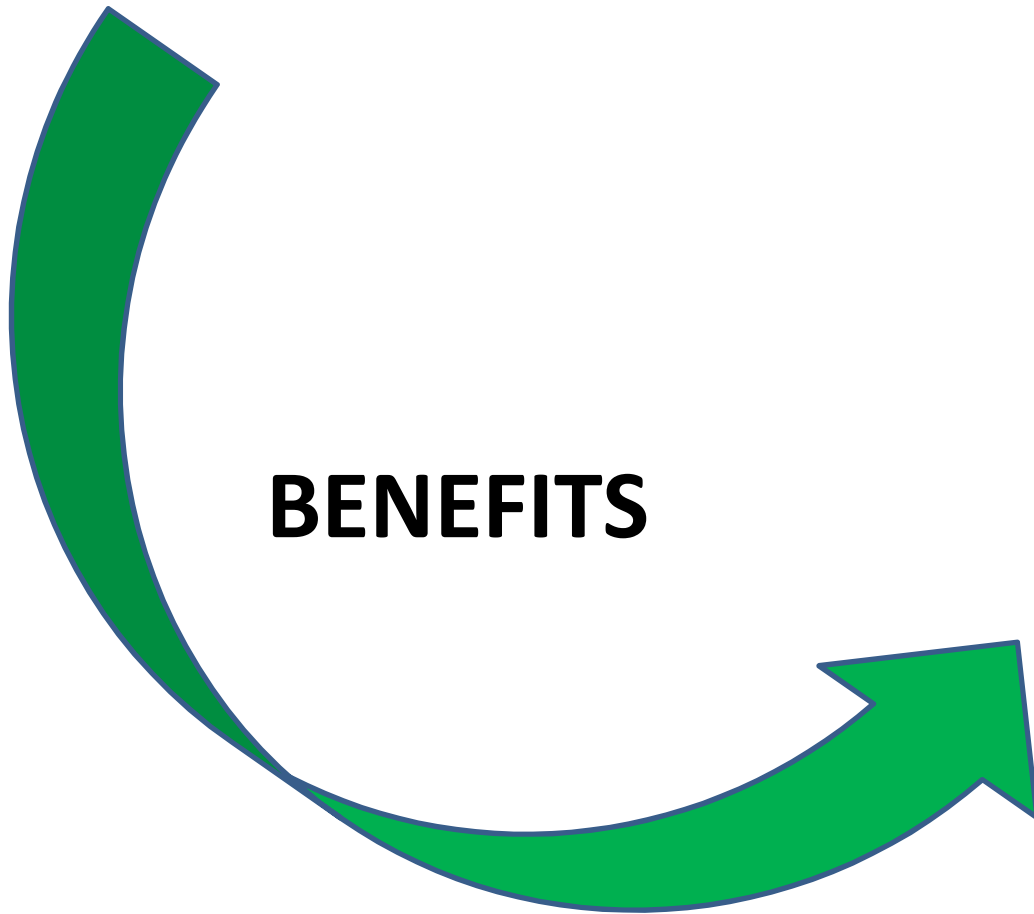
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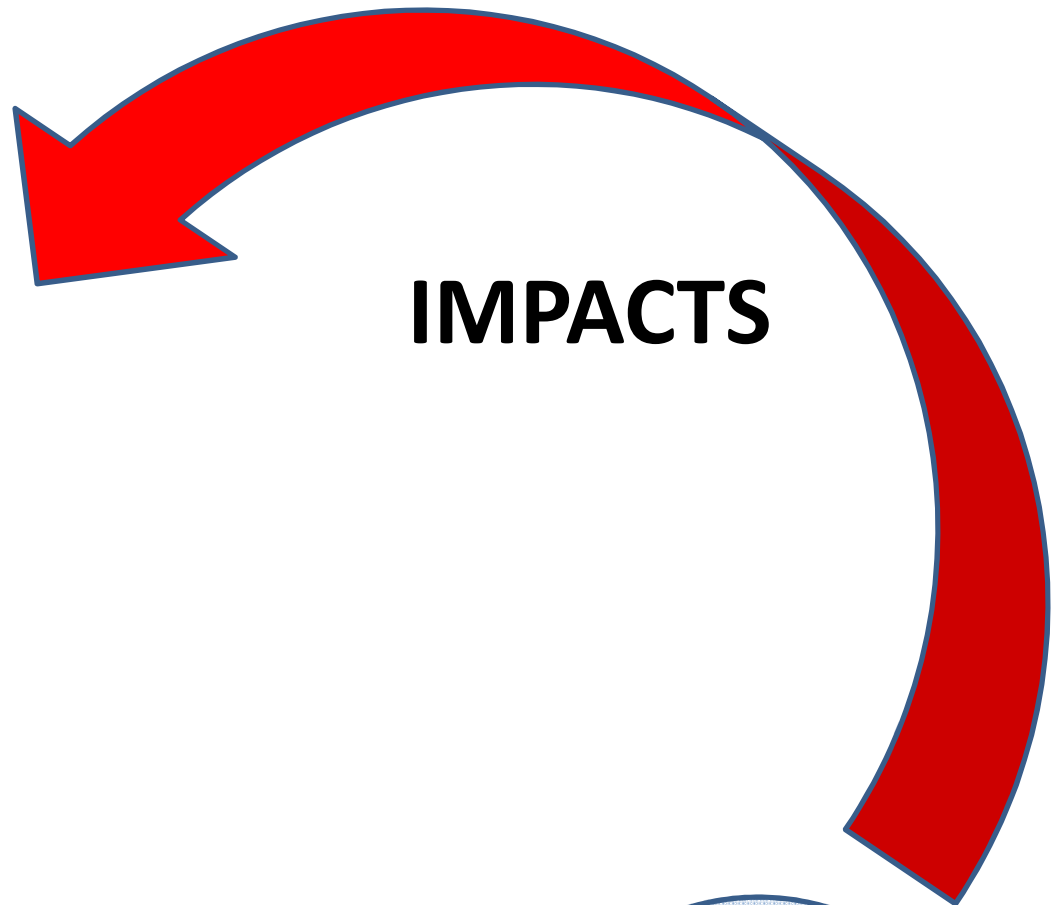
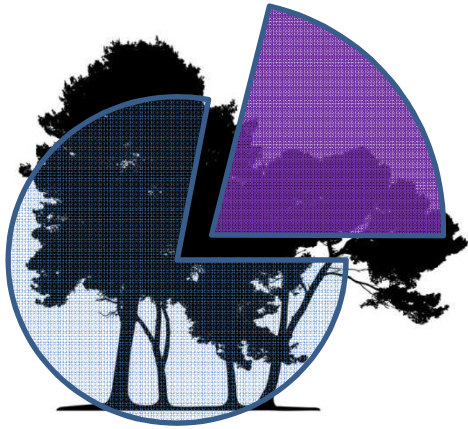
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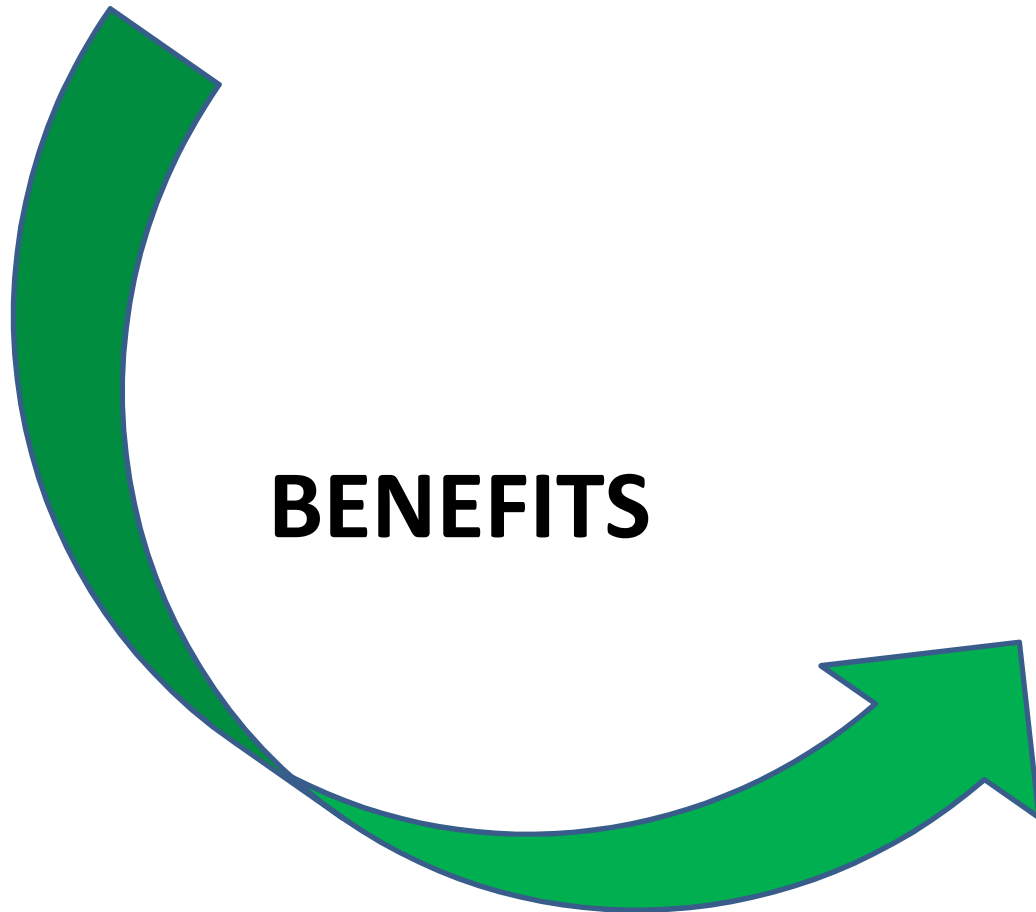
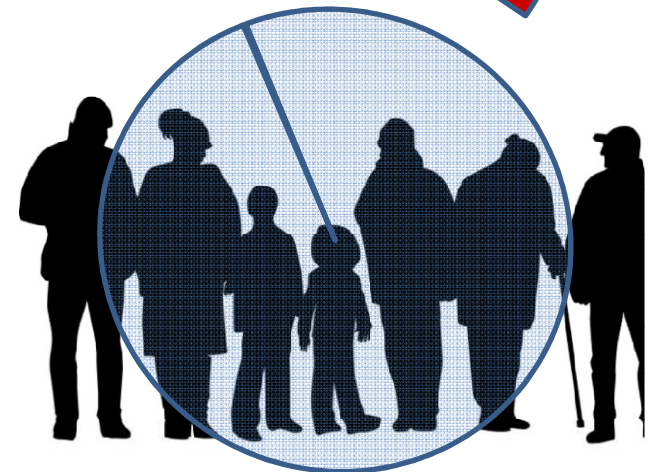
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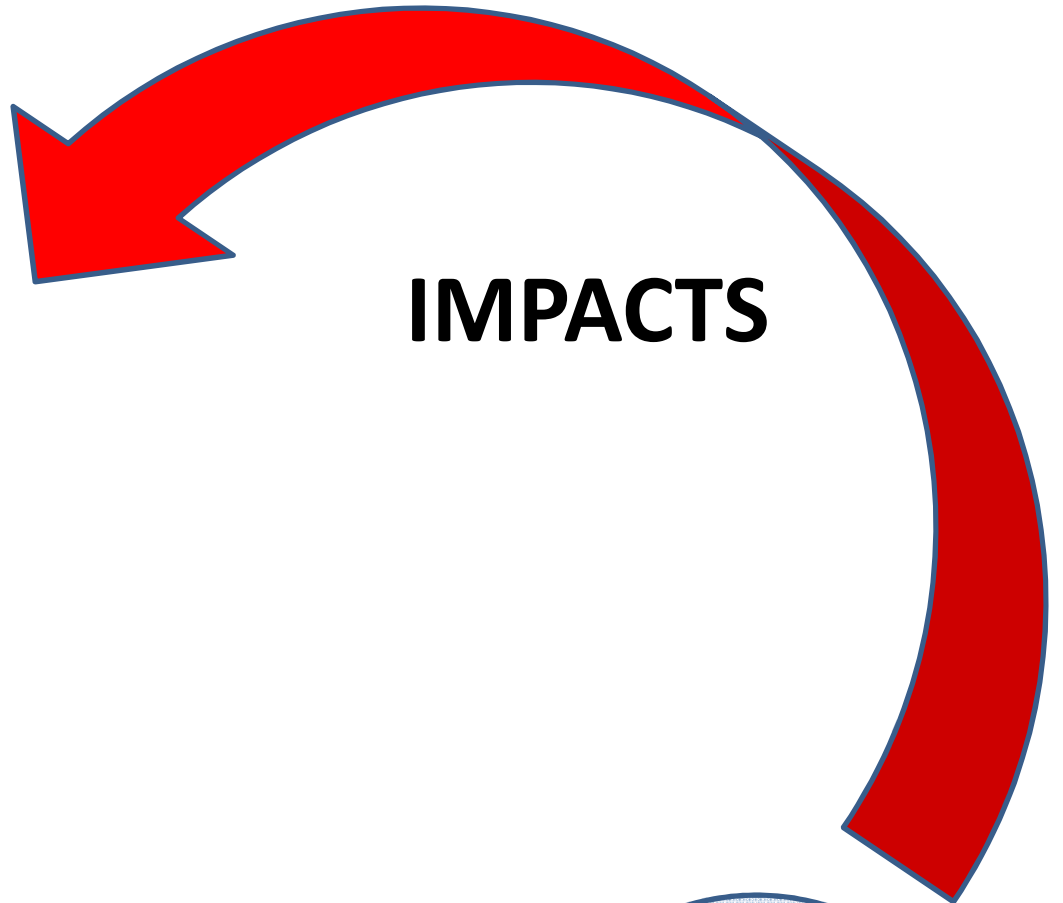
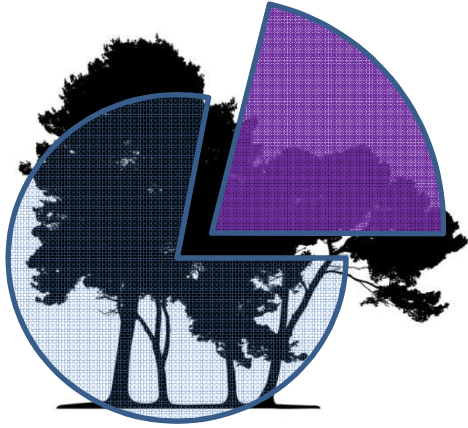
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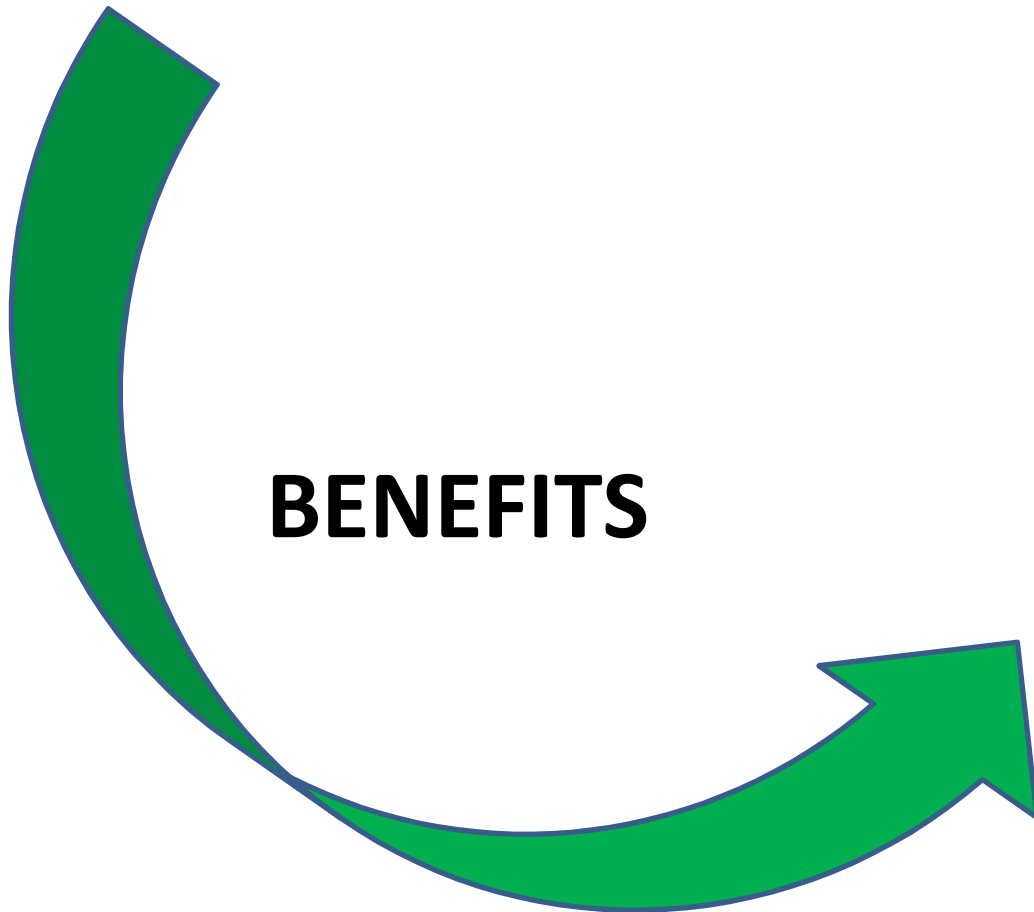
