

Wood Biomass Utilization in Serbia



USAID Competitiveness Project
USAID Projekat za razvoj konkurentnosti

Agenda

1. About the USAID Competitiveness Project
2. About Biomass
3. Wood Biomass Pellets
4. Serbia's Wood Biomass Potential
5. Market Players
6. Takeaways

USAID Competitiveness Project

- Four year project (Oct07)
- \$14.7m
- SMEs (export, sales)
- Seven sectors
- Renewables
- A2F



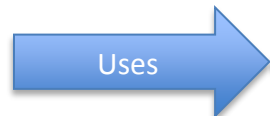
About Biomass



USAID Competitiveness Project
USAID Projekat za razvoj konkurentnosti

About Biomass

- Wide topic (coal, biogas, bio diesel, agricultural waste, wood, etc.)
- Wood Biomass
 - Sawdust
 - Branches
 - Wood off-cuts
 - Firewood



Uses for Wood Biomass

- Pellets & briquettes
- Residential & industrial



Wood Biomass Pellets



USAID Competitiveness Project
USAID Projekat za razvoj konkurentnosti



Stages in Pellet Manufacturing



Stages in Pellet Process

Wood
Biomass



Wood
Chips



Pellets



Stages in Pellet Process



Stages in Pellet Process



Biomass Pellet Value Chain



Biomass Pellet Value Chain



Biomass Pellet Value Chain



Biomass Pellet Value Chain



Serbia's Wood Biomass Potential



USAID Competitiveness Project
USAID Projekat za razvoj konkurentnosti

Key Factors

1. Production

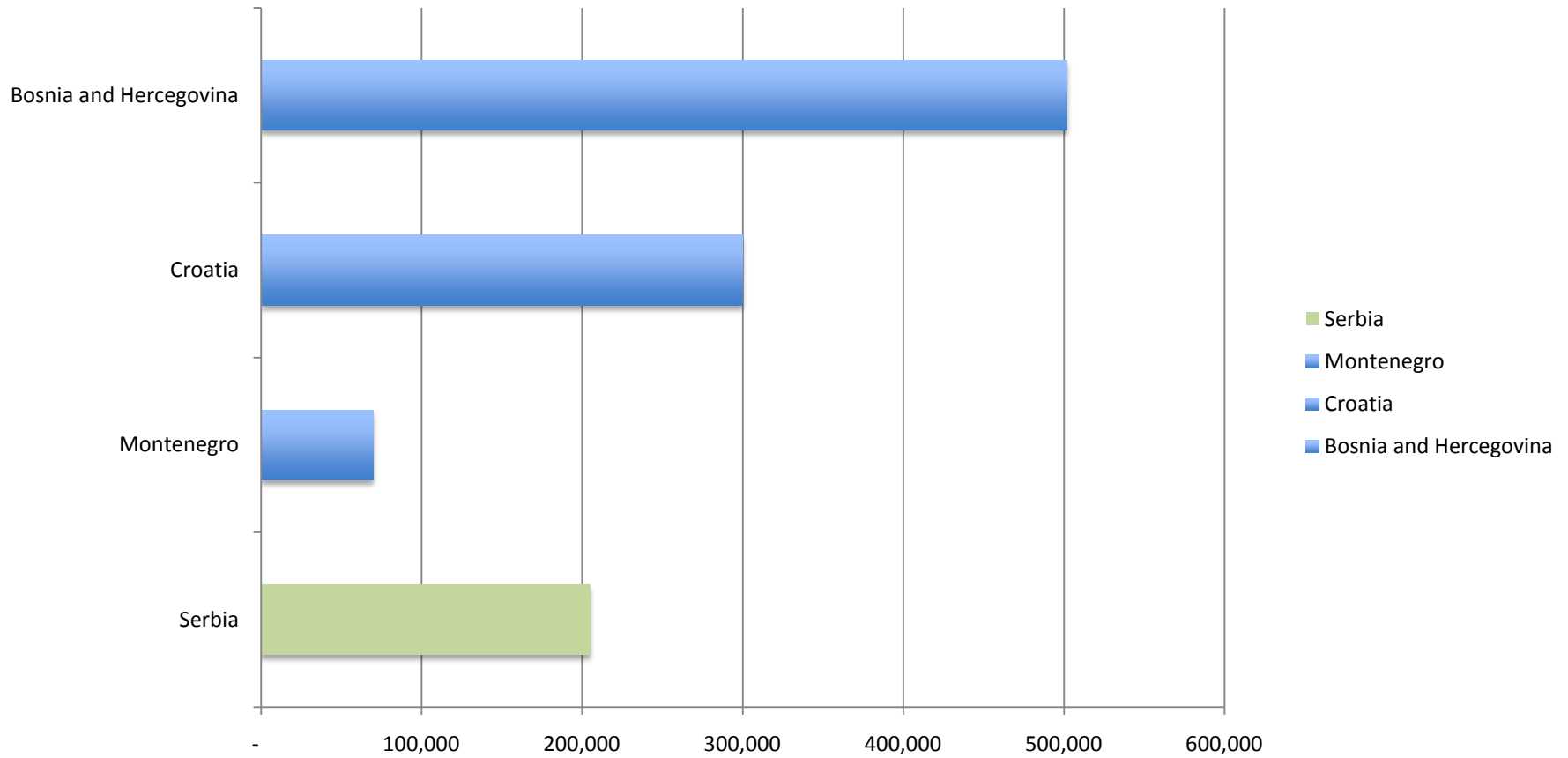
- Forest Area
- Utilization

2. Sales

- Local Market:
 - Population size
 - Consumption of Wood Fuel
- Export Markets

Forest Area

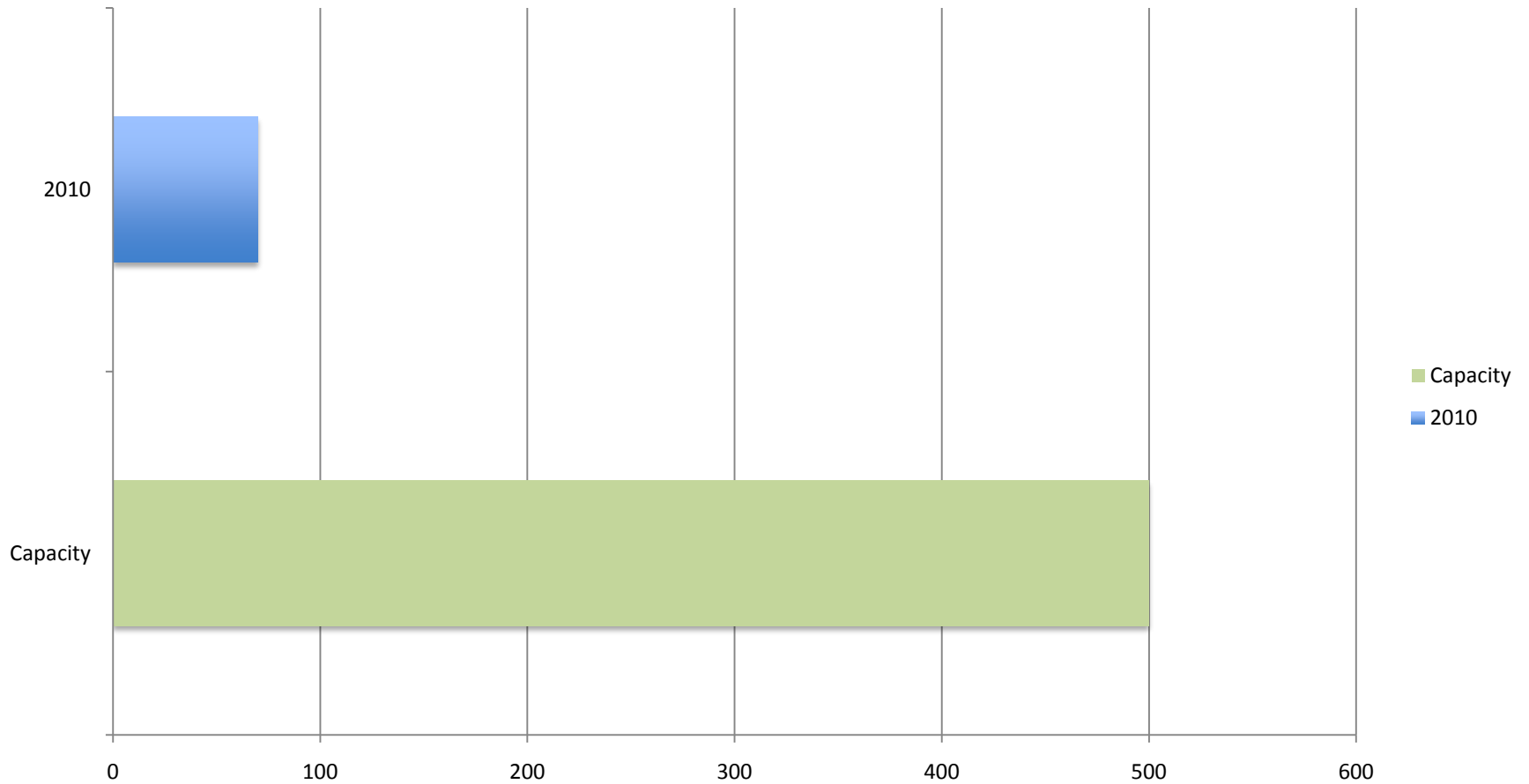
Forest Area (wood volume m3 mil)



