Science and Technology for Recovery, Rehabilitation, and Reconstruction

A Resilient Future: Science and Technology for Disaster Risk Reduction

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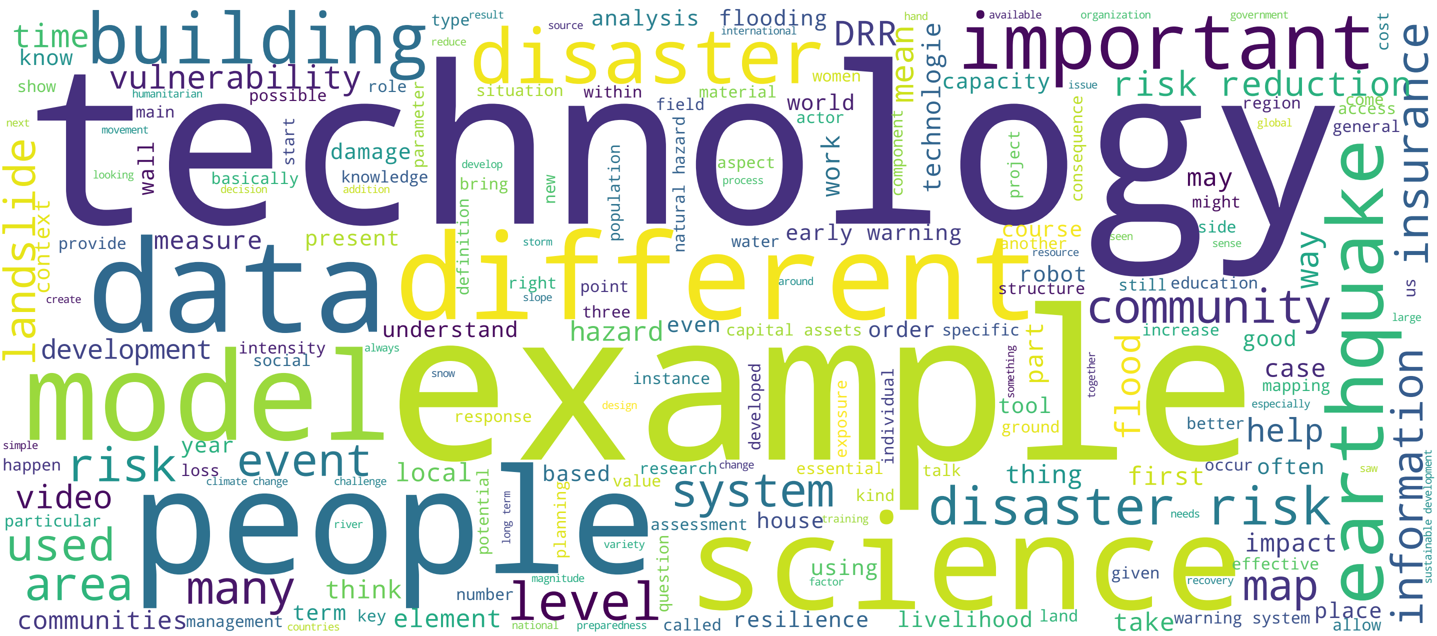

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Video

EPFL

Recovery, rehabilitation, reconstruction

The building blocks of livelihoods = capital assets:

- Human capital
- Natural capital
- Physical capital
- Financial capital
- Political capital
- Social capital

In this video I will present the definitions of recovery, rehabilitation, and reconstruction, and a few examples of science and technology for recovery in general. To better understand recovery, rehabilitation, and reconstruction definitions, let us first look at examples of capital assets.

Notes

Summary

0m 05s

Recovery, rehabilitation, reconstruction

The building blocks of livelihoods = capital assets:

- Human capital
- Natural capital
- Physical capital
- Financial capital
- Political capital
- Social capital

The building blocks of livelihoods, or capital assets, include human capital, such as knowledge, skills, and experience, natural capital, natural resources and ecosystems, financial capital, such as credits, savings, and insurance. The capacity to maintain or recover these capital assets defines the impact of a disaster on livelihoods.

Notes

Summary

0m 23s

Recovery, rehabilitation, reconstruction

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Recovery: "Decisions and actions aimed at restoring or improving livelihoods, health, as well as economic, physical, social, cultural and environmental assets, systems and activities, of a disaster-affected community or society, aligning with the principles of sustainable development, including build back better to avoid or reduce future disaster risk."