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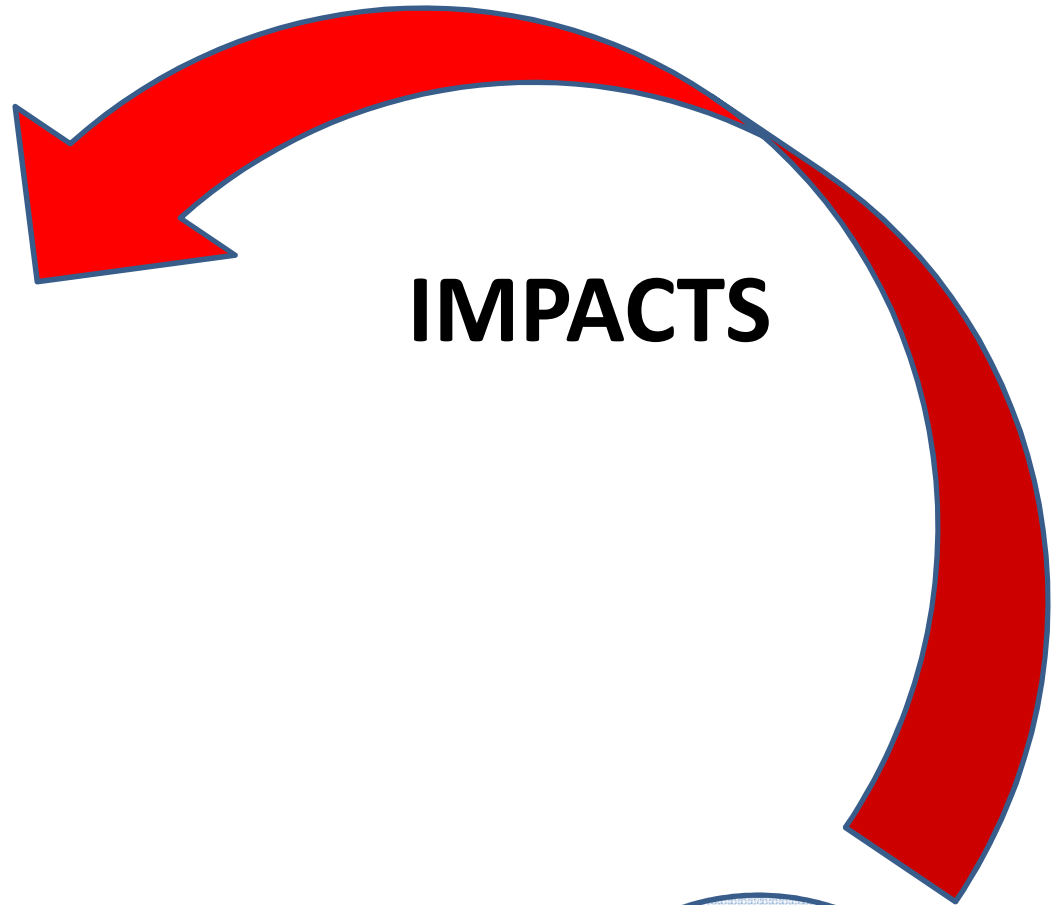
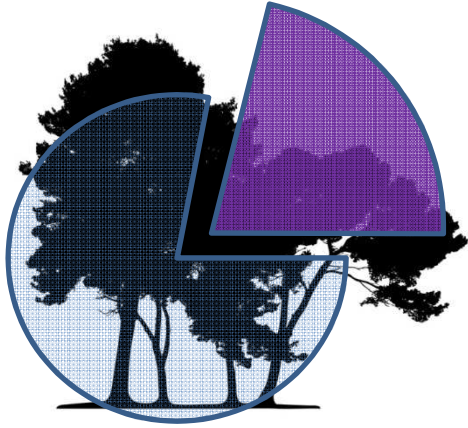
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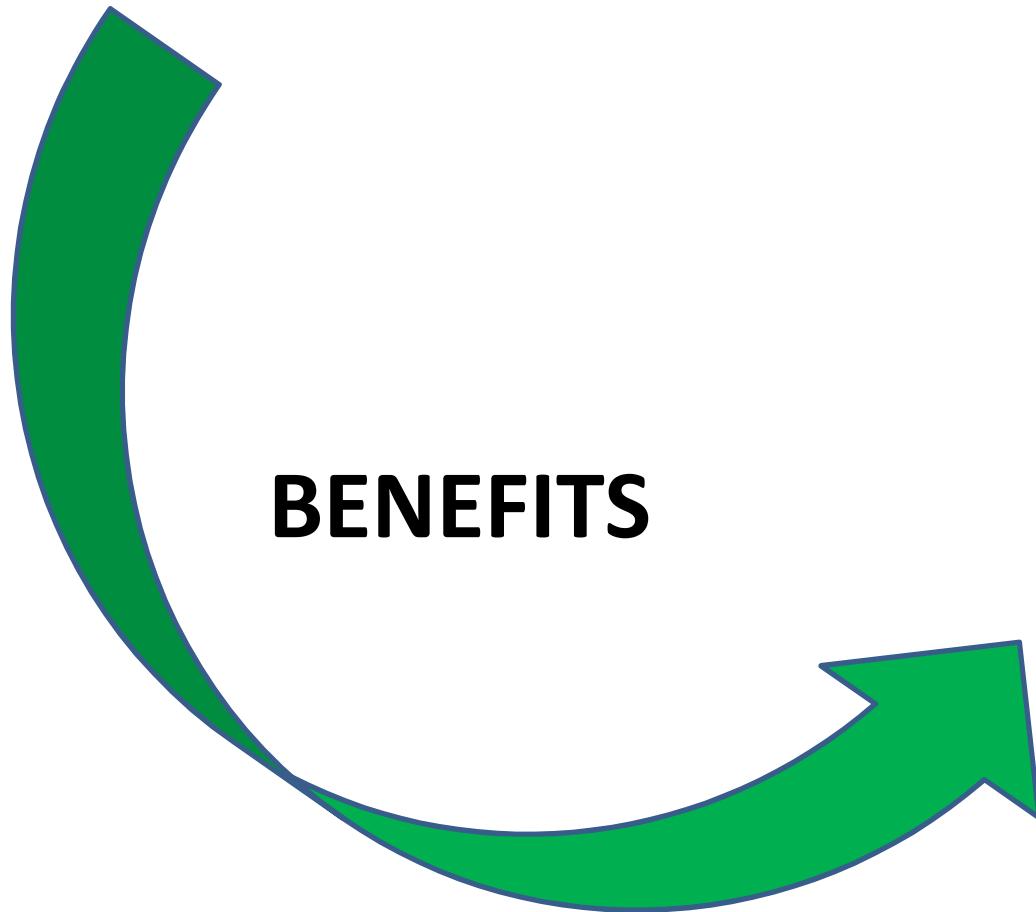
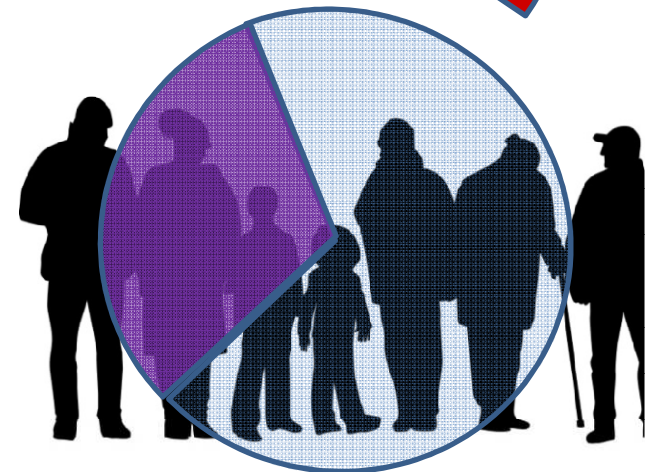
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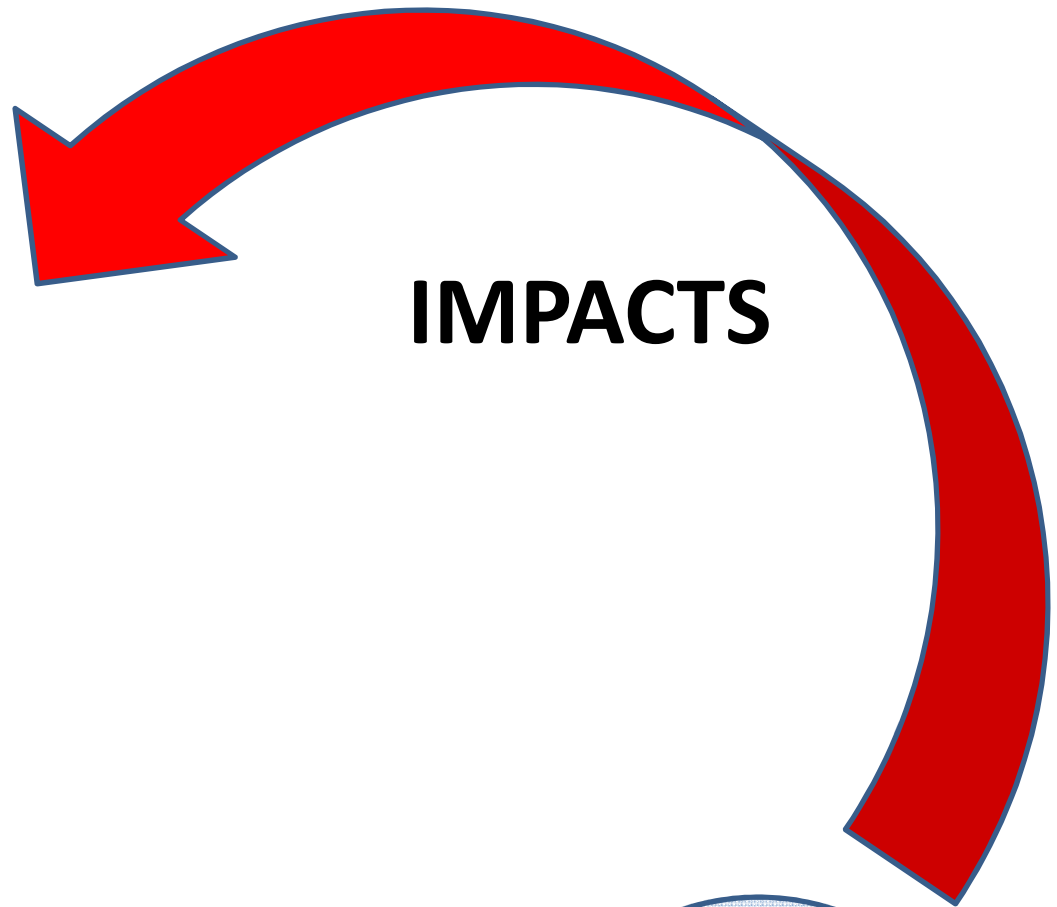
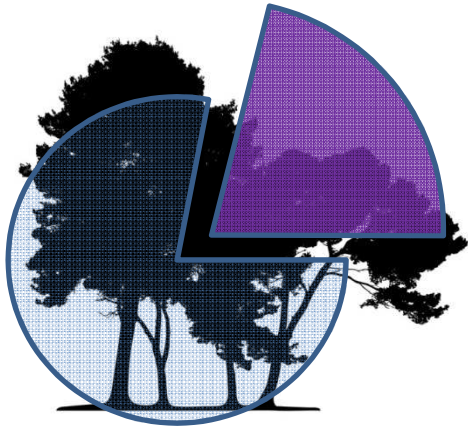
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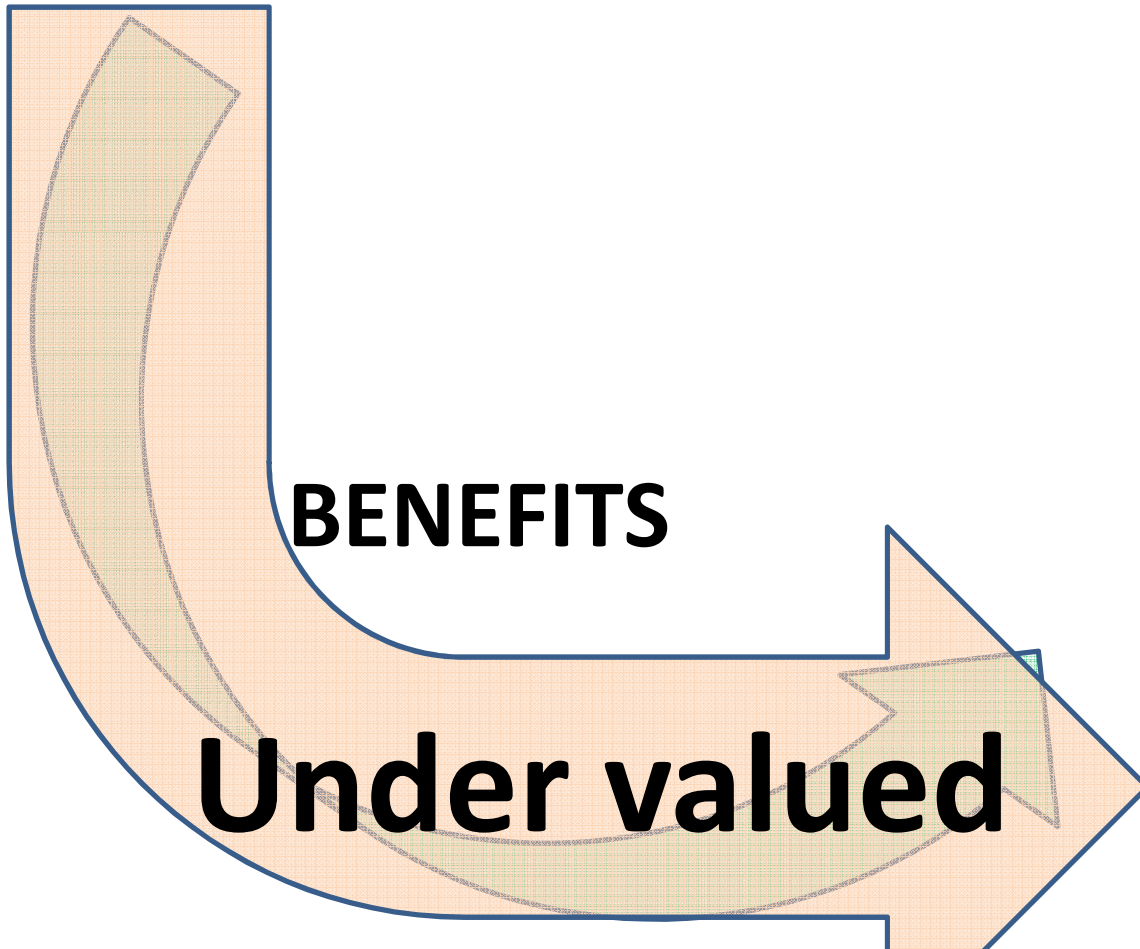
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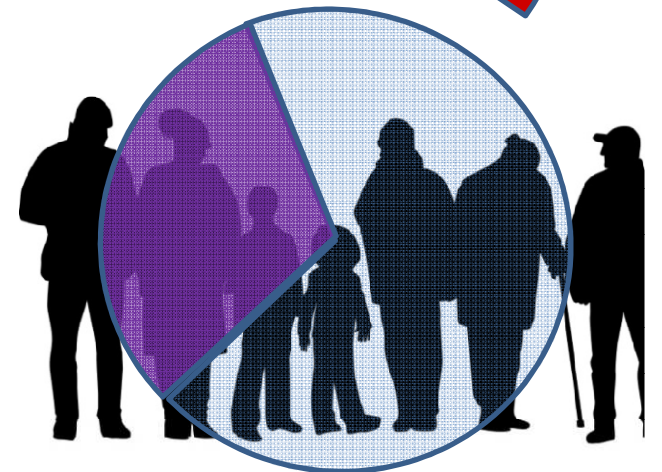