Production

Utilization

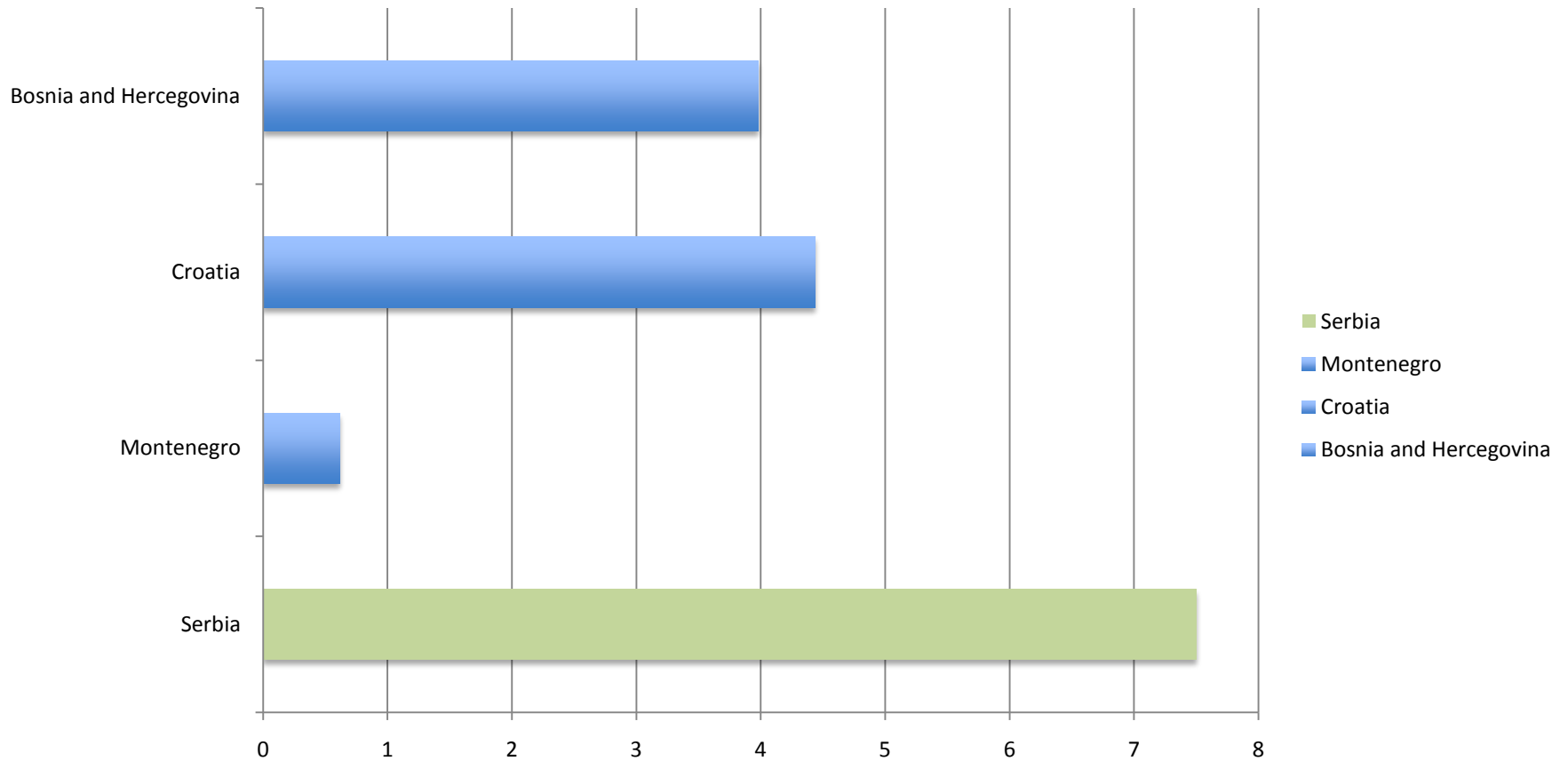
Serbia Pellet Production (000t/yr)



Sales (local)