(UNISDR, 2015)

Rehabilitation: "**The rapid and basic restoration** of services and facilities for the functioning of a community or a society affected by a disaster."

(UNISDR, 2015)

Reconstruction: "The medium and longer-term repair and sustainable restoration of critical infrastructures, services, housing, facilities and livelihoods required for full functioning of a community or society affected by a disaster."

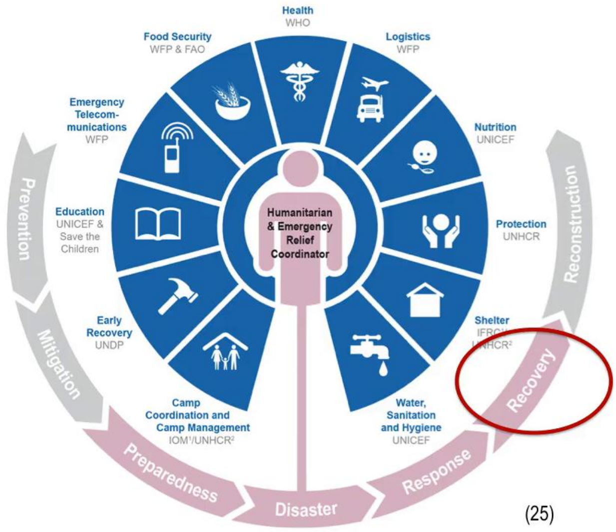
(UNISDR, 2015)

Notes

Summary

0m 46s

Recovery, rehabilitation, reconstruction



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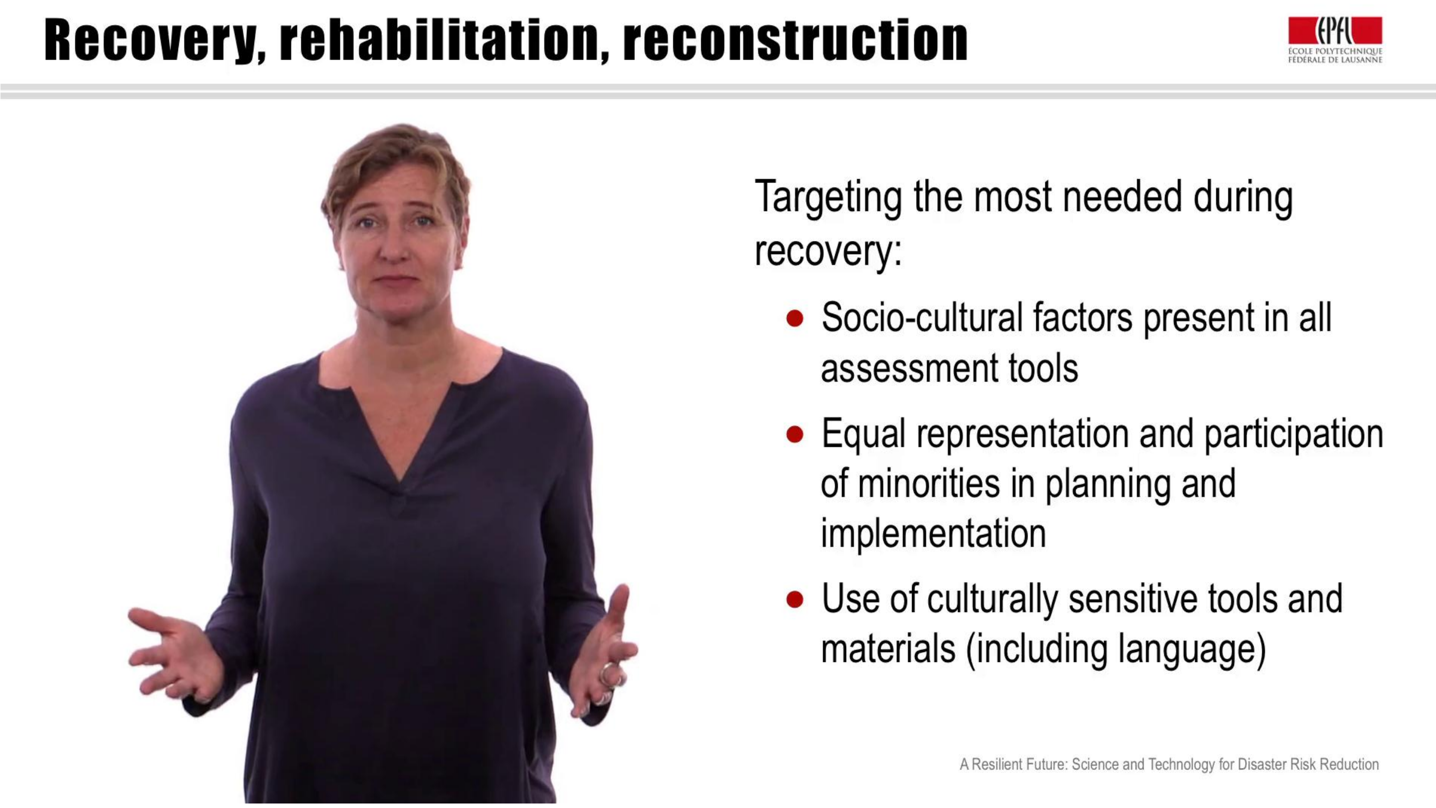
Recovery includes the "decisions and actions aimed at restoring or improving livelihoods, health, as well as economic, physical, social, cultural and environmental assets, systems and activities, of a disaster-affected community or society, aligning with the principles of sustainable development, including build back better to avoid or reduce future disaster risk." Rehabilitation is "the rapid and basic restoration of services and facilities for the functioning of a community or a society affected by a disaster." Reconstruction is "the medium- and long-term repair and sustainable restoration of critical infrastructures, services, housing, facilities, and livelihoods required for the full functioning of a community or society affected by a disaster." In the early phases of recovery, the rehabilitation, the cluster approach presented earlier in the course, is also used. Recovery should include addressing all the capital assets that you see. For example, health, nutrition, shelter, et cetera.