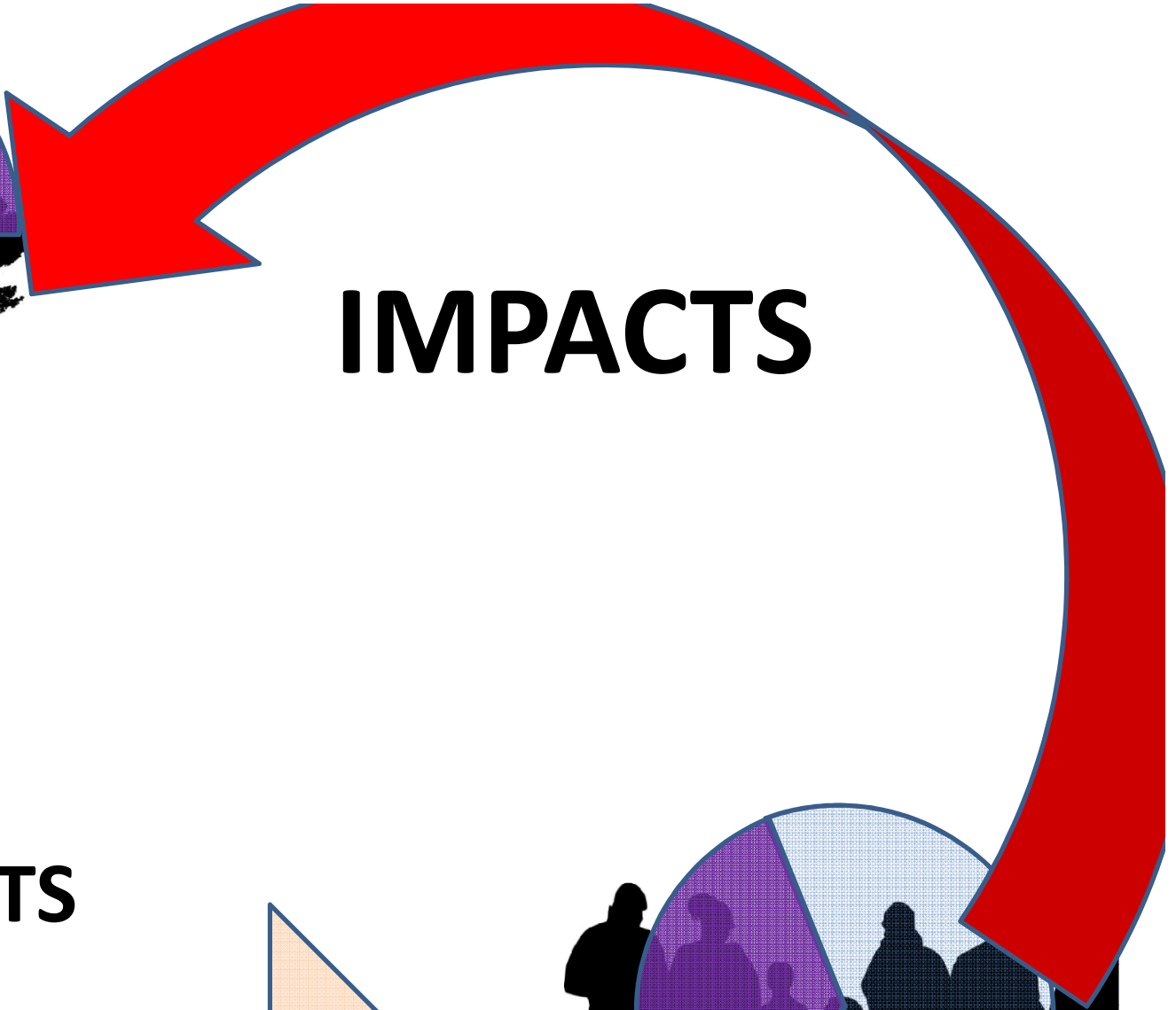
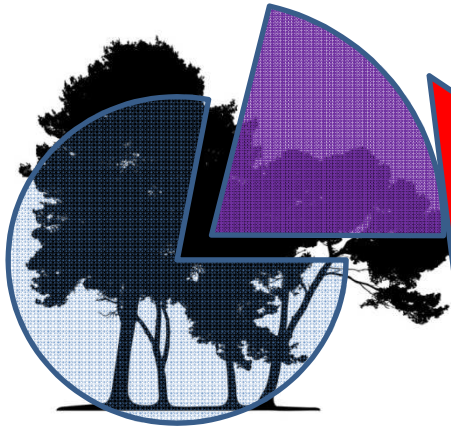
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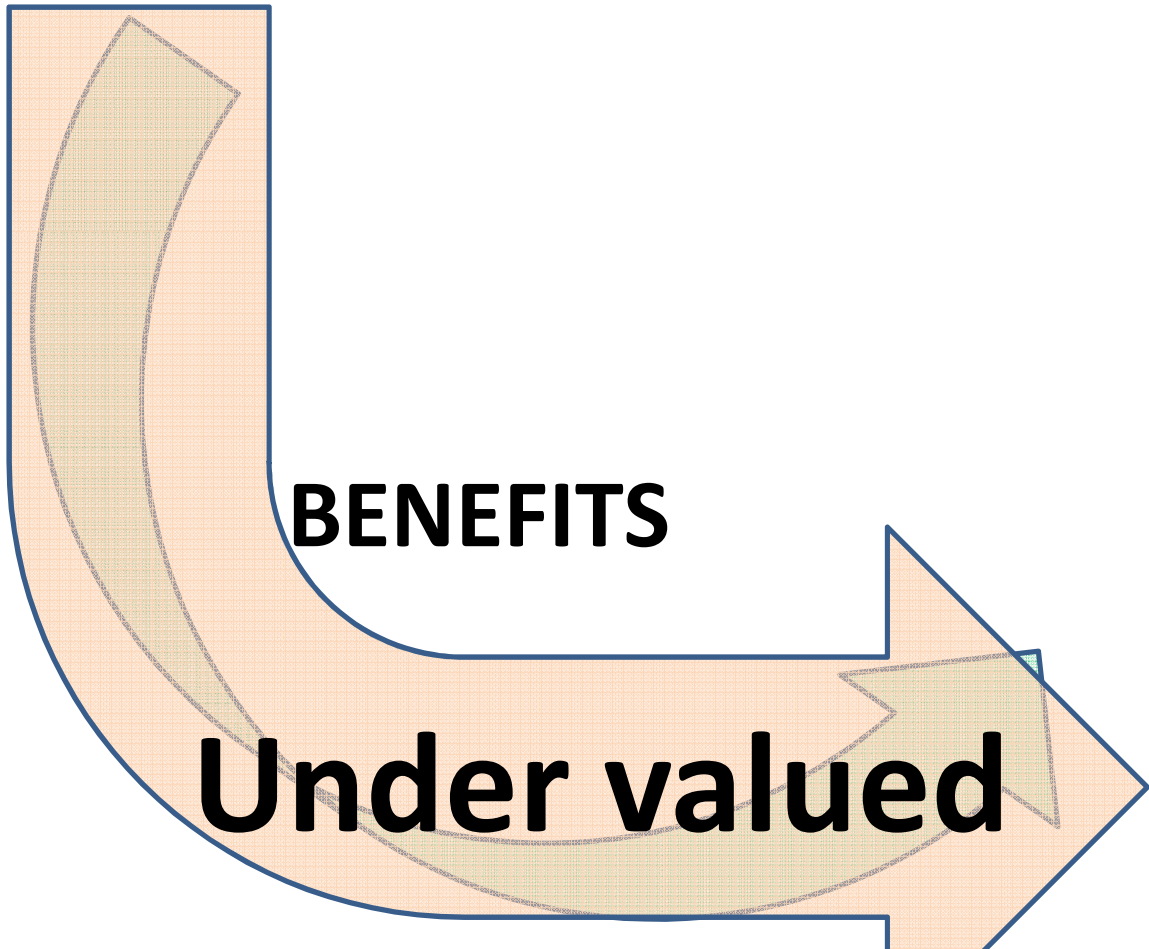
BENEFITS