Population

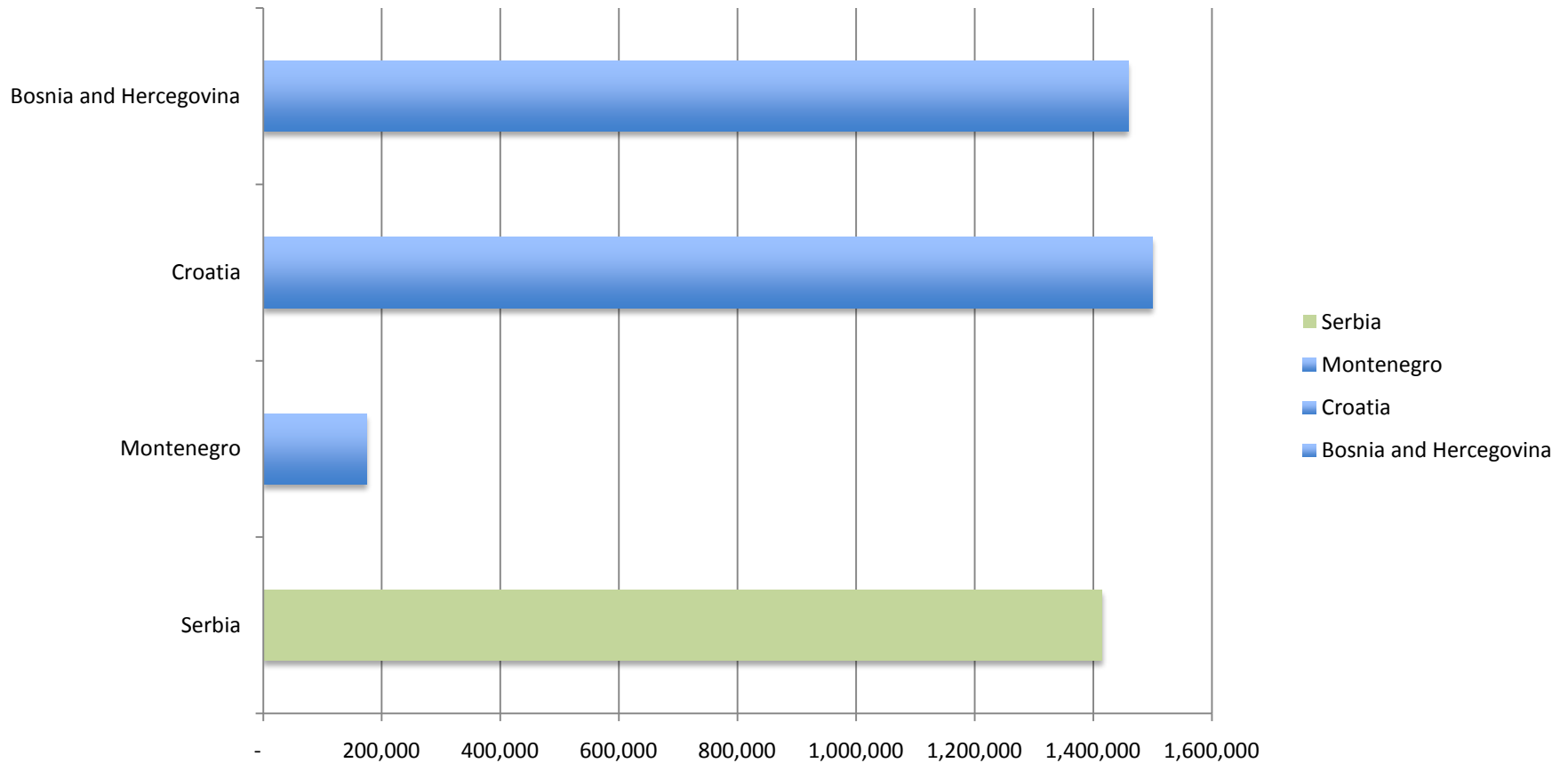
Population



Sales (local)

Wood Consumption

Consumption of Wood Fuel (m3/year)



Sales (export)

Export Markets



EXW
130, -€



Transport
55, -€

Delivered Milan
185, -€



Serbia:

Sales (export)

Export Markets



EXW
130, -€



Transport
55, -€

Delivered Milan
185, -€



Serbia: 



EXW
130, -€



Transport
40, -€

Delivered Milan
170, -€



Croatia: 

Market Players



USAID Competitiveness Project
USAID Projekat za razvoj konkurentnosti

Market Players

- Forestry Agencies (44%)
- Wood processing companies
- Entrepreneurs
- Privately owned forests (53%)
- Large scale fruit tree growers

Key Takeaways



Key Takeaways

1. Most crucial factors:
 - a) Raw materials access + proximity
 - b) Distance to market
2. How and where to enter the value chain
3. Low wood biomass utilization = opportunity to participate
4. Market demand:
 - a) Export market most lucrative
 - b) Domestic market to grow
 - c) Limited resources = increase price security

THANK YOU!



USAID Competitiveness Project
USAID Projekat za razvoj konkurentnosti