Notes

Summary

0m 47s



During recovery, it is important to target the social and economic sectors that need the most help. For this, it is essential that socio-cultural factors are present in all assessment tools. There is equal representation and participation of minorities, and culturally sensitive tools, technologies, and materials should be used.

Notes

Summary

1m 55s

Science and technology for recovery

Examples of S&T for recovery:

- Software education
- Mangrove fauna rearing and small-scale aquaculture
- Cash transfer via mobile phones
- Alternative energy technology
- Medium to long-term sanitation systems and storm water management

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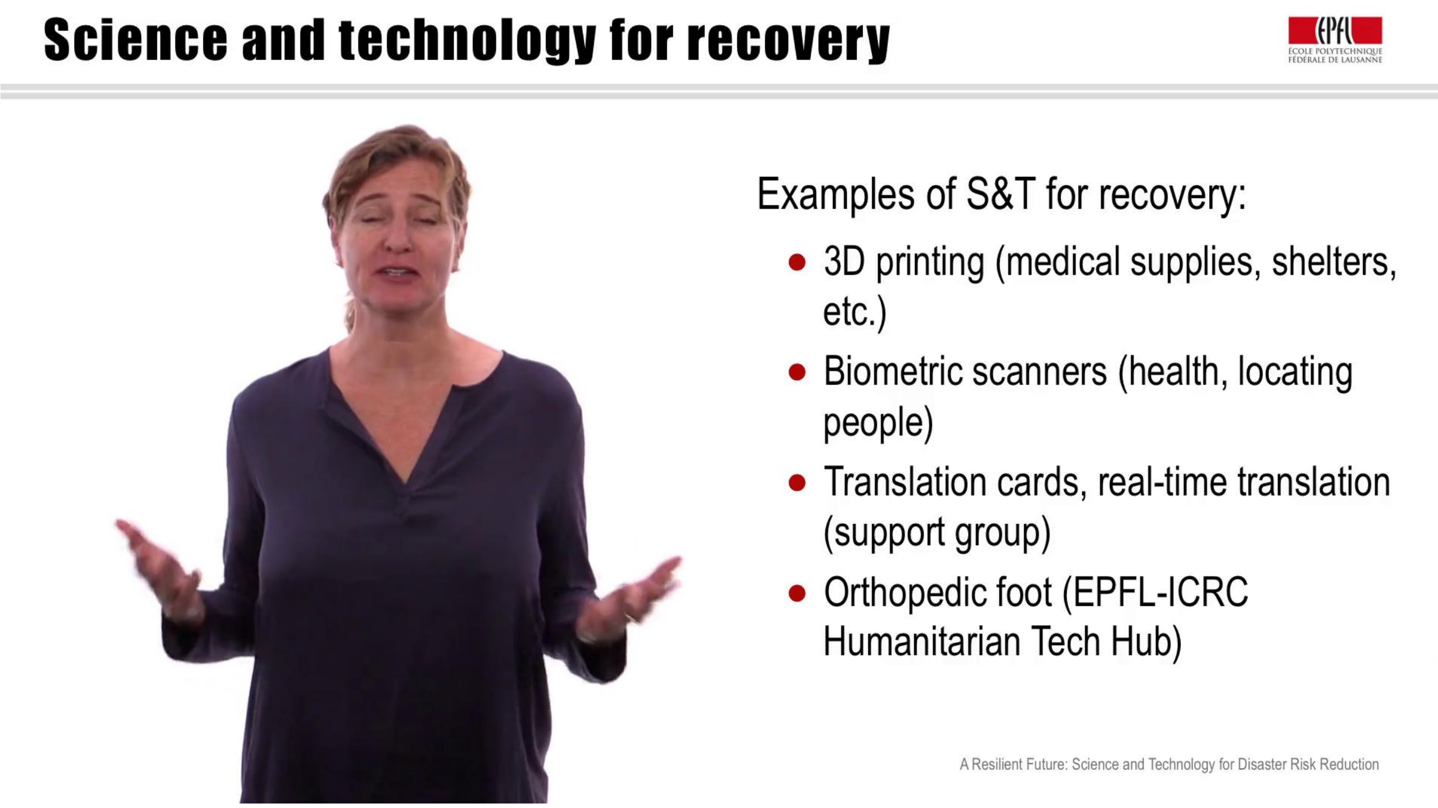
Science and technology are essential in helping obtain information on livelihoods, through livelihood assessments. For example, through the development and use of baseline information and analysis, the use of empirical evidence, and the understanding of impacts.