Under valued



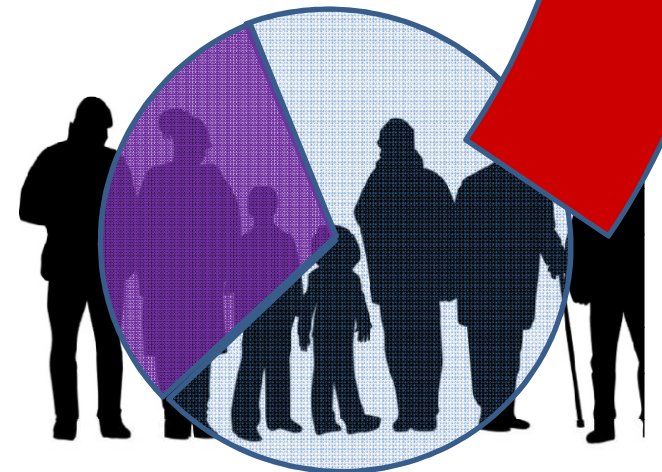


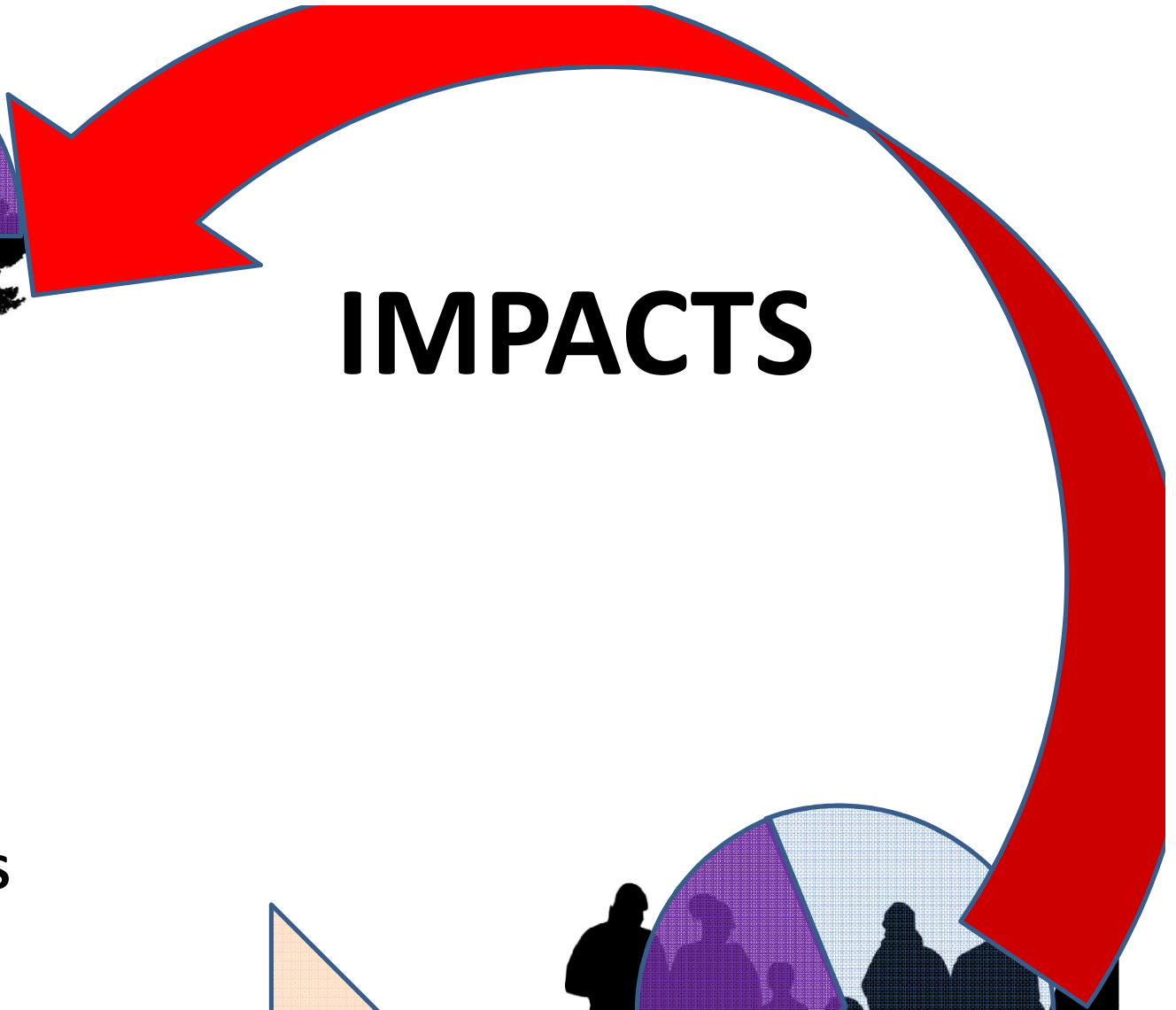
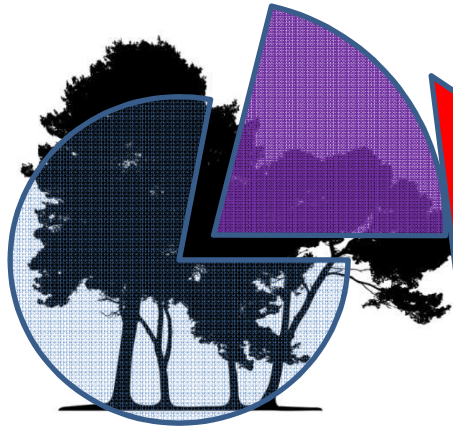
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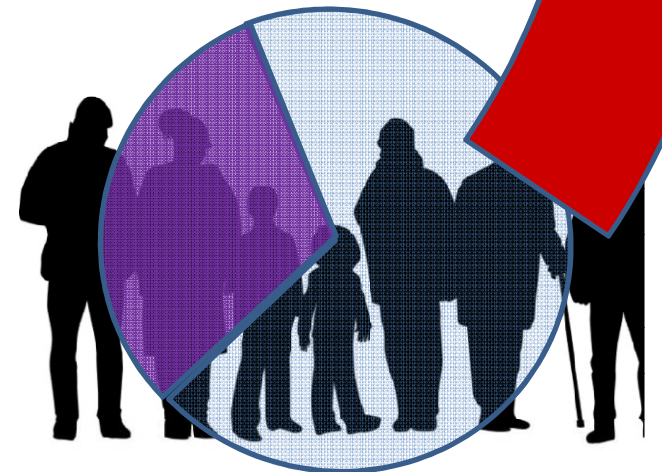




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BENEFITS

Under valued



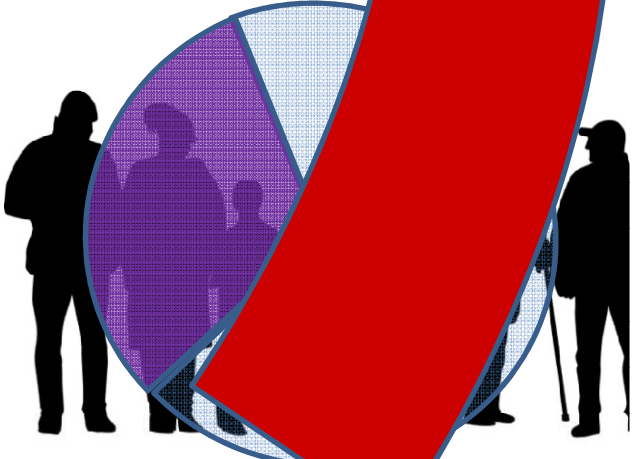


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BENEFITS

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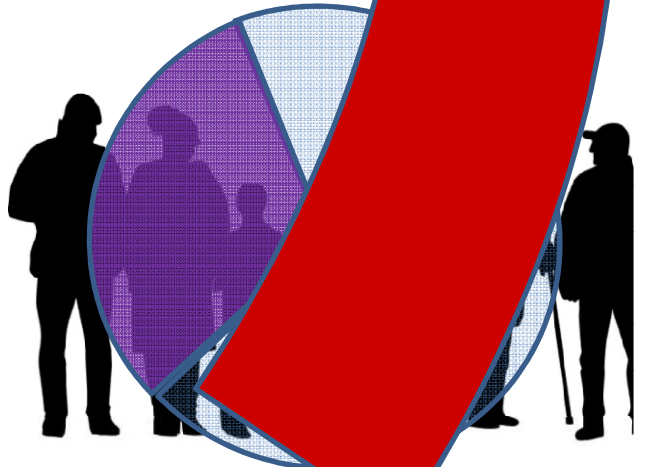
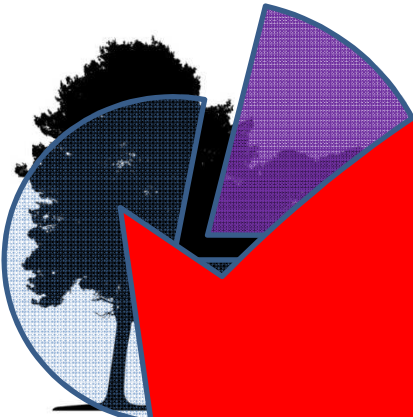


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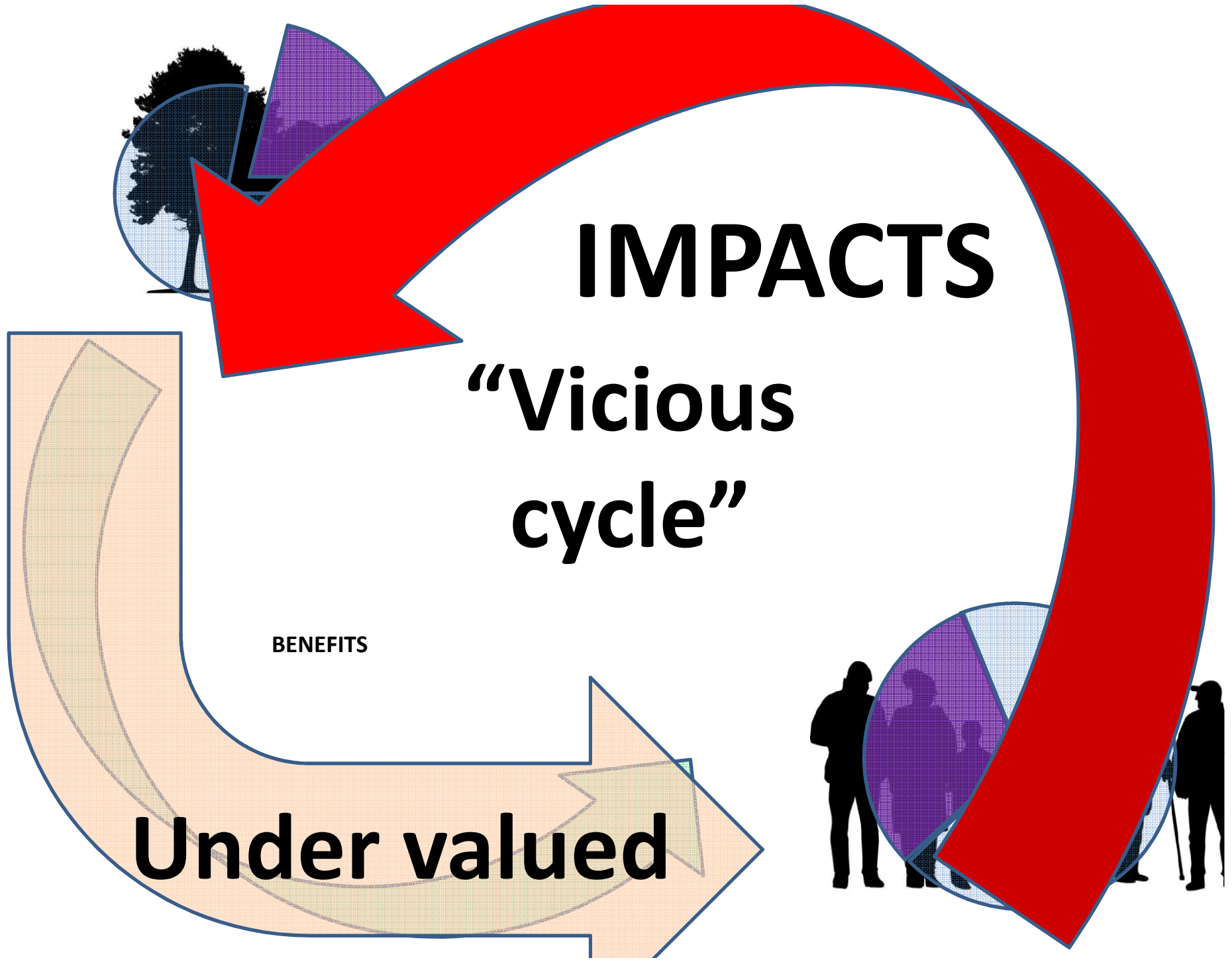


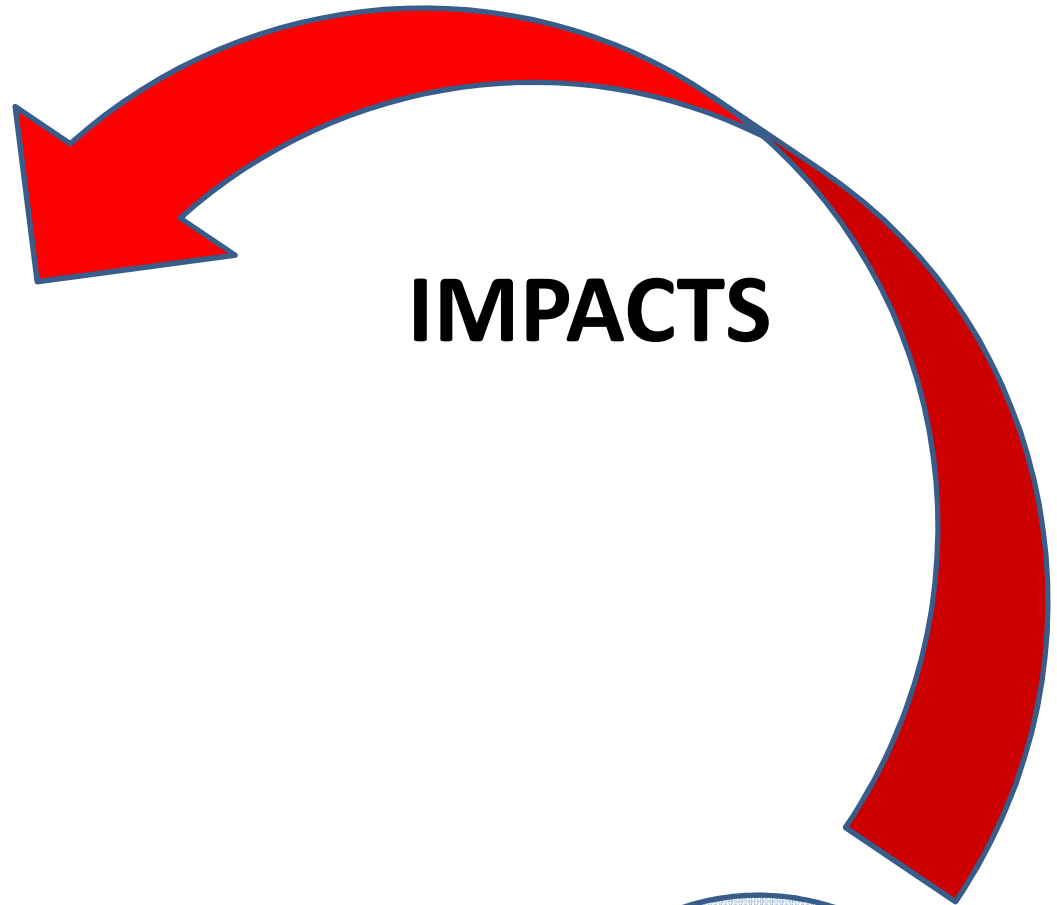
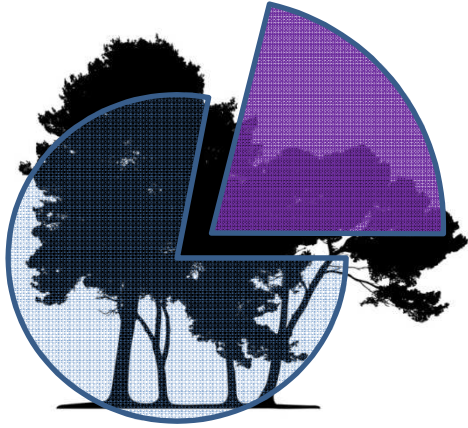
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“Vicious cycle”

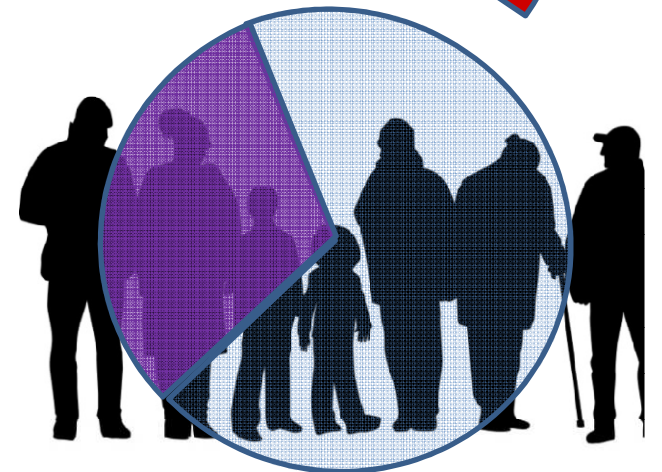
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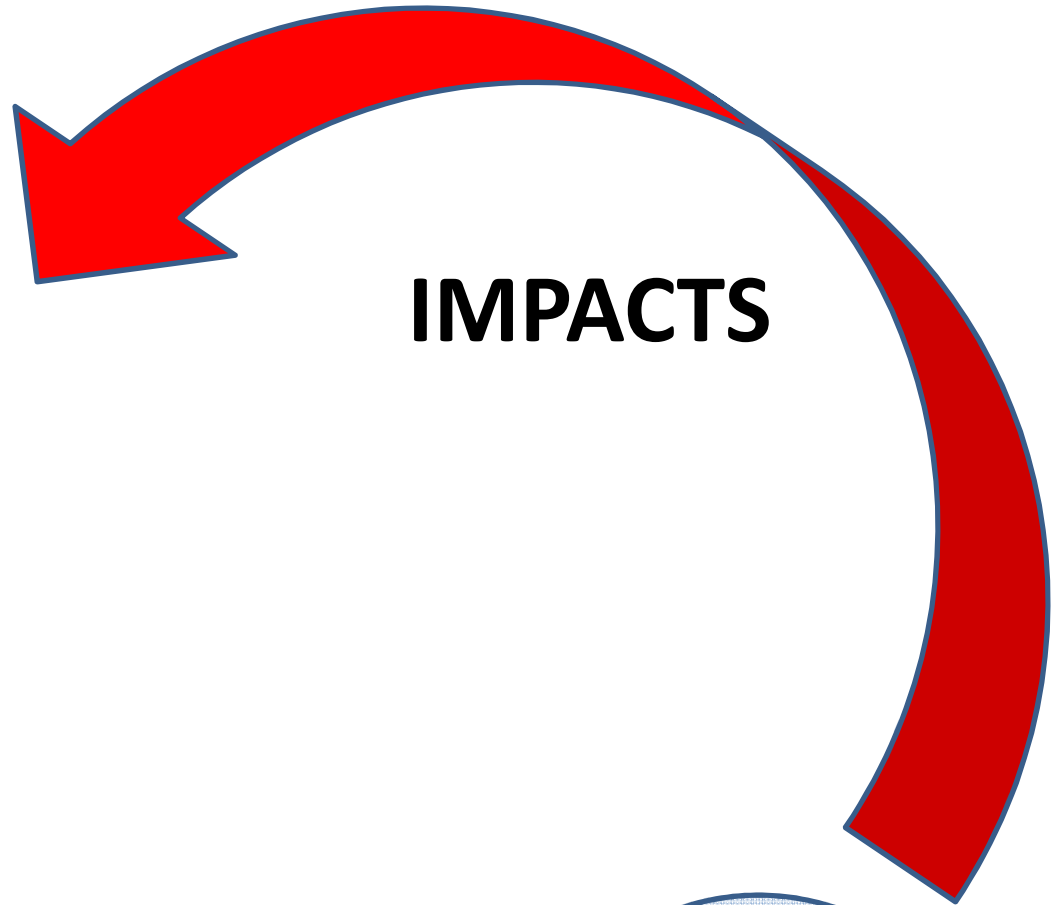
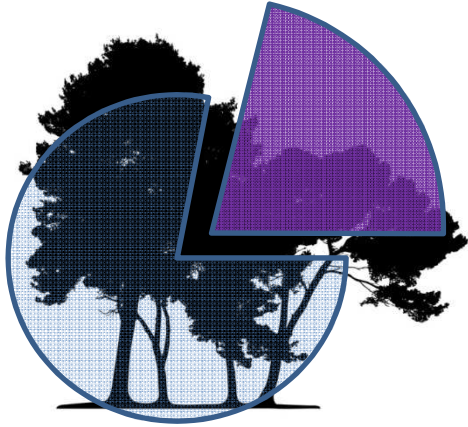




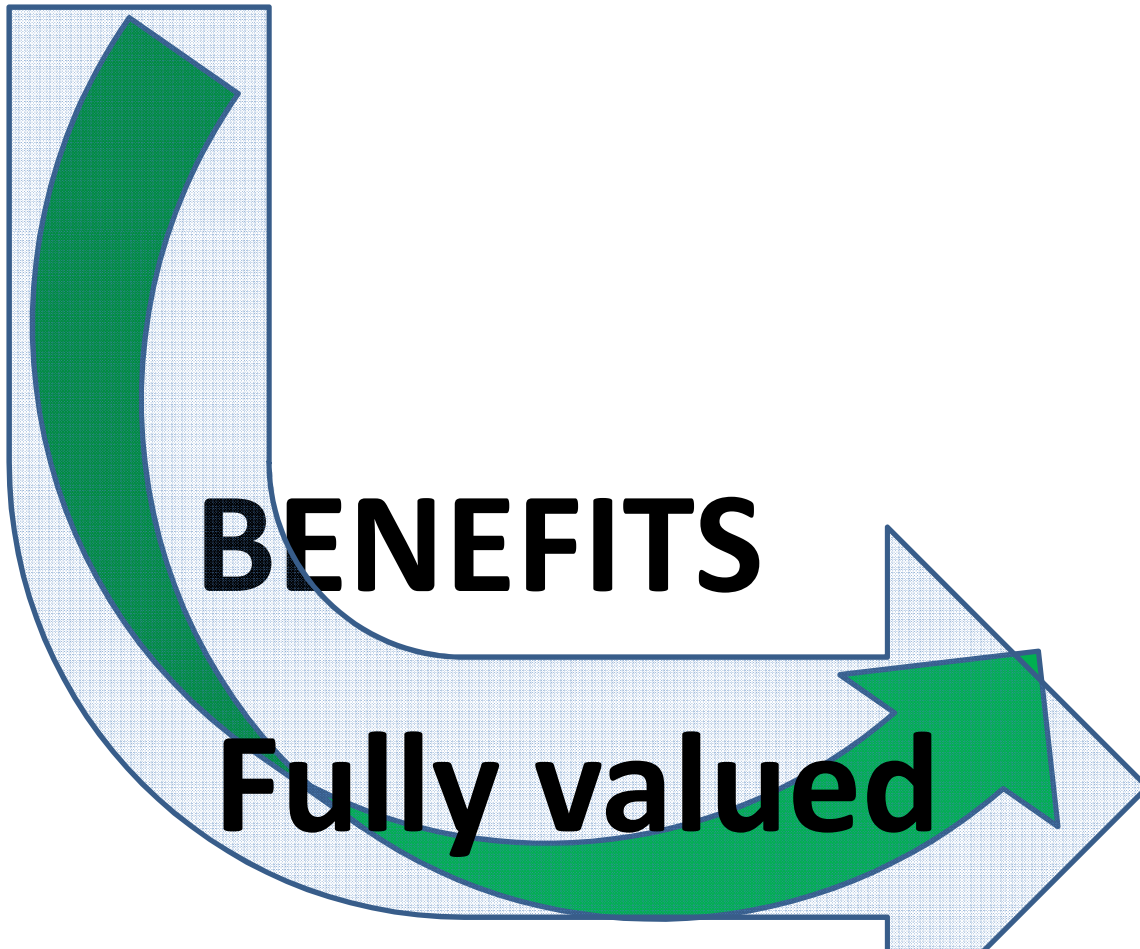
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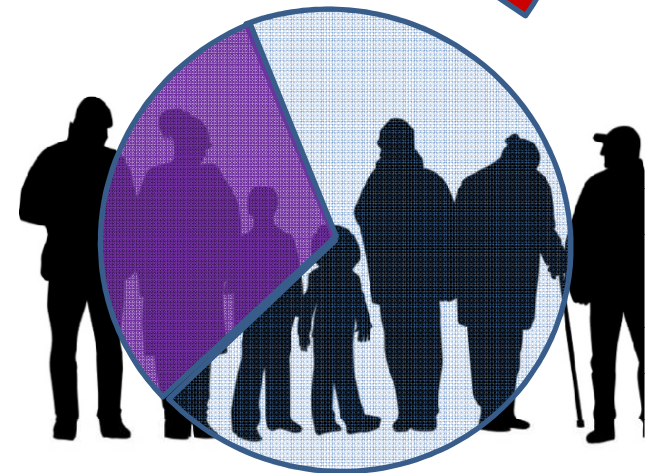


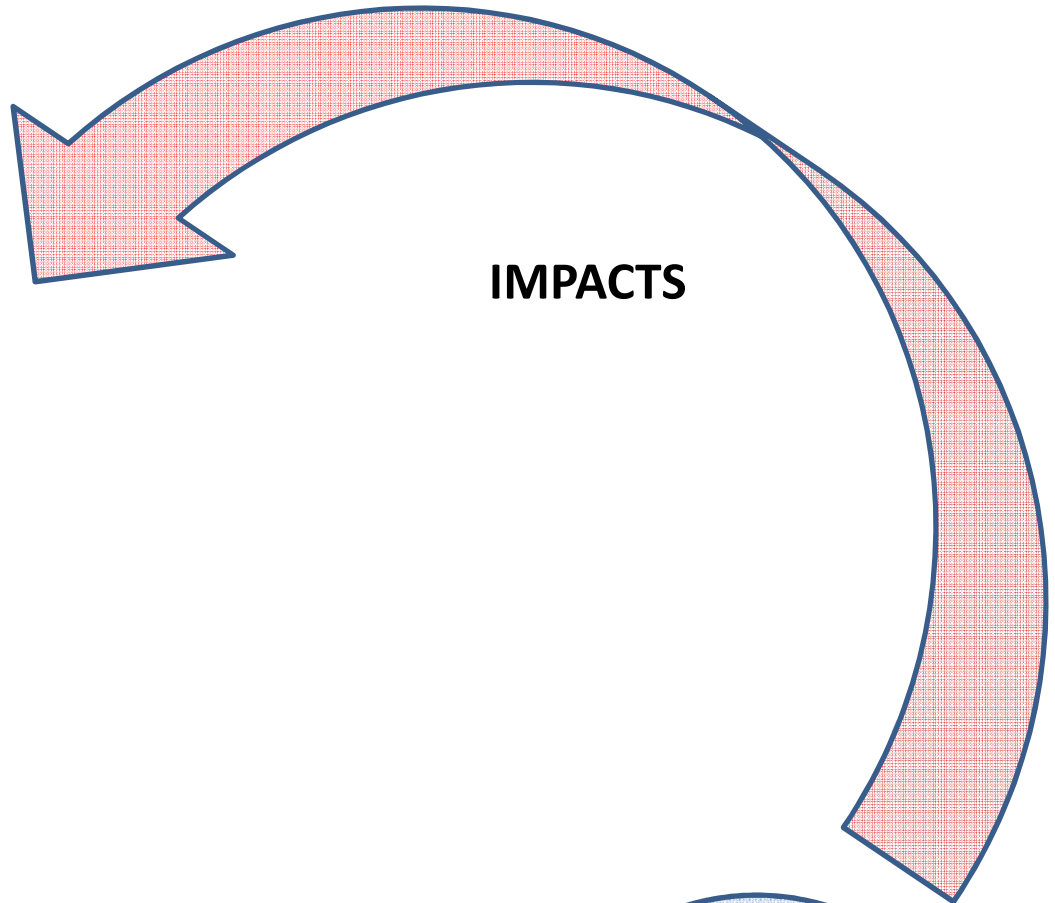
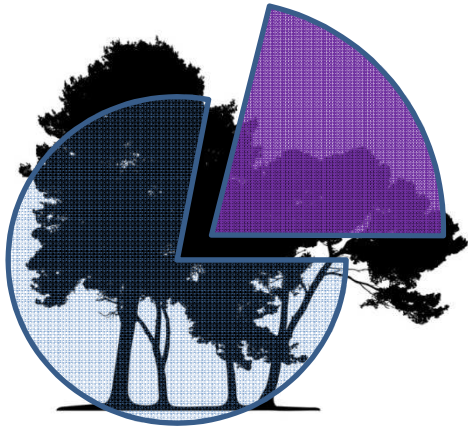
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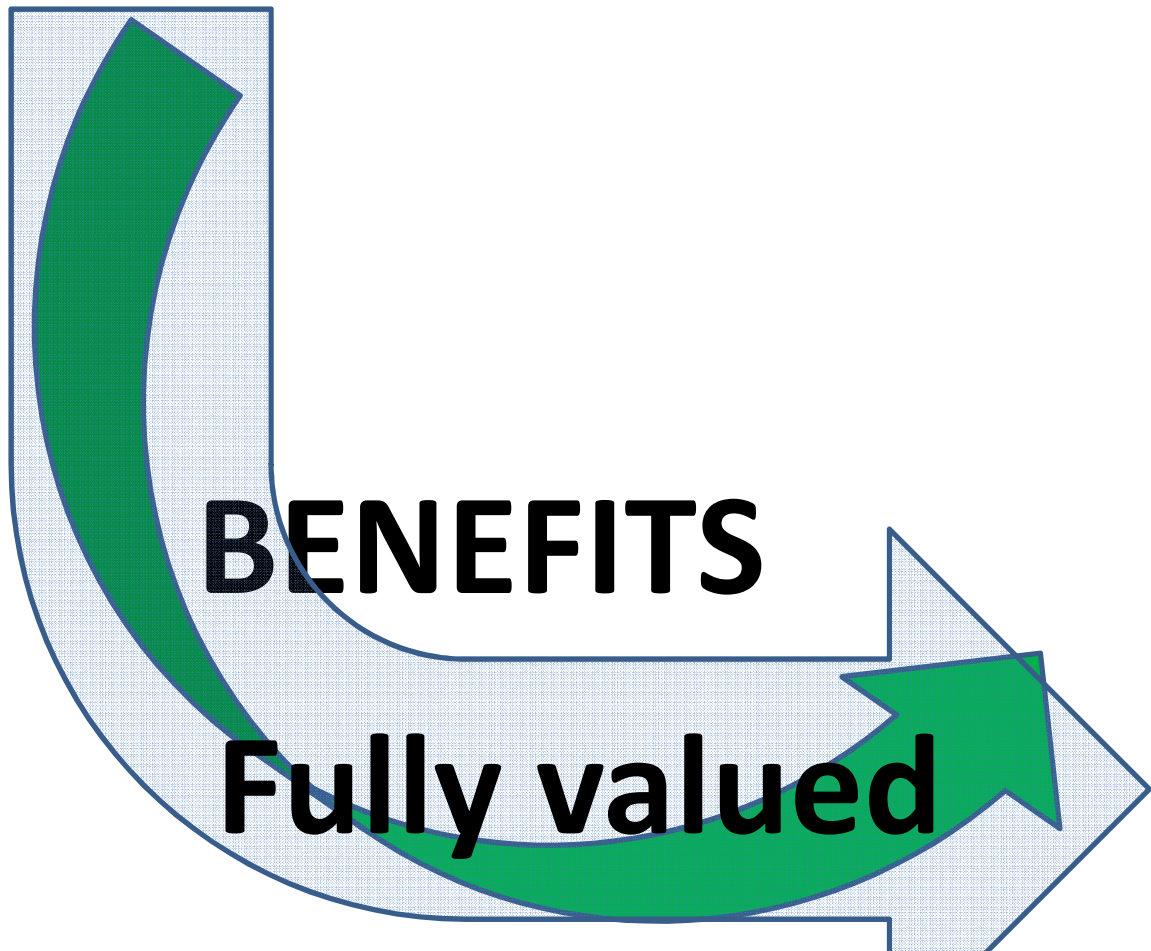
BENEFITS