Notes

Summary

2m 16s



In addition to the use of science and technology during assessments, other examples of science and technology for recovery include the use of software and computers for education and skill development, mangrove fauna cultivation and small-scale aquaculture. Both the education and sustainable economic activities can help those affected, regain their sources of income. Other examples include alternative energy technology, when moving back from temporary shelters to their communities, and sanitation systems and storm water management systems.

Notes

Summary

2m 31s

Main points

- The capacity to maintain or recover capital assets defines the impact of a disaster on livelihoods
- Science and technology are essential in helping to obtain information on livelihoods
- Several sciences and technologies can help in the recovery of livelihoods

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Other technologies being used, and that have been emerging for the recovery phase, include 3D printers, biometric scanners, real time translation that can help psychology professionals access more people in need of support services. Furthermore, EPFL and ICRC have been further developing orthopedic feet, increasing the level of agility for the person wearing it. In addition to a variety of recovery science and technology examples, we saw that the capacity to maintain or recover capital assets defines the impact of a disaster on livelihoods. We also saw that science and technology are essential in helping obtain information on livelihoods, and that several sciences and technologies can help in the recovery of those livelihoods.

Notes

Summary

3m 06s

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Notes

Summary

3m 54s

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Summary

3m 58s

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(29) "3D Printer" courtesy of Wɔɛlab (authorization granted on August 11, 2016). "In connection with the Hacker Ethic, Woelab have no isolated genius or unique inventor in the value system the lab is trying to implement. All our projects are collectivist. WoeLab is an innovative community based on sharing. Afate Gnikou is only a resident among all those work together on projects such as our 3Dprinter based on electronic waste. This machine, like everything developed in WoeLab, is a collaborative initiative. Our entire community has been involved from the beginning and helped develop the project. Indeed the W.Afate is one of the very first African-symbols of this contemporary movement of 'Commons' which is being developed around the world and which has -this the intuition behind everything we do in Togo-echoed in our African traditions. The W.afate must be describe like an invention of the WoeLab Community. And all the thirty young residents who benefit from WoeLab program are equally involved in this 3Dprinter in e-waste project. Those philosophies #LowHighTech, Technology Democracy and our original social model are the keys of WoeLab success (personal communication, Sénamé Koffi Agbodjinou)."

Notes

Summary

4m 01s

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Door locks with biometric finger scanner. Not very 007 but still pretty cool. #ces2014" by Dave Taylor is licensed under CC BY 2.0

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Notes

Summary

4m 04s