Fully valued



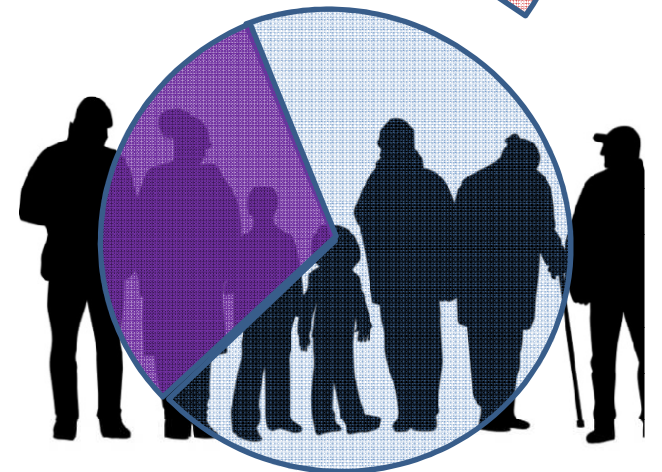


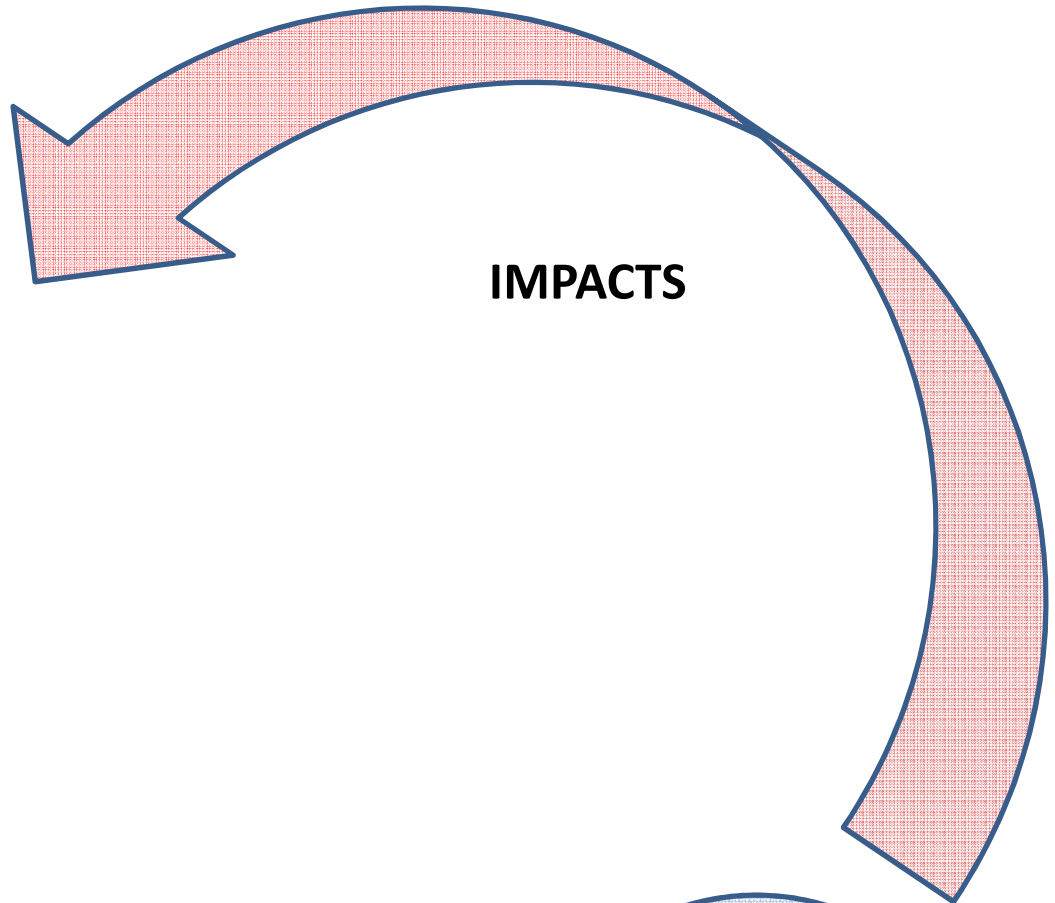
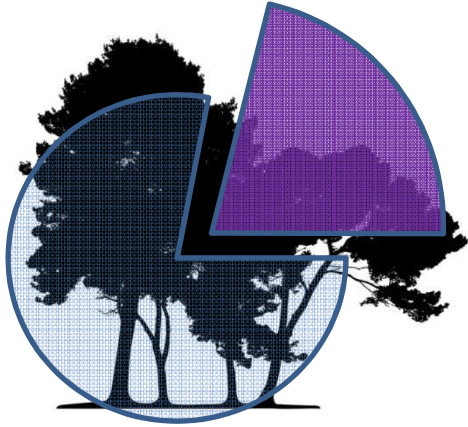
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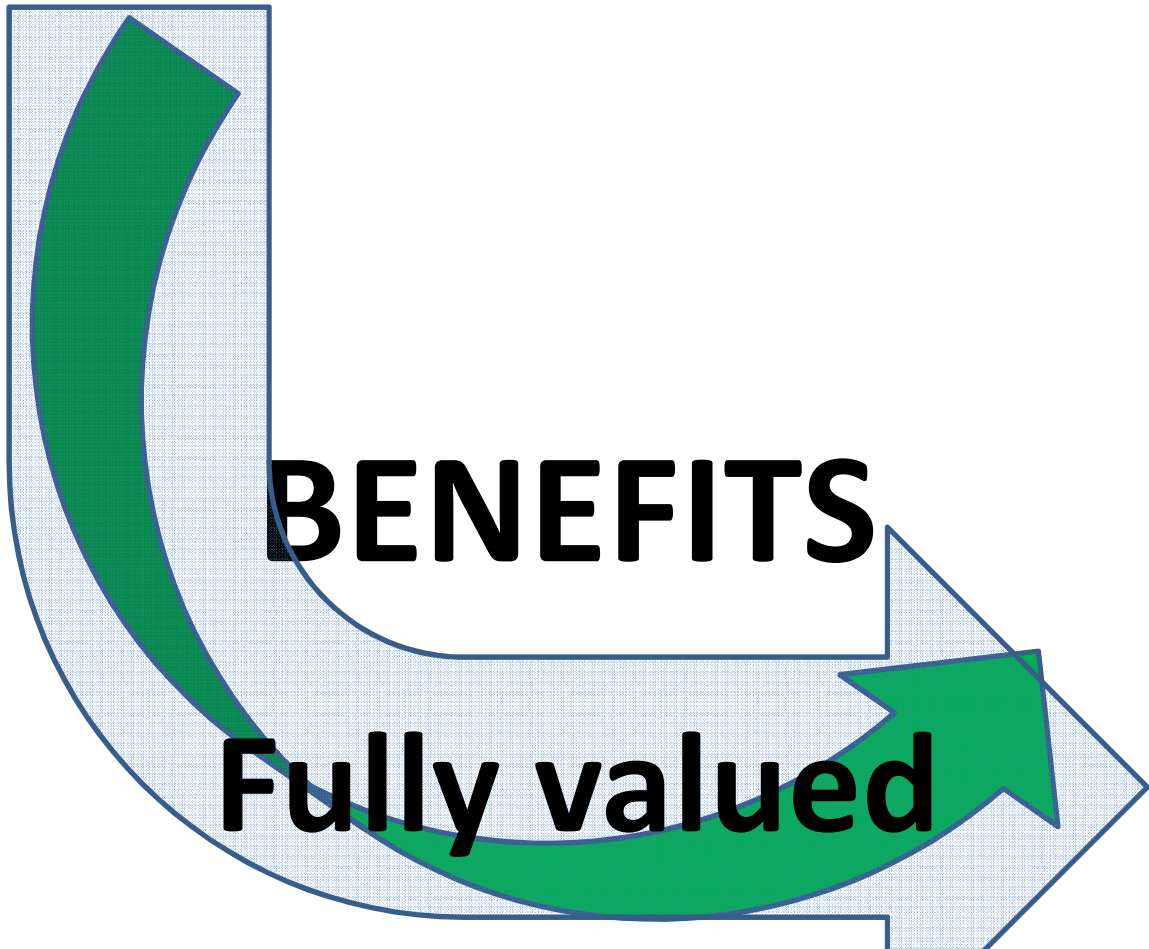
BENEFITS

Fully valued



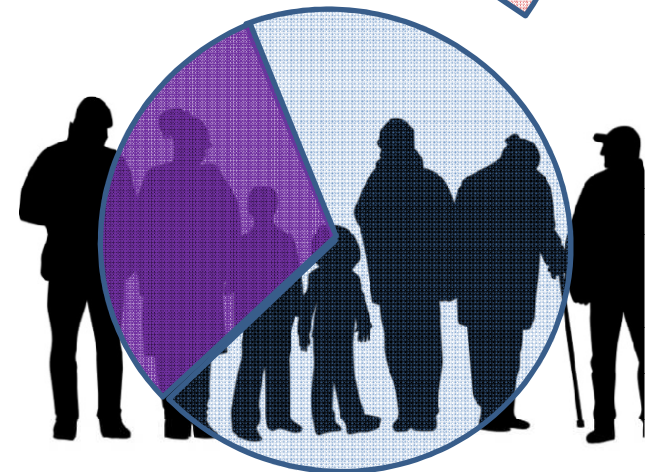


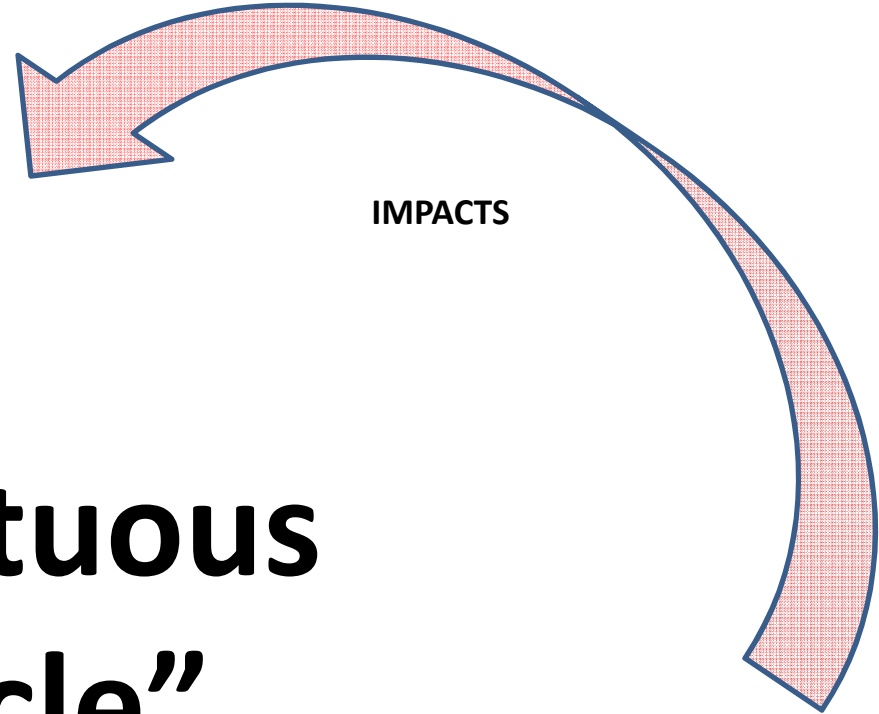
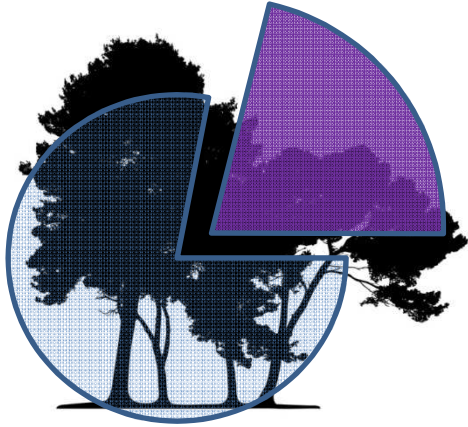
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BENEFITS

Fully valued

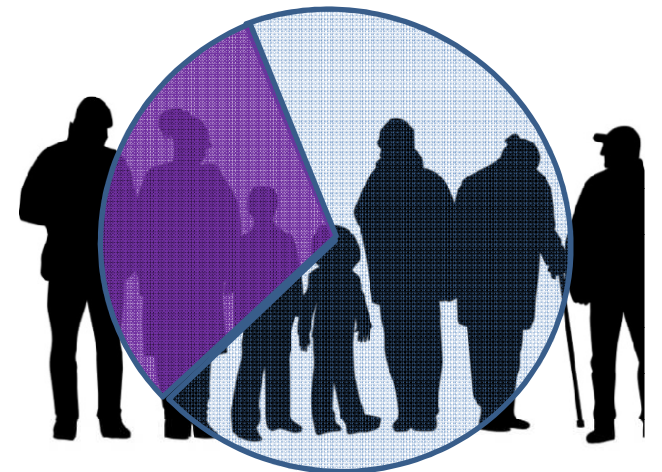




“Virtuous cycle”

BENEFITS

Fully valued



Under what circumstances is it important to assess and mainstream the values of protected areas and biodiversity?





...when there is a problem caused
by undervaluation



Examples of undervaluation:

1. A road is planned through a large protected area
2. Headwater forests are being degraded
3. Wetlands are being drained
4. Mangroves are being cut down
5. Rivers are being polluted from agricultural waste
6. Poaching is reducing wildlife populations
7. There is mining allowed in protected areas



BUT...protected areas are not ATM machines



And protected areas are not piñatas...



Protected areas are a societal investment



SAVINGS DEPARTMENT
 No. [REDACTED]
 The First National Bank & Trust Company OF NEWTOWN, PA. In Account with

Buck Taylor
Trustee of the [REDACTED]

Day	Deposited	Withdrawn	Balance	Day	Deposited	Withdrawn	Balance
July 27	221.00		221.00	1456			95352
Aug 13	105		326	Nov 30	159.26		111288
Aug 22	204		530	Dec 14	210		132688
Sept 4	99		629	Jan 3 11	435.00		176188
Sept 17	199.00		808.00	Feb 4	269		203088
Sept 25	264.00		1072.00	Feb 15	269		229988
Oct 8	117		1189.00	Mar 1	192		249188
Oct 18	174		1363.00	Mar 18	245.51		273769
Oct 18	72		1435.00	Apr 29	169		290469
Oct 23	370		1437.70	Apr 30	938.1		299850
Oct 24	120		1557.70	May 12	136		313450
Oct 30	105		1663.70	May 18		1000	213450
Nov 13	172.92		1836.62	" 22	172.5		215185
Nov 19	117		1953.52	" 24	40		219185
Nov 21		1000	953.52	May 27	348		253975

Economic valuation reveals the hidden
benefits of societal investments in
biodiversity protection...

...which leads to better decisions.



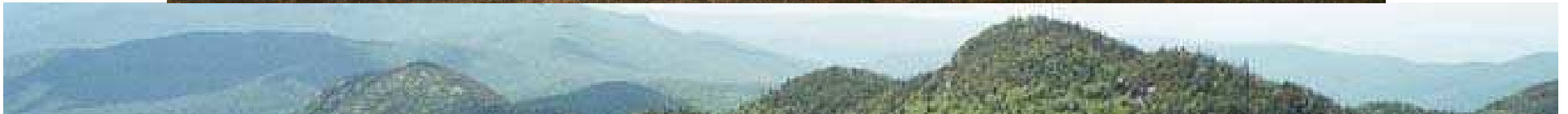
Steps in Assessing Protected Area Values

1. Clearly define the situation, audience and decision
2. Choose which benefits and services are included
3. Choose valuation method for each benefit
4. Develop measurable indicators
5. Analyze the economic and social value of benefits
6. Communicate the results to key decision makers



STEP 1

Clearly define the situation, audience and decision



STEP 1

Clearly define situation, audience and decision



STEP 1

Clearly define situation, audience and decision



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Clearly define situation, audience and decision



STEP 1

Clearly define situation, audience and decision



STEP 1

Clearly define situation, audience and decision



STEP 1

Clearly define situation, audience and decision



Problem that valuation will solve: Existing levels of protection (.2%) and existing management are insufficient to sustain saiga populations, upon which major ecosystem services, livelihoods and human wellbeing depend



STEP 2

Choose which benefits, goods and services are included



STEP 2

Choose ecosystem benefits and services that:

- Are associated with key national goals, such as poverty reduction
- Are easy to measure, have clear indicators and available data
- Are easy to communicate to key stakeholder groups
- Have the highest economic values
- Are the most important benefit across an entire ecosystem or protected area system



STEP 2

Choose which benefits, goods and services are included



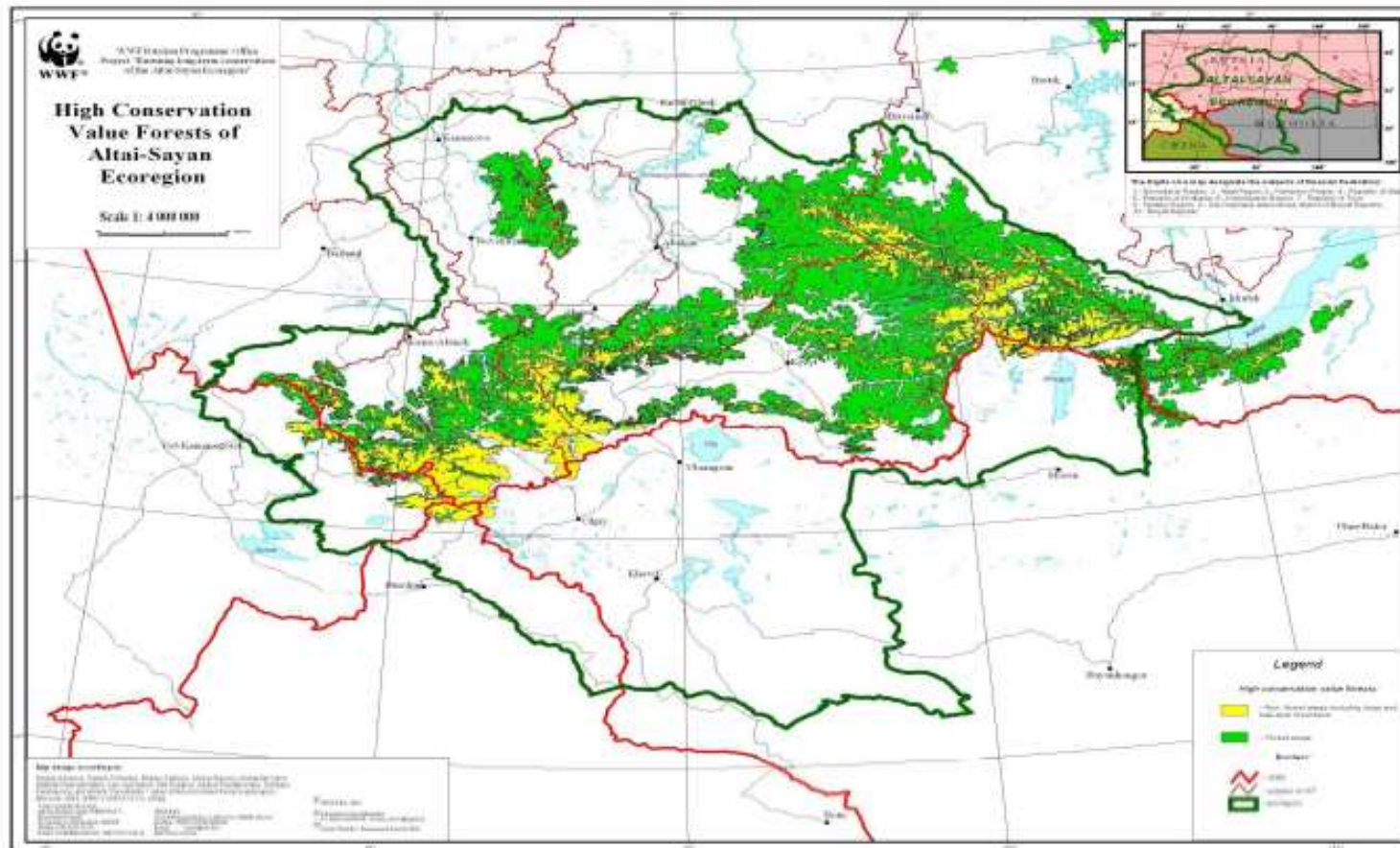
Sustainable livelihoods and subsistence



STEP 2

Choose which benefits, goods and services are included

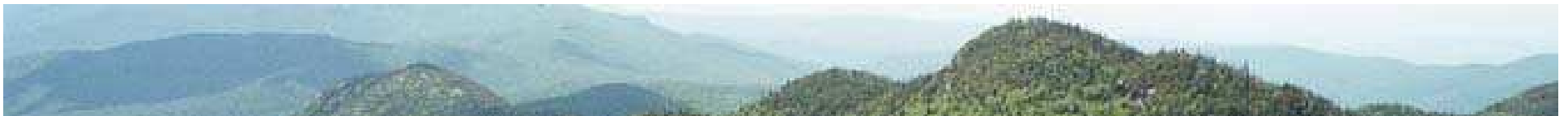
Carbon storage: 3.21 billion tones of Carbon



STEP 3

Choose a valuation method for each benefit/service

- Market price
- Replacement cost
- Costs avoided
- Net factor income
- Willingness to pay
- Contingent valuation
- Value comparison study



STEP 4

Develop measurable indicators

Ecosystem service	Potential Indicator
Food security	<ul style="list-style-type: none">• Average protein intake per person
Health	<ul style="list-style-type: none">• # and % of people using medicinal plants
Fisheries	<ul style="list-style-type: none">• List and volume of annual catch• # of people employed• Total \$US added to economy
Disaster mitigation	<ul style="list-style-type: none">• Hectares of avoided erosion• # of people protected from flooding
Water supply	<ul style="list-style-type: none">• Volume (cubic meters/second) from PAs• Hectares irrigated• Energy in megawatts from hydropower

STEP 4

Develop measurable indicators



- Number of families who rely on grazing
- Value of livestock that depends on grassland

STEP 5

Develop and implementation valuation assessment



STEP 5

Develop and implementation valuation assessment

- Develop description of work
- Develop terms of reference
- Develop methodology
- Develop budget for staffing, experts, communication
- Develop timeline
- Conduct assessment



STEP 6

Communicate the results to key decision makers

Simple

Powerful

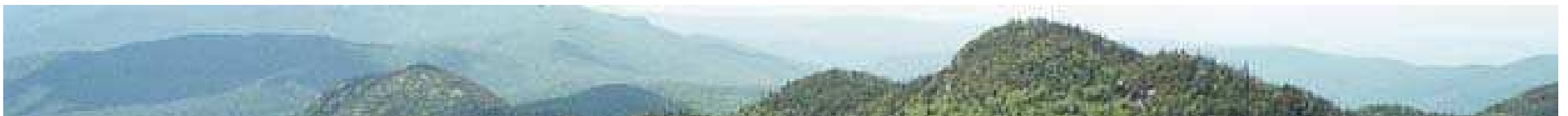
Actionable

Surprising

Targeted

Iconic

Concrete



STEP 6

Communicate the results to key decision makers



Kazakhstan agreed to a goal of establishing 6 million hectares of protected areas in key Saiga habitat by 2030

TARGET 2: Mainstreaming and integration

“By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes....”



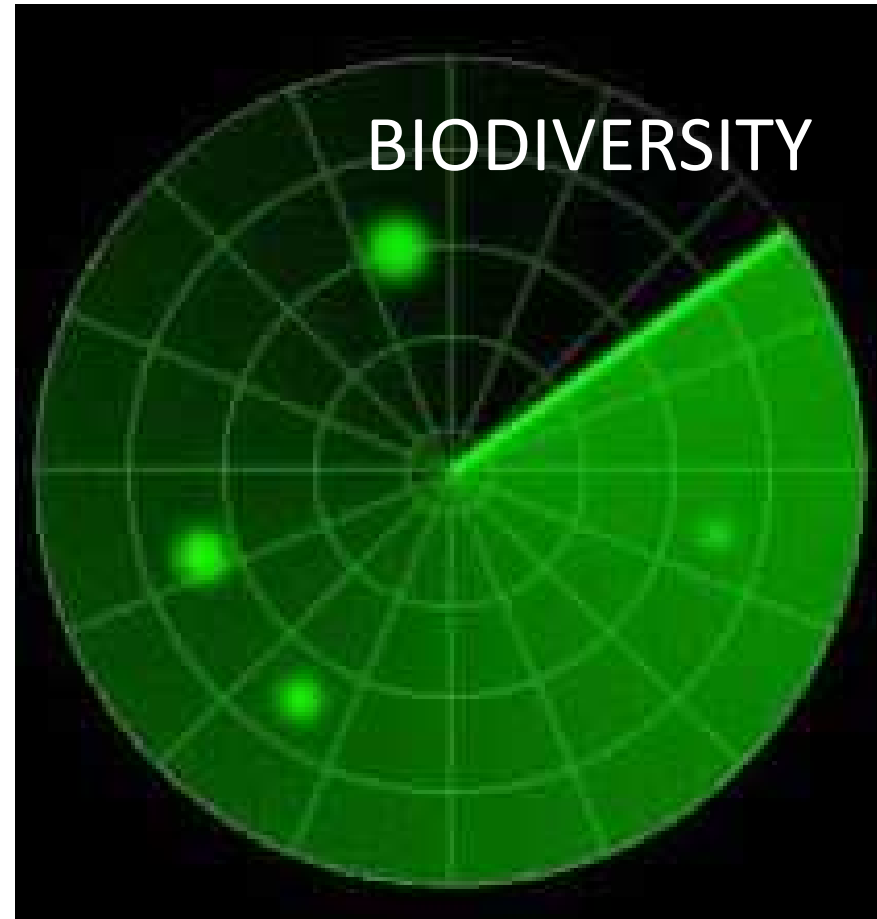
Mainstreaming and integration

To place
biodiversity into
economic decision-
making
frameworks...



Mainstreaming and integration

...in other words, to place biodiversity on the radar screen of major decision makers...



Mainstreaming and integration



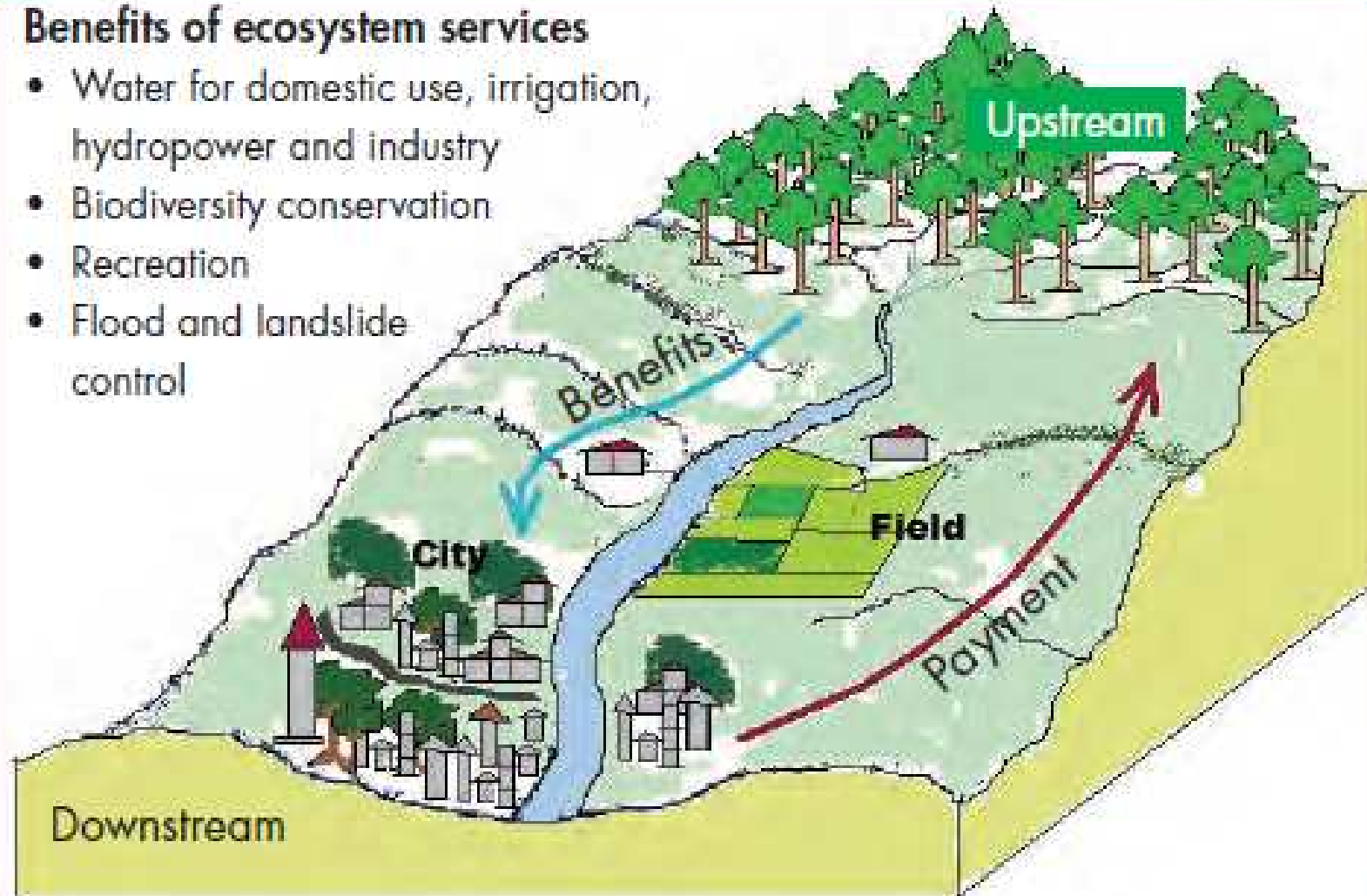
...in order to make better societal decisions.



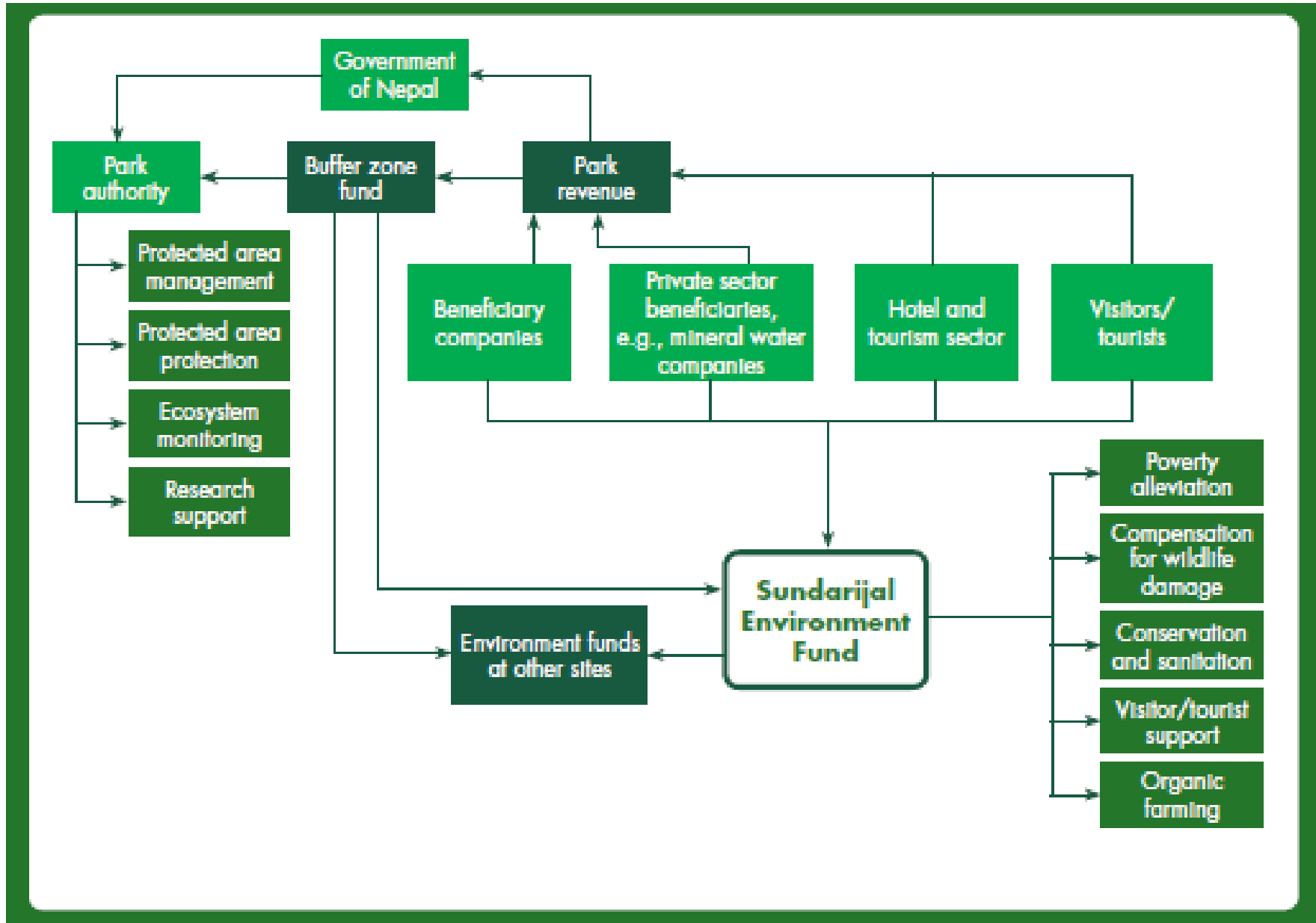
Example from Nepal

Benefits of ecosystem services

- Water for domestic use, irrigation, hydropower and industry
- Biodiversity conservation
- Recreation
- Flood and landslide control



Example from Nepal

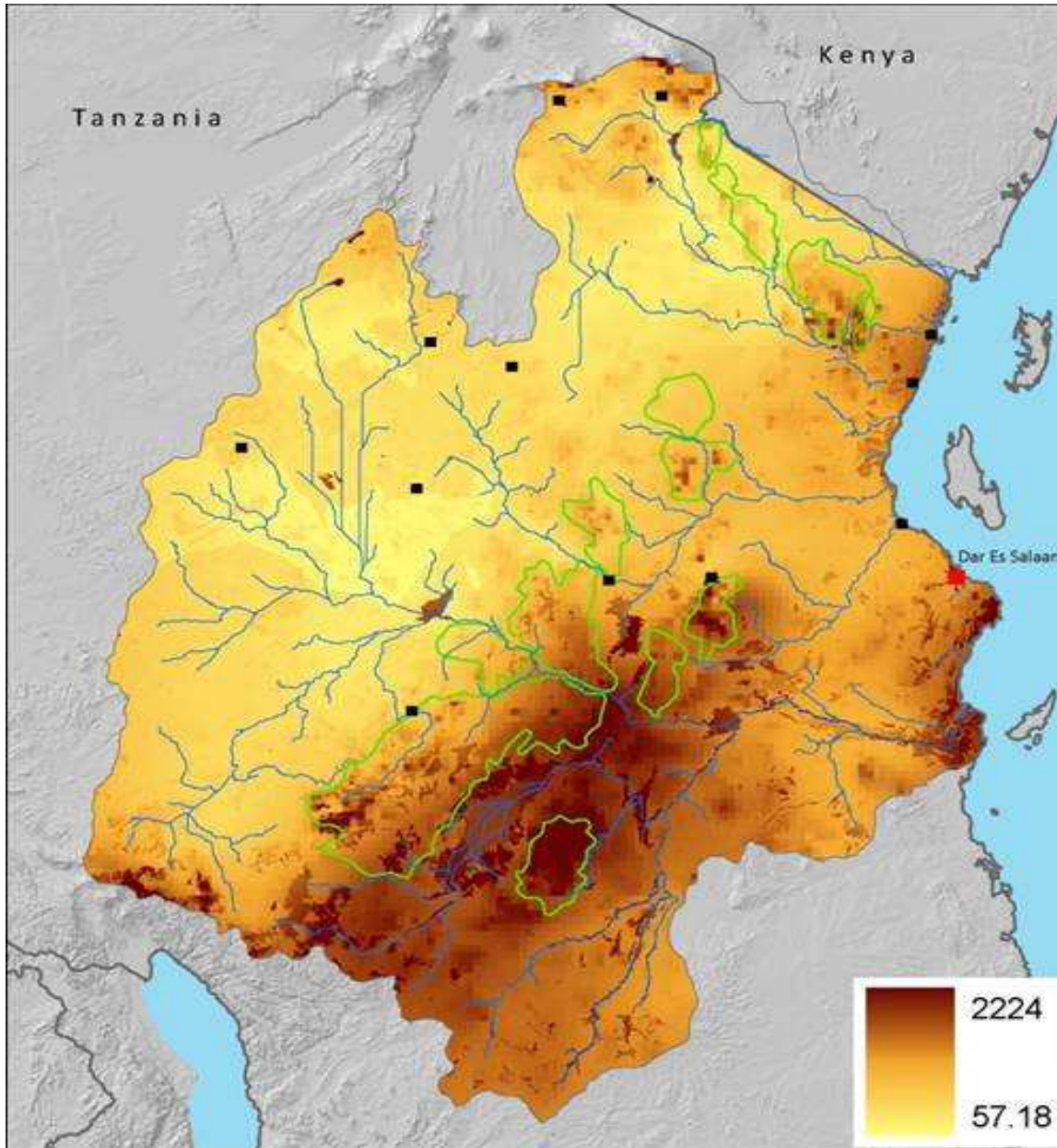


TARGET 2: Mainstreaming and integration

“By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes....”



Mainstreaming and integration



Forests important for water storage in Tanzania are also important for:

- Protected area planning
- Land use planning
- Forestry practices
- Water management
- Social development

Setting National Targets

Some possible examples from Tanzania:

- By 2020, 80% of forests critically important for water storage are fully protected
- By 2015, the forestry sector manages forests in key areas of the Eastern Arc primarily for the objective of water storage and quality
- By 2020, 30% of the degraded forests have been restored using payments for ecosystem services (water fees)



Exercise

Think of a situation in your country where protected area valuation is needed. In small groups, discuss each step:

1. Clarify the situation
2. Identify the benefits/services
3. Choose the method
4. Select indicators
5. Develop plan and conduct analysis
6. Communicate the results



Exercise

- Based on the example you've chosen, identify 1-2 relevant sectors.
- Identify specific opportunities for mainstreaming and integrating the results of the valuation study
- Then identify a potential national target using that example
- Complete exercise and post both the matrix and your target on the wall



Exercise

Exercise: Choose a specific case in which there is a problem caused by the undervaluation of a protected area. Using this case, discuss some ideas for completing each step. Be as specific as you can. Then discuss a) how you might integrate and mainstream this value into the economy and sectoral plans; and b) whether or not you think the valuation plan and the integration/mainstreaming plan will resolve the problem that you have identified.

<i>Step 1: Clarify the context</i>	<i>Step 2: Identify the benefits and services</i>	<i>Step 3: Choose the methodology</i>
<i>Step 4: Identify indicators</i>	<i>Step 5: Assess the PA and biodiversity values</i>	<i>Step 6: Communicate the results</i>

Steps for sectoral integration and mainstreaming:

Sector/planning process	Opportunities for integration and mainstreaming of protected area and biodiversity values

Context:

Mangrove forests are being destroyed, resulting in collapse of fisheries

National Target:



Exercise

Exercise: Choose a specific case in which there is a problem caused by the undervaluation of a protected area. Using this case, discuss some ideas for completing each step. Be as specific as you can. Then discuss a) how you might integrate and mainstream this value into the economy and sectoral plans; and b) whether or not you think the valuation plan and the integration/mainstreaming plan will resolve the problem that you have identified.



<i>Step 1: Clarify the context</i>	<i>Step 2: Identify the benefits and services</i>	<i>Step 3: Choose the methodology</i>
<i>Step 4: Identify indicators</i>	<i>Step 5: Assess the PA and biodiversity values</i>	<i>Step 6: Communicate the results</i>

Steps for sectoral integration and mainstreaming:

Sector/planning process	Opportunities for integration and mainstreaming of protected area and biodiversity values

Benefits:

Local fisheries

Local livelihoods

National Target:



Exercise

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Steps for sectoral integration and mainstreaming:

Sector/planning process	Opportunities for integration and mainstreaming of protected area and biodiversity values

Approach:

Market value

National Target:



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Steps for sectoral integration and mainstreaming:

Sector/planning process	Opportunities for integration and mainstreaming of protected area and biodiversity values

Indicators:

- Tons of fish consumed
- \$ earned in revenue by community
- Protein consumed

National Target:



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Steps for sectoral integration and mainstreaming:

Sector/planning process	Opportunities for integration and mainstreaming of protected area and biodiversity values

Plan:

NBSAP team to oversee study

National consultant to conduct study

Expert peer review

National Target:



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Steps for sectoral integration and mainstreaming:

Sector/planning process	Opportunities for integration and mainstreaming of protected area and biodiversity values

Communicate:

- Media campaign aimed at coastal communities
- Targeted meetings with energy sector

National Target:



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Steps for sectoral integration and mainstreaming:

Sector/planning process	Opportunities for integration and mainstreaming of protected area and biodiversity values

Sector:
Energy

Mainstreaming Opportunity:

Lobby energy sector for sustainable energy alternatives for coastal communities

National Target:



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Steps for sectoral integration and mainstreaming:

Sector/planning process	Opportunities for integration and mainstreaming of protected area and biodiversity values

By 2020, all remaining mangrove forests (as of 2011) are protected, 30% of degraded mangroves are under restoration, and long-term mechanisms are in place to provide alternative fuel to coastal communities

National Target:

