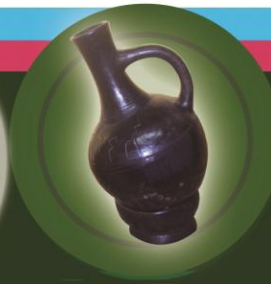


BUNOO



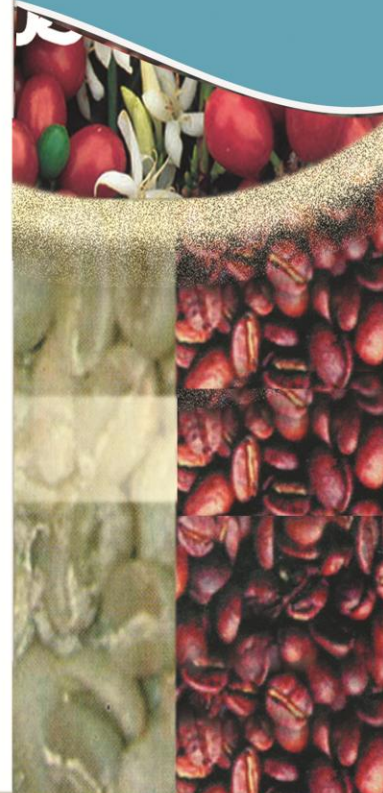
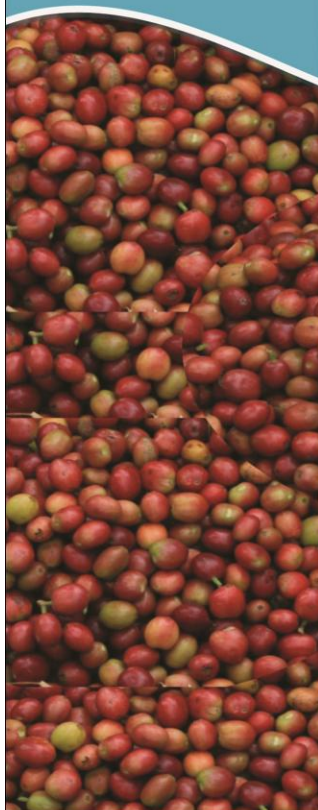
Kafa, Ethiopia, stretches over more than 700,000 ha containing more than 50% of Ethiopia's remaining Afromontane evergreen forests ecosystems. **It is the place of origin of the rare and critically endangered coffee Arabica...** UNESCO-website 2nd June 2010

Special Edition

ልዩ እትም

በካፋ ዞን ባህል ቱሪዝምና የመንግስት ኮሙኒኬሽን ጉዳዮች መምሪያ የሚዘጋጅ መጽሔት

ቅጽ 1 ቀጥር 10 መጋቢት 2003ዓ.ም



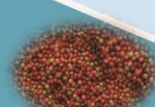
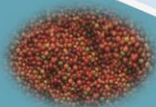
GAKI SHAROCHI – THE LAST KING OF KAFA KINGDOM [1890-1897]

Coffee is the gift of Kafa to the World

“Kafa, Ethiopia, stretches over more than 700,000 ha containing more than 50% of Ethiopia’s remaining Afromontane evergreen forests ecosystems. **It is the place of origin of the rare and critically endangered coffee Arabica.** The site, a scientific, economic, aesthetic and cultural treasure house, is characterized by numerous fertile valleys and low lands linking the mountains and ridges, and a number of majestic waterfalls, including the Barta and Woshi. Public private partnerships for economic growth and efficient use of resources have been implemented successfully in the area and can serve models for new initiatives, particularly for sustainable coffee production and marketing.” UNESCO-website 2nd June 2010

For Further Information: Visit the following websites:-

- WWW.kafa-biosphere.com
- WWW.unesco.org



FOR THIS SPECIAL EVENT OF KAFA COFFEE BIOSPHERE LAUNCHING DAY

CONGRATULATIONS TO US ALL !



ማውጫ

ርዕስ	ገጽ
❖ የዝግጅት ክፍሉ መልዕክት-----	2
❖ ርዕሰ አንቀጽ-----	3
❖ የዞኑ ዋና አስተዳዳሪ መልዕክት-----	4
❖ የዞኑ ባህል፣ ቱሪዝምና የመንግስት ኮሙኒኬሽን ጉዳዮች መምሪያ ኃላፊ መልዕክት-----	6
❖ ዓለም አቀፍ የባዮስፌር ሪዘርቭ መረብ -----	7
❖ የአየር ፀባይ ለውጥ እውነታዎች-----	16
❖ በካፋ ውስጥ የሚገኙ የቱሪስት መዳረሻዎች-----	22

አድራሻ ካፋ ዞን ቦንጋ



047-331-0403

047-331-0788

047-331-0150

ፋክስ 047-331-01842

የመ.ሣ.ቁ 77

ቡኖ ቅጽ 1 ቁጥር 10
2003 ዓ.ም ልዩ እትም

በካፋ ዞን ባ/ቱሪዝምና
የመን/ኮሙ/ጉዳዮች
መምሪያ የሚዘጋጅ
መጽሔት

ኤድቶራሪያል ኮሚቴ
ተስፋዬ ወርቁ ደድኖ
ወንዱ ወ/ሰንበት

/NABU/

አሰፋ ገ/ማሪያም የሾ
ፀጋዬ ገ/ማሪያም

ካሜራ ፊደና ፎቶግራፍ
አሳምነዉ አትርሳዉ

ኮምፒውተር ጽሑፍ
አዳኝ ምትኩ

የአዘጋጅ መልእክት

በካፋ ዙን ባህል ቱሪዝምና የመንግስት ኮሙኒኬሽን ጉዳዮች መምሪያ ተዘጋጅታ የምትታተመዉ በኖ መጽሔት ቀደም ባሉት ዘጠኝ እትሞች የተለያዩ መረጃዎችን ስታስተላልፍ ቆይታለች።

አሁን ደገሞ በልዩ እትሟ በሁለት ቋንቋዎች ማለትም በአማርኛ እና በእንግሊዝኛ በዉስን ርዕሶች ላይ ብቻ ትኩረት በማድረግ ለንባብ ተዘጋጅታለች።

የዙን ዋና አስተዳዳሪ እና የባህል ቱሪዝምና የመንግስት ኮሙኒኬሽን ጉዳዮች መምሪያ ኃላፊ መልእክቶችን፤ የአለም መንግስታትና ህዝቦች የጋራ ችግርና አጀንዳ በሆነዉ የአየር ፀባይ ለዉጥ፤ የባዩስፌር ጥበቃ መረቦች፤ እና በካፋ ውስጥ የሚገኙ የቱሪስት መዳረሻዎች በጥቂቱ በሚሉ ርዕሶች ላይ መረጃ ትሰጣለች ።

ስለሆነም መጽሔቷ በዉስጧ ስለያዘቻቸዉ ርዕሶች በቂ ግንዛቤ እንደምታስጨብጥ ተስፋ በማድረግ መልካም ንባብ ብለናል።



KAFA



ርዕስ አንቀፅ

ዓለምን እያነጋገረ ያለው የአየር ለውጥና ብክለት ለመከሰቱ ምክንያቶች ከሆኑት አንዱ የደን ሀብት መውደም ነው። ለመውደም ምክንያት ከሆኑት ዋነኛው የሕዝብ ቁጥር ማደግና አግባብ ያልሆነ አጠቃቀም ነው።

የአየር መዘባት በሰጪና በእንስሳት ሕይወት ላይ ከፍተኛ ቀውስ እየፈጠረ ነው። ለአብነት ወቅቱን ያልጠበቀ ዝናብ፣ መቀት፣ ቃጠሎ፣ ኑሮ ውድነትና የጤና መታወክ የመሳሰሉት የሚጠቀሱ ናቸው። በመሆኑም በዓለም ላይ አለመረጋጋት፣ የኢኮኖሚያዊና ማህበራዊ ችግሮች እየበዙ መጥተዋል።

ይህን ለመታደግ ነባሩ ደንና ብዝሃ-ህይወት መክለል፣ መጠበቅ እንዲሁም የተራቆቱ አካባቢዎችን መልሶ በማልማት ተተኪውን ትውልድ የማዳን ግዴታ ሁሉም ሊገነዘቡ ይገባል።

ነባሩ ተፈጥሮ ደንም ሆነ የተራቆተው እንደገና ለምቶ ለትውልድ ማስተላለፍ የሚቻለው ይህን የመታደግ አቅም ያለው ሕብረተሰብ በመፍጠርና በባለቤትነትም የማስተዳደር፣ በአግባቡ የመጠቀም ክህሎትና ብቃት እንዲኖረው ለማድረግ ተከታታይነት ያላቸው ስልጠናዎች የገንዘብና ቁሳቁስ ድጋፍ በየደረጃው ሲደረግ ብቻ ነው።

ይህን አቅም ለመፍጠር አንድን አካል ብቻ የሚመለከተው ሣይሆን መንግስት፣ መንግስታዊ ያልሆኑ ድርጅቶች፣ ግለሰቦችና ህብረተሰቡ ራሱ በጋራ መረባረብ ይኖርበታል። በተለይም በዓለም አቀፍ ደረጃ ለቅርሶች መኖርና መጠበቅ ከፍተኛ አስተዋፅኦ በማድረግ ላይ የሚገኘው UNESCO እና ሌሎች የሚመለከታቸው ክፍሎች ሁሉ በገንዘብ፣ በቁሳቁስና በአቅም ግንባታ ሥራዎች ተከታታይነት ባለው መልኩ በመስራት አሁን በአገራችን የቀረችውን የተፈጥሮ ደንና ብዝሃ ህይወት መጠበቅና ማስጠበቅ ሚና ላይ የጐላ ድርሻ ሊኖራቸው ይገባል።

ሕዝቡም የዚህ የተፈጥሮ ደን መኖር የሱ የመኖር ሕልውና መሆኑን ተረድቶና ተገንዝቦ ደኑን የመጠበቅ የመንከባከብና የማቆየት እንዲሁም የተራቆቱ አካባቢዎችን መልሶ በማልማት ተግባር ላይ ከፍተኛ ተሳትፎ እንደሚጠበቅበት ማወቅ አለበት፤ መተግባርም ይገባዋል።

በየደረጃው ያለው የመንግስት መዋቅርም የተለያዩ የሕብረተሰብ ክፍሎችን በማስተባበርና ግንዛቤ በማስጨበጥ በ5 ዓመቱ ዕድገትና ትራንስፎርሜሽን ዕቅድ ውስጥ ተፈጥሮን መጠበቅና መንከባከብ ሥራ ጐልቶ እንዲወጣ የማድረግ ኃላፊነቱን በተገቢው መወጣት አለበት።





አቶ ክፍሌ ገ/ማሪያም

የካፋ ዞን ዋና አስተዳዳሪ መልዕክት

አገራችን እትዮጵያ በአለም ታሪክ ውስጥ በርካታ ባህላዊና ታሪካዊ ቅርሶች ባለቤት በመሆን ትታወቃለች። ከነዚህም ለአብነት የአክሱም ሐውልት፣ የላሊበላ ውቅር ቤተ-ክርስቲያን፣ የፋስለጸስ ቤተ-መንግስትና የጀጎል ግንብ በዩኔስኮ/UNESCO/ ከተመዘገቡት የሚጠቀሱት ናቸው።

በሌላ መልክ ለመጀመሪያ ጊዜ የሰው ዘር መገኛነቷን የሚያረጋግጥ እንደ ሉሲ፣ሠላምና አርዲ በሀገራችን በምስራቁ ክፍል መገኘታቸው የዓለም ሃይንቲስቶችና ህዝብን ያሳምኑ ሆነዋል።

ከዚህም በተጨማሪ የአገራችን የኢኮኖሚ ጀርባ አጥንት የሆነው ቡና የተገኘው በአገራችን በካፋ ዞን በዴቻ ወረዳ በማኪራ ቀበሌ መሆኑ በዩኔስኮ /UNESCO/ ተመዝግቧል።

በአሁኑ ጊዜ ዓለምን በማነጋገር ላይ የሚገኘውና እጅግ አሳሳቢ ጉዳይ የሆነው የአየር መዛባትና ብክለት ምክንያቱ የተፈጥሮ ደን መመናመን መሆኑ ጥርጥር የለውም። ከዚህም መነሻነት በእጃችን ያሉት የተፈጥሮ ደኖች ተክልለው፣ ተጠብቀውና ቀጣይነት ያለው የአጠቃቀም ሥርዓት ተዘርግቶ ለተተኪው ትውልድ እንዲተላለፍ ማድረግ የኛ ኃላፊነትና ግዴታ ነው።

በመሆኑም ቀደም ሲል የካፋ ሕዝብ በባህላዊ አስተዳደርና አኗኗር ሥርዓቱ የተፈጥሮ ደንን በመጠበቅና በመንከባከብ ለዛሬ ትውልድ አስረክቧል።

ከዚህም በመነሳት በዓለም የታወቁ ምሁራን ባደረጉት ጥናትና ምርምር ውጤቶች መሠረት ይህ የተፈጥሮ ደን በዩኔስኮ/UNESCO/ ዕውቅና አግኝቶና ተክልሎ የካፋ ቡና ባዮስፌር/Kafa Coffee Biosphere/ ተብሎ በመጠበቁና በመመረቁ በራሴና በካፋ ሕዝብ ስም እንኳን ደስ አለን እላለሁ። ይህንን የተፈጥሮ ደን ጠብቆ ያቆየው ህዝብና ባህሉ ሊመሰግንም ይገባል።



ህዝቡም ይህን ባህላዊ ልምድ በሳይንሳዊ ዘዴ በማስደገፍ የተፈጥሮ ደኑን የበለጠ እንዲጠብቀውና ተንከባክቦ በማቆየት የመጭውን ትውልድ ህይወት የመታደግ ግዴታና ኃላፊነት እንዳለበት መረዳትና መተግበር አለበት እላለሁ።

ይህን የተፈጥሮ ደን ጠብቆ ያቆየው ሕዝብ ቁጥሩ ከጊዜ ወደ ጊዜ እየጨመረ በመሄድ ላይ ይገኛል። ይህ እየጨመረ ያለው የሕዝብ ቁጥር ለመኖር የሚያስችል ተጨማሪ መሬት ለመያዝ መንቀሳቀሱ አይቀሬ ነው።

ስለዚህ አሁን ያለውን የተፈጥሮ ደን ከመጠበቅ ባሻገር በተራቆቱ ቦታዎች መልሶ ደን የማልማትና ቀጣይነት ያለውን የግብርና ምርት እድገት ለማስመዝገብ በሚያስችል አካሄድ የመሬቱን ምርታማነት በመጠበቅ ከትንሽ መሬት የተሻለ ምርት ለማግኘት የሚያስችል በሞዴል አርሶ አደሮች የተሞከረና ከፍተኛ ውጤት ያስገኝ ምርጥ ተሞክሮ በመቀመር ለሁሉም አርሶ አደሮች የማድረስ ሥራ ትኩረት ተሰጥቶ እየተሰራ ያለና ተጠናክሮ የሚቀጥል ይሆናል። እንደዚህ ተጨባጭ ሁኔታም ቡናን በከፍተኛ ደረጃ ለማልማት በሚደረገው እንቅስቃሴም የአካባቢ ጥበቃ ሥራ ጋር በማቀናጀት እንዲተገበርም ይደረጋል።

በዞናችን ያለው የተፈጥሮ ደን ባለበት እንዲቆይ ጉዳዩ የሚመለከታቸው ሁሉ ጠብቆ ያቆየውን ሕዝብ ማድነቅ ብቻ ሳይሆን የገንዘብና የቁሳቁስ /material and financial/ ድጋፍ ሊያደርጉለት ይገባል።

የተፈጥሮ ደኑ መኖርና መቆየት የዓለም አቀፍ ጥቅም እንዳለው ሁላችንም ተረድተን ለካፋ ሕዝብ ብቻ ሳንተው እንዴት መጠበቅና ማስጠበቅ እንዳለብን በዕድገትና በትራንፎርሜሽን ዕቅዳችን ማካተትና መተግበር ይኖርብናል።

በመጨረሻም ህዝቡ ያለውን የተፈጥሮ ደን እየጠበቀ እንዴት መጠቀም እንዳለበት ተከታታይነት ያለው የአቅም ግንባታና ድጋፍ እንዲደረግለት ሁሉም እንዲረባረብ ጥሪዬን አቀርባለሁ።

አመሠግናለሁ!!!





አቶ ምትኩ አስፋዉ የዩኒቨርሲቲ

የካፋ ዞን ባህል ተረገምና መንግስት ኮሙኒኬሽን ጉዳዮች መምሪያ ኃላፊ መልእክት

ኢትዮጵያ የበርካታ ብዙሀን-ህይወት ሀብት ባለቤት ከሆኑት ሀገሮች አንዷ ስትሆን በተለይ ደግሞ የእጽዋት ብዛትና በሀገሪቱ ብቻ በቀል /Endemic Element/ ትታወቃለች፡፡

በአሁኑ ወቅት በዓለም ላይ በቅርቡ ብዙሀን-ህይወታዊ ሀብት ይዘታቸው ትኩረት ከተሰጣቸው 34 አካባቢዎች /Bio diversity Hot spots/ ውስጥ ሁለቱ በሀገራችን ኢትዮጵያ ይገኛሉ፡፡ ከእነዚህ ውስጥ የደቡብ ምእራብ ኢትዮጵያ አፍሮ ሞንታኔ ደን /Afro-Mountane Forest/ አንዱ ሲሆን ካፋ ዞን የዚህ አካል በመሆኗ ቀዳሚ ሥፍራ ትይዛለች፡፡ ዞኖችን በኢትዮጵያ ከሚገኙት ሁለት የመጨረሻ ቅርቡ የደን ሀብት ከሚገኝባቸው ጥቂት የደቡብ ምእራብ ኢትዮጵያ አካባቢዎች ውስጥ ዋነኛው ነው፡፡

ይህ በደቡብ ምእራብ ኢትዮጵያ አካባቢ የሚገኘው የዞኖችን ህብረተሰብ በባህሉ፣ በእምነቱና በተፈጥሮ እውቀቱ ጠብቆ ያቆየው የደን ሀብት በዓለም የተባበሩት የትምህርት፣ የሳይንስና የባህል ድርጅት/UNESCO/ እውቅና አግኝቶ መመረቁ አድናቆት የሚቸረው ሲሆን ይህን ለየት ያለ አኩሪ ባህል፣ እምነትና የተፈጥሮ እውቀት በሳይንሳዊ መንገድ ታግዞ ለህ/ሰቡ፣ ለሀገርና ለአለም የሰጠውን ጥቅም በተሻለ ሁኔታ እንዲቀጥል ለማድረግ መንግስት፣ መንግሥታዊ ያልሆኑ ድርጅቶችና ሌሎች የሚመለከታቸው አካላት ድጋፍ በከፍተኛ ደረጃ ይጠበቃል፡፡

በዚህ ረገድ የኢ.ፌ.ድ.ሪ መንግስት በአምስት ዓመቱ የእድገትና የትራንስፎርሜሽን እቅድ ውስጥ ህ/ሰቡን ያሳተፈ የተፈጥሮ ሀብት ጥበቃና ልማት ትኩረት ከተሰጡት መስኮች አንዱና ዋነኛ በመሆኑ ወደ ተግባር ስለተገባ የዞኖችን ህዝብ የተለመደ የተፈጥሮ ሀብትን ጠብቆ የማቆየት አኩሪ ታሪኩን በሳይንሳዊ ዘዴ አዳብሮ እንዲቀጥልና ለዚህ ዓላማ መሳካትም የሚመለከታቸው ሁሉ የበኩላቸውን ድርሻ እንዲወጡ ጥሪዬን አስተላልፋለሁ፡፡

በማጠቃለያም በዞኖችን የካፋ ቡና ባዮስፌር በዓለም ቅርስነት ተመዝግቦ መመረቁ እየተገነባ ካለው የቦንጋ ብሔራዊ ቡና ሙዚየም ጋር ተዳምሮ ለዞኖችንም ሆነ ለአገራችን ገጽታ ግንባታ ኢኮኖሚያዊና ማህበራዊ ፋይዳው ከፍተኛ በመሆኑ በመምሪያችንና በራሴ ስም እንኳን ደስ አለን እያልኩ ካፋን የቡና መገኛ ብቻ ሳትሆን የግብይት ማእከል ለማድረግ እየተደረገ ላለው ጥረት በጋራ እንነሳ መልእክቱ ነው፡፡

አመሰግናለሁ !

ዓለምአቀፍ የባዮስፌር ሪዘርቭ መረብ (World Network of Biosphere Reserves) /ትርጉም- በወንዱ ወ/ሰንበት የናቡ ኮሙኒኬሽን ኦፊሰር/

የባዮስፌር ሪዘርቭ ውልደት (መነሻ)

ወደ 21ኛው ክፍለ ዘመን ስንሸጋገር ዓለማችንን የገጠማትን እጅግ ፈታኝ የሆነች ግር ለመፍታት የባዮስፌር ሪዘርቭ ፅንሰ ሀሳብ ተቀየረ። የመኖር ህልውናችን የሆኑ የብዝሃ-ህይወት ሀብቶች ማለትም እጽዋት፣ እንስሳትና ጥቃቅን ነፍሳት እንዴት እንንከባከባቸው? ጤናማ የተፈጥሮ ሥነ-ምህዳር /Eco-system/ እንዴት ይጠበቅ የሚልና በተመሳሳይ እያሻቀበ ያለው የህዝብ ቁጥር ብዛትና የቁስ ፍላጎት/ምኞት እንዴት ይጣጣሙ? የሥነ-ህወታዊ ሀብት እንክብካቤ ከዘላቂ ተጠቃሚነት ጋር እንዴት እናስታርቃቸው? አሁን ያለው የህዝብ እድገትና ስርጭት እያመለከተ ያለው የተፈጥሮ ሀብትና የኃይል ፍላጎት መጨመር፣ የግሎባላይዜሽን ኢኮኖሚና የንግድ ሥርዓት በገጠሩ ህብረተሰብ ላይ ተጽእኖ ማሳረፍ፣ የባህል ልዩነቶች እየተሸረሸሩ መምጣታቸው፣ ማእከላዊነትና ተፈላጊ መረጃዎችን ለማግኘት ያለው አስቸጋሪነት፣ ፍትህዊ የቴክኖሎጂ ፈጠራዎች ስርጭት ያለመኖር ሲሆኑ እነዚህ ሁሉ ከፊታችን ላሉ መጨዳመታት በተፈጥሮ አካባቢና በልማት ላይ ጥቂር ጥላ ያጠሉ ናቸው።

ሀገራት ይህንን አመላካች ሁኔታ በራሳቸው ብቻ መፍታት አይቻላቸውም። እ.ኤ.አ በ1968 ዩኔስኮ ባዘጋጀው የባዮስፌር ሪዘርቭ ሀብት እንክብካቤና ተገቢ አጠቃቀም ኮንፌረንስ መንግስታት በጉዳዩ ላይ ባደረጉት ውይይት በዩኔስኮ ውስጥ ሰውና ባዮስፌር /Man & Biosphere-MAB/ የሚል ንግግራም ተቀበለ። የባዮስፌር ሪዘርቭ እንክብካቤ

ጽንሰ ሀሳብ በአጭር ጊዜ ውስጥ የሰውና ባዮስፌር ዓላማዎች ማስገኛ ቁልፍ ግብዓት ሲሆን የብዝሃ-ህይወት እንክብካቤ፣ የኢኮኖሚና ማህበራዊ ልማትን ከፍ ለማድረግና ብሎም የባህል እሴትን ባለበት ለማቆየትና የሚጣረዙ ግቦችን ሚዛናዊ እንዲሆኑ አድርጓል።

የባዮስፌር ሪዘርቭ ማለት የሰውና የባዮስፌር ዓላማዎች የሚሞክሩበት፣ የሚፈተሹበት፣ ተሞክሮ የሚታዩበትና ተግባራዊ የሚደረጉበት ቦታ ማለት ነው። እኤአ በ1970 ይህ የባዮስፌር ሪዘርቭ የሚለው ስያሜ የተመረጠበት ሰውና ባዮስፌር ንግግራም ልዩ የሙከራ ቦታ መሆኑን ለመለየት ነው።

እ.ኤ.አ. በ1992 በሪዮዴጄኔሪዮ በተካሄደው የመንግስታት ድርጅት አካባቢና ልማት ኮንፌረንስ ላይ እነዚህ ጉዳዮች በትኩረት እንዲታዩ ለዓለም መሪዎች ቀርበዋል።

አጀንዳ 21፣ የብዝሃ ህይወታዊ ስምምነት /Convention on Biological Diversity/፣ የአየር ለውጥና በረሀማነት ላይ ከስምምነት የተደረሰባቸውና ለወደፊት ዘላቂ ልማት የአካባቢ እንክብካቤን ማካተት፣ በቀና መንፈስ የተፈጥሮ ሀብት ክምችት ያለማውደም፣ ከፍተኛ የማህበራዊ እኩልነት ማረጋገጥ፣ ለገጠሩ ማህበረሰብና ላካቡቱት እውቀት ክብር መስጠት ናቸው። የዓለም ማህበረሰብ የሪዮ ኮንፌረንስ ሀሳቦችን ተግባራዊ ተምሳሌት ሆኖ ለማዬት ይፈልጋል። እነዚህ ተምሳሌቶች ተግባራዊ መሆን የሚችሉት የህብረተሰቡን ማህበራዊ፣ ባህላዊ፣ መንፈሳዊና የኢኮኖሚ ፍላጎቶች መገለጫ ሆኖ ስሰራ ብቻና ሳይንሣዊ መሠረት ያለው ሲሆን ነው።

እኤአ በ1995 በስፔን ሲቪሌ በተደረገው ዓለም አቀፍ የባዮስፌር ሪዘርቭ ኮንፌረንስ እነዚያ ተምሳሌቶችን የባዮስፌር ሪዘርቭ መተግበር ሊያረጋግጥ እንደሚችል ማመላከቻ ሰጥተዋል።

ስለዚህ የባዮስፌር ሪዘርቭ በዓለም አቀፍ ደረጃ አዲስ የሚጫወተው ሚና እንዳለው ከግንዛቤ ተወስዷል። ይህ ደግሞ በባዮስፌር ሪዘርቭ ውስጥ የሚኖሩ የሚሰሩትን እና በአካባቢው ያሉት ከዓለም ተፈጥሮ ጋር ሚዛናዊ ግንኙነት ጋር ብቻ ግንኙነት እንዲኖራቸው ማለት ማይሆን የህብረተሰብ ፍላጎትን ጭምር ሟሟያ እንዲሆኑ ነው።

2. የባዮስፌር ሪዘርቭ ምንድን ነው?

ባዮስፌር ሪዘርቭ በየብስ ወይም በወሃ አካላት ውስጥ ያለ ሥነ ምህዳር፣ እጽዋትና እንስሳት እንዲሁም ሆኖ በአለም አቀፍ የዩኔስኮ ሰውና ባዮስፌር ንግግራም ማእቀፍ ውስጥ ተመዝግበው እውቅና ያገኙ ናቸው። የባዮስፌሮች ስብስብ በአንድነት የባዮስፌሮች ዓለም አቀፍ መረብ ይባላል። ባዮስፌሮች እውቅና የሚያገኙት በቅድሚያ ለዓለም አቀፍ የባዮስፌሮች መረብ ከመቅረባቸው በፊት ቅድመ ሁኔታዎችና የተቀመጣቸውን መመዘኛዎች ሟሟላቸው በአግባቡ ከተረጋገጠ በኋላ የየሀገራቱ ብሔራዊ መንግስታት በሚያቀርቡት የእውቅና ጥያቄ ነው። እያንዳንዱ የባዮስፌር ሪዘርቭ እርስ በእርስ የተደጋገፉና የተቆራኙ ሶስት መሠረታዊ ተግባሮችን/አገልግሎቶችን ሟሟላት አለባቸው።

1. የእንክብካቤ ተግባር

/A conservation function/

የመሬት አቀማመጥ/landscape / ሥነ ምህዳሮች፣ ልዩ ልዩ ዝሪያዎችና የተለያዩ ዘረ-መል ዓይነቶች እንክብካቤ የተደረገላቸው መሆኑን ማረጋገጥ

2. የልማት ተግባር

/A development function /

በአካባቢው የኢኮኖሚ ልማቱ ባህልን፣ ማህበራዊና ሥነ-ምህዳሩን በጠበቅ መልኩ እንዲሆን ማስተዋወቅ

3. የሎጅስቲክ ድጋፍ ተግባር

በአካባቢ፣ በሀገር አቀፍና በዓለም አቀፍ ደረጃ ከእንብካቤና ከልማት ጋር የተገናኙ ጉዳዮች ላይ ለሚደረግ ምርምር፣ ክትትል፣ ትምህርትና ለመረጃ ልውውጥ ድጋፍ ማድረግ ናቸው።

እያንዳንዱ የባዮስፌር ሪዘርቭ ሀገሮች ባላቸው ህጋዊ ማእቀፍ ሥር እንዲተዳደሩ ይደረጋል። እንዳንድ ሀገሮች ደግሞ ባዮስፌር ለማቋቋም ሲፈልጉ ለዚህ የሚሆን ህግ ያረቃሉ። ይሁን እንጂ በአብዛኛውን ጊዜ በነባሩ ብሔራዊ ህግ የተጠበቁ ቦታዎችን ማካለል ጠቀሜታው ይታያል። የባዮስፌሮች ማካለል ሁኔታ እንደየአካባቢው ነባራዊ ሁኔታ የሚወሰን ሲሆን ማዕከላዊ ዞን/core/፣ አዋሳኝ ክልል/buffer/ እና ሽግግር /transition/ ተብሎ ይካለላል። በርካታ የባዮስፌር ሪዘርቭ ቦታዎች በአንድ ወቅት በሌሎች ሥርዓቶች የተካለሉ ቦታዎችን ያካልላል / ለምሳሌ ብሔራዊ ፓርኮችን ወይም የተፈጥሮ ጥበቃን /እና ሌላ የዓለም አቀፍ እውቅና ያገኘ ቦታ፣ የዓለም ቅርስ ወይም የተፈጥሮ ቦታ ሊሆን ይችላል።

የባለቤትነት ሥርዓቱም ይለያያል ። የባዮስፌር ማዕከላዊ ቦታዎች በአብዛኛው የመንግስት መሬት ቢሆኑም በግልና መንግስታዊ ባልሆነ ድርጅትም ይሆናል። በአብዛኛው አዋሳኝ ቦታዎች /Buffer/ የማህበረሰብ ወይም በግል ባለቤትነት የሚያዝ ሲሆን ይህም በአጠቃላይ ለሽግግር ቦታዎችም /Transition area/ይሰራል።

የባዮስፌር ሪዘርቭን ማቋቋም ከፍተኛ የሆነ ተግባሮችን /Challenges/ ይደቅናል። ከእነዚህም ተገቢ አደረጃጀቶች መፍጠር ለምሳሌ የጥቅም

ግጭት የሚፈታ ኮሚቴ ማቋቋም፤ በባዮስፌር አካባቢ የሚሰሩ እቅዶች ዝርዝር ሥራዎችን የማስተባበር ተግባራት ሊጠቀሱ ይችላሉ። ባዮስፌር ሪዘርችን ልዩ የሚያደርገው ባዮስፌርን የማስተዳደር ሁኔታ በባዮስፌር አካባቢ የሚኖርን ማህበረሰብ ባካተተና በህብረተሰቡ በአጠቃላይ ባለው ውል ወይም መስተጋብር መሆኑ ነው። የባዮስፌር አስተዳደር ግልጽ፣ የራሱ ሂደት ያለውና ተስማሚ /Adaptive/ መሆን አለበትና ነው። ይህ እቅራረብ አርቆ ማሰብንና ትእግስትን ይጠይቃል። ነገር ግን ከውጭ ለሚመጡ ፓለቲካዊ፣ ኢኮኖሚያዊና ማህበራዊ ግፊቶች ብሎም በአካባቢው ሥነ ምህዳርና የባህል አሴቱ ላይ ተጽእኖ የሚያሳርፉ ሁኔታዎች ላይ የአካባቢው ማህበረሰብ በተሻለ ሁኔታ ምላሽ ለመስጠት ሁኔታው ይፈቅድላቸዋል።

3. ለምን እንፈልጋቸዋለን?

ባዮስፌር ሪዘርች እንዲቋቋም የሚፈለግበት ምክንያቶች በዋነኝነት ስድስት ናቸው። እነዚህም፡-

3.1 ብዝህ ህይወትን ለመንከባከብ

ሰው በመሬትና በውሃ ሀብት ላይ ባደረሰው ጫና የእጽዋትና የእንስሳት ዝሪያዎች፣ ሥነ ምህዳሮች በፍፁም በአስከፊ ሁኔታ በመመናመናቸው የምድራችን ተፈጥሮአዊ ሁኔታ ቀንሷል። ብዝህ ህይወት ለሰው እምቅ አቅም የሆኑ የምግብ፣ የአልባሣ፣ የመድሃኒት፣ ለኢንዱስትሪና ለግንባታ ጥሬ እቃ ምንጭ ቢሆኑም በነዚህ ሀብቶች ላይ የሚደርሰው መመናመን ለሰው ልጅ ስጋት ሆኗል። ብዝህ ህይወት ለምርምር፣ ለትምህርትና ለሰው ልጆች ሁሉ መዝናኛ እጅግ አስፈላጊ በመሆናቸው በፍፁም ተተኪ የሌላቸው ሀብቶች ናቸው። በባዮስፌር ክልል ውስጥ ማእከላዊ/core zone/እና

አዋሣኝ ዞን/Buffer Zone/ ተብሎ የሚከለሉ የባዮስፌር ሪዘርች ቦታዎች አገልግሎታቸው በናሙናዎች ክምችትነት የተከለሉና በአግባቡ ጥበቃ የሚደረግላቸው የዓለም ዋና ህይወታዊ ክልሎች ሲሆኑ የማመሳከሪያና የጥናት መስክ በመሆናቸው በብዝህ ህይወት ላይ ያለንን እውቀት እንዲሻሻል ይረዳናል። የባዮስፌር ሪዘርች ለዓለም ናሙና የሆኑ እጽዋትንና እንስሳት አሁን ላለውና ለመጪ ትውልድ ጠቀሜታ እንክብካቤና ጥበቃ ያደርግላቸዋል።

3.2 ጤናማ ሥነ ምህዳሮችን

እንዳለ ለማቆየት

የባዮስፌር ሪዘርች ሰፊ የመሬትና የውሃ ወካይ እንደመሆናቸው ለህይወት ደጋፊ ሥርዓቶች/Life Support System/ አንዳሉ በተፈጥሮአቸው እንዲቆዩ ከፍተኛ አስተዋጽኦ ስለሚያደርጉ የአፈር መሸርሸርን የማስወገድ፣ የአፈር ለምነት የመጠበቅ፣ የወንዝ ፍሰትን የመቆጣጠር፣ የውሃ ምንጮችን የመመላለስ፣ የአፍር ለምነትን የማደስ፣ የህይወታዊ ሀብቶችን መራባትን ብሎም የውሃና የአየር ብክለትን በማስወገድ ጤናማ ሥነ ምህዳር ቀጣይ እንዲሆን ያደርጋሉ።

3.3 ስለተፈጥሮ ሥርዓቶችና የለዉጥ ሂደታቸው ለመማር

በባዮስፌር ሪዘርች ማእከላዊ ዞን ውስጥ በዝቅተኛ ደረጃ የተረበሹ /የተጉዳ/ የተፈጥሮ ሥርዓቶች ላይ የአወቃቀር /Structure/ እና የተለዋዋጭነት /Dynamics/ ምርምር በማድረግ በሰው ተግባራት ተጽእኖ ካረፈባቸው የአዋሣኝ ዞንና ሽግግር ቦታዎች የማነፃፀር ጥናት ሊካሄድ ይችላል። እነዚህ ጥናትና ምርምሮች ለረጅም ጊዜያት ከተካሄዱ በኋላ እነዚህ ሥርዓቶች ምናልባትም በረጅም ጊዜያት እንዴት እንደሚለወጡ ያሳያሉ። በተመሳሳይ የረጅም ጊዜ የመረጃ መከታተያ ጣቢያ በማቋቋም ወጥ ዘዴዎችና መለኪያዎች በመጠቀም

ውጤቶችን በአህጉርና በዓለም ደረጃ ለማወዳደር ያስችላል። የተገኘው መረጃ የዓለም የአየር ለውጥን በተሻለ ሁኔታ እንድንረዳ ያስችላል።

3.4 ባህላዊ የመሬት አጠቃቀም ሁኔታን ለመማር

በተለያዩ የዓለም ክፍሎች የሚገኙ ህዝቦች ለረጅም ዓመታት የተፈጥሮ ሀብትን የማይጎዳ ጠለቅ ያለ የመሬት አጠቃቀም ዘዴ ያላመዱ ሲሆን ይህም ለዘመናዊ አመራረት ሥርዓት ከፍተኛ የሰው ጥጋ ያለው እውቀት ሰጥቷል። የባሕር ሪዘርቭ ቦታዎች የእነዚህ ህዝቦች ጠቃሚ ልምድ እንዳለ እንዲጠበቅ የማድረግ ሲሆን በተጓዳኝ ከባህላቸውና ከአካባቢያቸው ጋር ተስማሚ የሆነ ተክኖሎጂዎችን በመጠቀም የኢኮኖሚ ብልጽግናቸውን ማሻሻል ነው። በተጨማሪም እነዚህ ባህላዊ ሥርዓቶች ጥንታዊ የሆነ የእንስሳት ዝሪያ አረባብ እና ጥንታዊ የሰብል ዘረመሎች ስብስቦችን ተንከባክቦ ለዘመናዊ ግብርና በመጠቀም በገንዘብ ሊተመን የማይችል ጠቀሚታ ያስገኛል።

3.5 ዘላቂ የተፈጥሮ ሀብት አስተዳደር እውቀትን ለማጋራት

የባዮስፌር ሪዘርቭ ማእከላዊ ትኩረቱ ምርምር በማድረግ አካባቢን የማይጎዳና የሰውን ብልጽግና የሚያሻሽል የመሬት አጠቃቀም ልምድን ማግኘት ነው። ከግኝቱ የተማርነውን ትምህርት በመስክ በቦታው ላይ ማሳየትና በማሰልጠን ማስተላለፍ ነው። የግኝት ውጤቶች ወዲያውኑ በሽግግር ዞን ላይ ተግባራዊ የሚደረጉ ሲሆን ለሌሎች አህጉራትም እንዲዳረስ ማስቻል ነው። የመንግስት ባለስልጣናት፣ የሀገር ውስጥና የውጭ ሳይንቲስቶች፣ ጐብኚዎችና የአካባቢው መሪዎች ሁሉ ከዚህ ልምድ ተጠቃሚ ይሆናሉ። በመሆኑም የባዮስፌር ሪዘርቭ አንዱ አገልግሎት እውቀትንና ክህሎትን

ለአካባቢ፣ ለብሔራዊ ብሎም በዓለም አቀፍ ደረጃ ማካፈልና ማዳረስ ነው።

3.6 የተፈጥሮ ሀብት ችግሮችን ለመፍታት መተባበር

አካባቢና ልማት እንዳይታረቁ የሚያደርጋቸው ዋናው እንቅፋት የተቋማትን ሴክተሪያል አደረጃጀት ነው። የባዮስፌር ሪዘርቭ የጥቅም ግጭት ላይ ሁሉም የሚመለከታቸው ባለድርሻ አካላት በጥልቀት እንዲወያዩ ተገቢ ቦታ ይሰጣቸዋል። እነዚህም የአካባቢ ባለሥልጣናት፣ የመሬት ባለቤቶች፣ የተፈጥሮ ተንከባካቢ ማህበራት፣ የመንግስት መሪዎች፣ ሳይንቲስቶች፣ የአካባቢ አርሶ አደሮች፣ አሳ አጥማጆችና የግል ድርጅቶች ወዘተ ሲሆኑ ባዮስፌርን ለማስተዳደር ሁሉም ወገኖች የባዮስፌርን ሥራ ማቀድና ማስተባበር የሚያችል ዘዴ ለመፈለግ የግድ ተጋግዘው መስራት ይኖርባቸዋል። በዚህ ሁኔታ የባዮስፌር ሪዘርቭ ግጭቶችን ለመፍታት የሚያስችሉ እድሎች ከመስጠቱም በላይ ለሌሎች የመሬትና የውሃ ልማት ግጭቶችም ተሞክሮ ተግባራዊ ሊደረግ ይችላል።

4 የባዮስፌር ሪዘርቭ እንዴት ይደራጃል?

የተሟላ ተግባርን ለማከናወንና የተፈጥሮ ሀብትን በአግባቡ ለመጠቀም የባዮስፌር ሪዘርቮች እርስ በርስ በተያያዙ ሶስት ዞኖች ይደራጃሉ። እነዚህም ማእከላዊ ዞን /Core Zone/፣ አዋሃኝ ዞን /Buffer Zone/ እና የሽግግር ዞን /Transition Zone/ በመባል ይታወቃሉ። የእነዚህ ዞኖች አደረጃጀትን እያንዳንዱ አካባቢ ያለውን ጂኦግራፊያዊ፣ ማህበራዊ፣ ባህላዊ፣ የህግ ጥበቃና መከላከያ ነባራዊ ሁኔታ እና አካባቢያዊ ተጨባጭ ችግሮችና እወኔታዎችን ከግምት ውስጥ በማስገባት በተለያዩ መንገዶች ተግባራዊ ማድረግ ይቻላል።

ይህ ተለማቂነት /Flexibility/ አንዱና ጠንካራ የባዮስፌር ሪዘርቭ ጽንሰ ሀሳብ ሲሆን በፈጠራ ታግዞ ጥቅም ላይ ማዋል ይቻላል፡፡

ሀ/ ማእከላዊ ዞን ቦታ/The Core Zone/

በህጋዊነት የተቋቋመና ያቀፋቸውን የመሬት ገጽታዎች፣ ሥነ ምህዳሮችና ዝሪያዎችን ለረጅም ጊዜ ለመጠበቅ የሚያስችል መሆን አለበት፡፡ የባዮስፌር ሪዘርቭ የእንክብካቤ ዓላማዎችን ለማሳካት ይዞታው ሰፊ መሆን ይኖርበታል፡፡ በአብዛኛው የዓለም ክፍል በተፈጥሮ ወጥ ያለመሆኑና ፈርጆ ብዙ የአካባቢ ሥነ ምህዳር ሥርዓት /Mosaic Ecological System/ የወካይነቱ ሽፋን ለማረጋገጥ ሲባል በአንድ የባዮስፌር ሪዘርቭ ክልል ውስጥ በርካታ ማእከላዊ ዞኖች /ቦታዎች/ ሊኖሩ ይችላሉ፡፡ የባዮስፌር ሪዘርቭ ማእከላዊ ዞኑ ከምርምርና ክትትል ተግባር በስተቀር በፍፁም ከሰው ንኪኪ ውጭ ናቸው፡፡ ይሁን እንጂ በልዩ ሁኔታ ከማእከላዊ ዞን ውስጥ ያሉ ተረፈ ምርቶችን ለሚሰበሰቡ የአካባቢው ማህበረሰቦች ወይም ለተስማሚ የመዝናኛ ተግባራት ፈቃድ ሊሰጥ ይችላል፡፡

ለ/ አዋሣኝ ዞን /ቦታ/ /Buffer Zone/

አዋሣኝ ዞን ማለት በማእከላዊ ዞን ዙሪያ አድርጎ ወይም በትይይዩ አዋስኖ በግልጽ የተከለለ ነው፡፡ የማእከላዊ ዞን እንክብካቤ ዓላማዎችን ሳያንታቱ ተግባራት የሚከናወኑት እዚህ ሲሆን ከዚህም ባሻገር የአዋሣኝ ዞኖች ዋና አስፈላጊነት ለማእከላዊ ዞን የከለላ/የጥበቃ ሽፋን መስጠት ነው፡፡ በአዋሣኝ ዞኑ ክልል የሙከራ ምርምር ለምሳሌ የተፈጥሮ እጽዋትን፣ ለሰብል የሚሆን መሬት፣ ደኖች ወይም አሣ እርባታ ላይ በማድረግ አዳዲስ ዘዴዎችን በማግኘት

የተሻለ ከፍተኛ ጥራት ያለው ምርት በብዛት እንዲገኝ ከማድረግም ባሻገር በተጓዳኝ የተፈጥሮ ሂደቶችን ብዙሀ-ህይወትንና የመሬት ሀብትን ጨምሮ እስከተቻለ ድረስ የመንከባከቢያ ቦታ ይሆናል፡፡ በተመሳሳይ ሁኔታ በአዋሣኝ ዞን ላይ የተራቆቱ ቦታዎችን እንዴት እንደሚያገግሙ ሙከራዎች ይካሄድባቸዋል፡፡ አልፎ አልፎ የትምህርትና ስልጠና፣ ቱሪዝምና የመዝናኛ ማእከሎችን እንዲያካብቁም ይደረጋል፡፡

ሐ/ የሽግግር ዞን /ቦታ/Transition Zone/

ውጫዊ የሽግግር ዞን ላይ ትብብር ተጠናክሮ የሚቀጥልበትና ምናልባትም በርካታ የግብርና እንቅስቃሴዎች፣ ሰዎች በብዛት የሰፈሩበትና ሌሎች አገልግሎቶች የሚከናወኑበት ቦታ ነው፡፡ በዚህ ቦታ ላይ የአካባቢው ማህበረሰቦች፣ የእንክብካቤ ወኪሎች፣ ሳይንቲስቶች፣ የሲቪል ማህበራት፣ የባህል ቡድኖች፣ የግል ድርጅቶችና ሌሎች የሚመለከታቸው ወገኖች በአካባቢው ለሚኖሩ ማህበረሰቦች ጠቀሜታ ሲባል በሚገባ በጋራ ተስማምተው የአካባቢውን ሀብት በዘላቂነት የማልማትና የማስተዳደር ግዴታ አለባቸው፡፡ የባዮስፌር ሪዘርቭ የክልሉን የተፈጥሮ ሀብት ባለበት በዘላቂነት እንዲተዳደር በማሳወቅ የተሰጠውን ሚና መጫወት ያለበት ሲሆን የሽግግር ቦታው ክልል ለከፍተኛ የኢኮኖሚና ማህበራዊ ልማት ወሳኝ ሚና አለው፡፡ የሽግግር ዞን በሰዎች በከፍተኛ ደረጃ እንደሚያዝ እሙን ነው፡፡ በመሆኑም የአካባቢው ማህበረሰብ መሠረታዊ ፍላጎትና ምኞታቸውና ልዩ ልዩ ፍላጎቶች-በግብርና፣ በአሣ ማርባት፣ በማእድን ወዘተ ያሉት የጥቅም ግጭቶች መታረቅ ያለባቸው ሲሆን በአጠቃላይ የባዮስፌር ሪዘርቭ በሀገሪቱ ካለው

የጥበቃ፣ የእንክብካቤና ልማት እቅድ ጋር የተቀናጀ መሆን አለበት፡፡

5 ተጠቃሚው ማነው?

አርሶ አደሮች፣ ደን አልሚዎች፣ አማካኝ አርቢዎች የባዮስፌር ሪዘርቭ ለሥልጠናና ለሠርቶ ማሣያ ንጥረት የባዮስፌር ጥበቃ አማራጭ የመሬት አጠቃቀምና አስተዳደር ስትራቴጂዎች ስልጠናዎችና የሠርቶ ማሣያ ንጥረት አመቻችቶ ያቀርባል፡፡ በመሆኑም የተፈጥሮ እሴት-የመሬት ለምነት፣ የውሃ ጥራት ለመጠበቅ ያሉት የሰውና የገንዘብ ሀብቶችን በአግባቡ ጥቅም ላይ ያውላል፡፡

የአካባቢው ማህበረሰቦች

ይህ የሚያካትተው የአካባቢ ተወላጅ ማህበረሰቦችን እስከ ገጠሩ ህብረተሰብ ያጠቃልላል፡፡ ለነዚህ ህዝቦች ከፍተኛ እምቅ ጠቀሜታዎች ያሉ ሲሆን እነዚህም የመሬትና የውሃ ሀብት አንክብካቤ፣ የተረጋጋና ዘርፈ ብዙ የኢኮኖሚ መሠረት፣ የአካባቢ ምርቶችን ማስፋት፣ ተጨማሪ የሥራ እድል፣ በመሬት አጠቃቀም ውሳኔ ላይ ከፍተኛ ተጽእኖ የማሳደር፣ በተከለሉ ቦታዎች ላይ ያሉ የአስተዳደርና የቡድን ፍላጎቶች ግጭት መቀነስ፣ ነባር ባህልና ልምድ እንዲሁም የአኗኗር ዘይቤ በመጠበቅና የማስቀጠል እድሎች ለአካባቢው ማህበረሰቦችና ለልጆቻቸው የተሻለ ጤናማ አካባቢ መኖሩ ናቸው፡፡

ሳይንቲስቶች

የባዮስፌር ሪዘርቮች የምርምር ሥራን ያበረታታሉ ለምሳሌ በሥነ ምህዳር ሂደቶች /Ecological Process/ ወይም ብዝህ ህይወት ሳይ የሚደረግ ምርምርን ያበረታታሉ፡፡ የባዮስፌር ቦታዎች አዲስ መላ-ምቶች እና መከራዎች ለማጠናከር ሰፊ ያሉ የመረጃዎች ክምችት የሚገኝበት/የሚጠናቀርበት/ ነው፡፡

በተጨማሪም የባዮስፌር ሪዘርቮች የረጅም ጊዜ ዋስትና ለጥናት ቦታዎችና ለክትትል ተግባሮች የሚሰጥ ሲሆን ይህም የረጅም ጊዜ ሁኔታዎች ከአጭር ጊዜ ልውውጦች በማነፃፀር የተከሰቱትን ልውጦች በአየር ወይም በውሃ ሥርዓት መሆኑን ለመለየት ያገለግላል፡፡ የባዮስፌር ጥበቃዎች ፈርጂ ብዙ ምርምሮች፣ ንጽጽራዊ ጥናቶችና መረጃ ልውውጦችም እንዲካሄዱ ያደርጋል፡፡ በመሆኑም ባዮስፌሮች በሀገርም ሆነ በዓለም አቀፍ ደረጃ የጥናትና ምርምር ፈንድ አንዲመደብ ያበረታታል፡፡

የመንግስት ውሳኔ ሰጪዎች እና ኤጀንሲዎች

የባዮስፌር ሪዘርቮች ለውሳኔ ሰጪዎች በተፈጥሮ ሀብቶች ላይ የተሻለ መረጃ የሚሰጥ ሲሆን የቴክኒክና የተቋማዊ አቅም ግንባታዎች በመስጠት በዘላቂነት የተፈጥሮ ሀብትን እንዲያስተዳድሩ ያደርጋል፡፡ ባዮስፌር በተጨማሪም የተገኙትን ጥቅሞች በማሳየት የተፈጥሮ አንክብካቤን ህዝቡ በከፍተኛ ደረጃ እንዲደግፉ ያግዛል፡፡ ባዮስፌሮች ተጨባጭ የሰርቶ ማሣያ ምሳሌዎች ሆነው እንዴት በአካባቢ ብሎም በክልል ደረጃ የተፈጥሮ ሀብቶችን በዘላቂነት ማስተዳደር አንደሚቻልና ምን ተቋማዊና ህጋዊ ሁኔታዎች አንደሚያስፈልጉ ለማሰስ ያገለግላሉ፡፡ ይህን በማድረግ የባዮስፌር ሪዘርቮች ሀገሮች በዓለም አቀፍ ስምምነት የገቡትን ግዴታዎችን ለምሳሌ ብዙሀ-ህይወት በረሃማነት እና አጀንዳ 21ን እንዲያሳኩ በማስቻል እንደ መሣሪያ ያገለግላሉ፡፡

የዓለም ማህበረሰብ

በትምህርትና በግንኙነት ተግባራት የህዝብ አስተያየትና ተጨባጭ የመሬት አጠቃቀም ግጭት አፈታት መንገዶችን ለዓለም ማህበረሰብ በማሳየትና የብዙሀ-

ህይወት ክብካቤን ማረጋገጥ ነው። የባዮስፌርች ለአካባቢ፣ ለሀገርና ለዓለም አቀፍ የትምህርት፣ የመዝናኛ፣ የቱሪዝም እድሎች የሚሰጡና በሁሉም የዓለም ህዝቦች መካከል የወንድማማችነት ስሜት እንዲፈጠር በመርዳት ባዮስፌር በዘላቂነት እንዲተዳደር ያደርጋል።

6 ባዮስፌርች እንዴት ይመረጣሉ?

የባዮስፌር ሪዘርች እጅግ በጣም በርካታ የሆኑ የተፈጥሮ የባዮስፌር አካባቢዎችን የሚሸፍኑ ናቸው። እነዚህም ከከፍተኛ ተራራማዎች እስከ ከፍተኛ የሰው ተጽእኖ ያረፈባቸው ለጥ ያሉ ሜዳዎች፣ ከጠረፋማ ክልሎችና ደሴቶች አስከፊ ግዙፍ መሀል ሀገር ደኖች፣ ከትሮፒክ በርሀዎች እስከ ቱንዱራ ንፍቀ ክብብ ክልሎችን ያካልላል።

አንድ ቦታ የባዮስፌር ሪዘርች ሆኖ ለመካለል በመመዘኛው መሠረት በትክክል ሟሟላት ያለበት፡-

- ዋና የባዮ ጂኦግራፊክ ሪጅን ወካይ መሆን ያለበት ሲሆን በሰው ጣልቃ ገብነት የተከሰተ ለውጥ በተጨማሪ መኖር አለበት፤
- ጥበቃና ክብካቤ ሊደረግላቸው የሚገቡ የመሬት ገጽታዎች፣ ሥነ ምህዳሮች ወይም በርካታ የአንስሳትና እጽዋት ዝረያዎች የያዘ መሆን አለበት፤
- ቀደም ሲል ከላይ የተጠቀሱትን የሶስቱን የባዮስፌር ጥበቃ ተግባራትን የሚያገለግል ትክክለኛ የይዞታ መጠን መኖር አለበት፤
- ትክክለኛ የዞን ሥርዓት ያለው ሆኖ በህግ ማእቀፍ የተካተተ ማእከላዊ ዞን የሆነ ወይም ለረጅም ጊዜ የተከለለ የጥበቃ ቦታ ያለው፣ በግልጽ የተለየ

አዋሣኝ ዞንና ውጫዊ የሽግግር ዞን ያለው መሆን አለበት፤

በባዮስፌር ሪዘርች እቅድና አስተዳደር ባለድርሻ አካላት በአግባቡ እንዲገቡና እንዲሳተፉ የሚመለከታቸው የመንግስት ተቋማት፣ የአካባቢው ማህበረሰቦችና የግል ፍላጎት ላላቸው የተመቻቸ አደረጃጀት ይዘረጋላቸዋል። ድንበር ዘለልና በጣም ግዙፍ የተፈጥሮ አካባቢ ከሆነና ከብሔራዊ ድንበሮች የሚያዋስን ከሆነ ሀገሮች በጋራ በመተባበር የባዮስፌር ሪዘርችን እንዲያደራጁትና እንዲያስተዳድሩ ይበረታታሉ።

የአንድ ባዮስፌር ሪዘርችን በእጩነት ለማቅረብ አግባብነት ያላቸውን የመንግስት ኤጀንሲዎችን፣ ተዛማጅ ተቋማትንና የአካባቢው ባለሥልጣናትን በማሳተፍ ባዮስፌርን ማዘጋጀት የሰውና የባዮስፌር/MAB/ ብሔራዊ ኮሚቴ ኃላፊነት ነው። እያንዳንዱ እጩ የባዮስፌር ሪዘርች ለየኔስኮ አማካሪ ኮሚቴ ቀርቦ ከተገመገመ በኋላ አማካሪ ኮሚቴው ተገቢነት መኖሩን ሲያረጋግጥ ለሰውና ባዮስፌር ዓለም አቀፍ አስተባባሪ ምክር ቤት አንዲቀርብ አስተያየት ያቀርባል። ይህ ምክር ቤት በእጩ ባዮስፌር ላይ ውሳኔ ከሰጠ በኋላ በየኔስኮ ዳይሬክተር ጀኔራል በኩል ለሀገሩ መንግስት ውሳኔው ይገለጻል። አንዴ የባዮስፌር ሪዘርች እውቅና ከተሰጠው አግባብነት ያላቸው ባለስልጣናት የባዮስፌርን ሪዘርችን ልዩ ሁኔታን በሚገልጽ ለምሳሌ መታሰቢያ ዓርማዎችን ወይም ምልክቶችን በማሳተምና መረጃዎችን በማሰራጨት እንዲያስተዋውቁ ይበረታታሉ።

ማነው የሚሳተፈው?

- በግይት ደረጃ /at Site Level/ የባዮስፌር ሪዘርች በርካታ ሳይንቲስቶችን፣ የሀገሪቱን ባለሥልጣናት፣ ልዩ ልዩ

የብሔራዊ ተቋማት ተወካዮችንና የአካባቢው ነዋሪዎችን በአንድ ላይ ያገናኛቸዋል፡፡

- በብሔራዊ ደረጃ /at national level/ የባዮስፌር ጥበቃዎች የብሔራዊ ብዙሀ-ሀይወት እቅድ አንድ አካል በመሆን የብሀ-ሀይወት ስምምነትን ተግባራዊ ለማድረግ በተፈጥሮ ጥበቃና ክብካቤ ብሎም በዘላቂ የተፈጥሮ ሀብት አጠቃቀም ዙሪያ የተሳተፉ ተቋማትን አጣምሮ ያገናኛል፡፡
- በዓለም አቀፍ ደረጃ/at the international level/ በርካታ ዓለም አቀፍ መንግስታት እና መንግስታዊ ያልሆኑ ድርጅቶች ከዓለም አቀፍ መረብ/World network/ ጋር በመጣመር ጽንሰ ሀሳቡን በመስክ ተግባራዊ ያደርጋሉ፡፡

በመሆኑም የባዮስፌር ሪዘርቮችን በተገቢው እንክብካቤና በትክክል ልማታዊ እንዲሆኑ የሚረዱና በርካታ ኘሮጀክቶች የሚደግፉ እነ የዓለም ባንክ፣ የተባበሩት መንግስታት የልማት ኘሮግራም /UNDP/፣የተባበሩት መንግስታት የአካባቢ ኘሮግራም/UNEP/፣የተባበሩት መንግስታት የምግብና እርሻ ድርጅት/FAO/፣ የዓለም አቀፍ እንክብካቤ ዩኒፎን/IUCN/፣ ዓለም አቀፍ አንክብካቤና የዓለም የተፈጥሮ ፈንድ/WWF/የመሳሰሉት ናቸው፡፡ ለአካባቢ ጥበቃ ያላቸውን ጽኑ ፍላጎት ማሳያነት በሁለቱቹ ስምምነት ወይም በግል ድርጅቶች ስፖንሰር አድራጊነትም የሚደግፉ የኘሮጀክቶች ቁጥር እየጨመረ ይገኛል፡፡ የባዮስፌር ጥበቃዎች የግንኙነትና መሪ የሆኑ ጽሑፎች በኢንተርኔት ላይ ይገኛል፡፡ የባዮስፌር መግለጫዎች ከዩኒስኮና ከዓለም አቀፍ

እንክብካቤ ክትትል ማእከል/World Conservation Monitoring center-WCMC/ይገኛል፡፡

ዓለም አቀፍ መረብ ለምን?

የባዮስፌር ጥበቃዎች በርካታ የተለያዩ የጂኦግራፊ፣ የኢኮኖሚና የባህል ሁኔታ ቢኖራቸውም ተጨባጭ መፍትሔ የሚሻ የጋራ የሆነ ፍላጎት አላቸው፡፡ ይኸውም ለአካባቢው ህዝብ ጠቀሜታ ሲባል የብዝሃ-ሀይወት ክብካቤን ከዘላቂ የተፈጥሮ ሀብት አጠቃቀም ጋር የማስታረቅ ጉዳዮች ናቸው፡፡ የዓለም አቀፍ መረብ በባዮስፌር ጥበቃዎች መካከል ያለውን ልውውጥ እንዲስፋፋ ያደርጋሉ፡፡ ለምሳሌ የጥናትና ምርምር ውጤቶች፣ የአስተዳደር ዘዴዎችን ወይም የአንድ የተወሰነ ንግር መፍቻ ልምዶችን እንዲለዋወጡ ያደርጋል፡፡ በባዮስፌሮች መካከል ትብብሮችን ያመቻቻል፤/ለምሳሌ ሣይንሳዊ ምርምርንና ክትትል፣የአካባቢ ትምህርትና ልዩ ስልጠናዎች/ በባዮስፌር ትብብሮች ረገድ የመረጃ ማቴሪያሎች፣ በዓለም አቀፍ ደረጃ የሚታተሙ መጽሔቶች ላይ የባዮስፌር መጣጥፎች ለማሳተም፣ የትብብር ኘሮጀክቶች፣ የጉብኝት ኘሮግራሞች፣ የሰው ሀይል ልውውጥ፣ጉብኝት ማዘጋጀት ወይም በኤሌክትሮኒክስ ኢ-ሜይሎች አንዲገናኙ ማድረግ ናቸው፡፡ የዓለም አቀፍ መረብ የሚደገፈው በንኡስ አህጉራት/Sub regions/ መረብ ሲሆን ለአብነትም ምስራቅ ኤዢያ ወይም ይዘታዊ መረብ /thematic network/ለምሳሌ ስለብዝሃ-ሀይወት ለማጥናት አዲስ ንኡስ መረብ መፍጠር የመሳሰሉት ይበረታታሉ፡፡ በሂደት ሁሉንም የባዮስፌር ሪዘርቮችን በዘመናዊ የመገናኛ አውታሮች ለማገናኘት እቅድ ተይዟል፡፡

ዓለም አቀፍ መረብ የሚተዳደረው በ28ኛው የዩኒስኮ አጠቃላይ ጉባኤ ቀርቦ በፀደቀው የህግ ማእቀፍ ነው፡፡ ይህ የህግ

ማእቀፍ የዓለም አቀፉን መረብ ተግባራት የሚዘረዝር ሲሆን የባዮስፌር ጥበቃዎችን በየወቅቱ እንደሚገመገሙ የሚያመላክት ነው። የዓለም አቀፉ መረብ ዝርዝር ተግባራት የሚመሩት ለባዮስፌር ሪዘርቭ ተብሎ እኤአ መጋቢት 1995 በስፔን ሲቪሌ በተደረገው ዓለም አቀፍ ጉባኤ በወጣው የሲቪሌ ስትራቴጅ ነው። በአሁኑ ወቅት ያሉት የባዮስፌር ጥበቃዎች በሙሉ በዚህ በዓለም አቀፉ መረብ ያልተካተቱ ሲሆን በመጨረሻ ጊዜ አንዲግተፉ ይህ መሪ ዶክመንት ተግባራቸውን እንዲያሻሽሉ ያግዛቸዋል ተብሎ ይታመናል።



የአየር ፀባይ ለውጥ እውነታዎች /ትርጉም- በወንዱ ወ/ሰንበት የናቡ ኮሙኒኬሽን ኦፊሰር/

1. የአየር ፀባይ ለውጥ ምንድነው?

የአየር ፀባይ ለውጥ ማለት በረጅም ጊዜ በአንድ የተወሰነ አካባቢ፣ ክልል ወይም በምድር ላይ የአየር ፀባይ መቀየር ነው። የአየር ፀባይ መቀየር የሚታወቀው ከአማካይ እለታዊ የአየር ሁኔታ ጋር ተያያዥነት ያላቸውን ገጽታዎች እንደ የአየር መቀት፣ የንፋስ ሁኔታና እርጥበት በመለካት ነው። ምንም የአማካይ እለታዊ የአየር ሁኔታዎች የማይለወጡ ቢሆኑም አንኳ አብዛኛው ሰው የማያውቀው ነገር የአየር ፀባይ ለውጥ ተለዋዋጭነት/Variability/ ራሱ የአየር ፀባይ ለውጥ የሚባል መሆኑን ነው።

የአየር ፀባይ ለውጥ የሚከሰተው በአንድ የተወሰነ አካባቢ ወይም ምድር በሁለት የተለያዩ ወቅቶች/ጊዜያት/ የአየር ፀባይ ሲለወጥ ነው። ይህ በተለምዶ የሚከሰተው አንድ ነገር በጠቅላላው በመሬት ከባቢ አየር/Earth Atmosphere/እና በመሬት ላይ/Surface/ የተመጣጠነ የፀሐይ ሀይል ስለውጥ ነው። በተራዘመ ጊዜ ወደ ህዋ መመለስ ባለበት ከመሬት አካልና ከከባቢ አየር የሚወጣው የሙቀት ሀይል መጠን ላይ አንድ ነገር ስለውጥ የአየር ፀባይ ለውጥ ይከሰታል።

እነዚህ ለውጦች ሁለቱን ለውጦች ማለት በእለታዊ አማካይ የአየር ሁኔታዎች ለውጥ እና ከአማካይ በምን ያህል የእለታዊ የአየር ሁኔታ እንደምለዋወጥ ሊያካትት ይችላል።

የለውጦቹ መነሻ ምክንያት የተፈጥሮአዊ ሂደቶች አንደ የእሳተ ጎመራ ፍንዳታ፣ የፀሐይ ምጣኔ ተለዋዋጭነት ወይም አጅግ አዝጋሚ በሆነ የውቅያኖስ ፍሰት ወይም የመሬት አካላት

ለውጥና በጊዜ ስሌት በአስርት ዓመታት፣ በመቶዎች ዓመታት ወይም ከዚያ በላይ በሆነ ጊዜ የሚከሰት ነው።

ነገር ግን የሰው ልጅም ወደ ከባቢ አየር ግሪን ሀውስ ጋስ /Green House Gases/ እና ኤሮ ሶልስ/Aerosols/ በመልቀቅ፣ የመሬት አካልን በመቀየር የአየር ንጣፍን እንዲሸረሸር በማድረግ ለአየር ለውጥ ምክንያት ሆኗል። ሁለቱም የተፈጥሮና የሰው ሰራሽ ምክንያቶች የሆኑና የአየር ፀባይ ለውጥ ሊያስከትሉ የሚችሉ የአየር ፀባይ ጫናዎች/Climate forcings/ይባላሉ። ምክንያቱም የአየር ፀባይ ወደ ሌላ አዲስ እሴት እንዲቀየር ግፊት ወይም ጫና የሚያሳድሩ በመሆናቸው ነው።

2. ለምን የዓለም ሙቀት/Global Warming/ የተሣሣተ ቃል ሆነ?

የአየር ፀባይ ለውጥ የሚያመለክተው በአጠቃላይ የአየር ሁኔታ መቀየርን ሲሆን የሙቀትን፣የእርጥበትን፣ የንፋስንና ሌሎች ምክንያቶችን ሁሉ ያጠቃልላል ነው። የዓለም ሙቀት እና የዓለም መቀዝቀዝ በተጨማሪም የሚያመለክተው አማካይ የዓለም የላይኛው መሬት/Surface/ ሙቀት ላይ ያለውን ማንኛውንም ለውጥ ነው። በተለምዶ የዓለም ሙቀት ሲባል ዓለም በተመሳሳይ በወጥ ሁኔታ ይሞቃል በሚል በተሣሣተ ግንዛቤ እንድንረዳው ያደርጋል።

በእርግጥ የዓለም አማካይ የሙቀት መጠን መጨመር ለከባቢ አየር ፍሰት ምክንያት በመሆን አንዲለወጥ ሲያደርግ በውጤቱም በአንዱ የዓለም አካባቢ በጣም ሞቃታማ ሲሆን ሌላው ዝቅተኛ ይሆናል። አንዳንድ ቦታዎች ደግሞ ፈጽሞ ቀዝቃዛ ሊሆኑ ይችላሉ። በአየር ፀባይ ለውጥ አካባቢ ያሉት ክስተቶች በርካታ ቢሆኑም ወካዩ የዓለም ሙቀት-Global Warming/የሚለው ቃል የተሳሳተ ሲሆን በተደጋጋሚ በተለያዩ መገናኛ

ብዙኃን አሁንም የአየር ፀባይ ለውጥን ለመግለጽ ይጠቀሙበታል።

3. የግሪን ሀውስ ኢፌክት ምንድነው?

ግሪን ሀውስ በመባል የሚታወቀው የተፈጥሮ ሥርዓት የመሬትን ሙቀት ይቆጣጠራል። በግሪን ሀውስ ውስጥ ያለ ብርቁቆ ሙቀት አምቆ እንደሚይዝ የኛው የከባቢ አየር በመሬት አቅራቢያ ያለውን የፀሐይ ሙቀትን አምቆ የሚይዝ ሲሆን ይህም የሚሆነው በቀዳሚነት ሙቀትን አምቆ መያዝ የሚያስችል ባህርይ ባላቸው የተወሰኑ ግሪን ሀውስ ኃላፊዎች አማካኝነት ነው።

መሬት በፀሐይ ብርሃን ትሞቃለች። አብዛኛው የፀሀይ ሀይል በከባቢ አየር ውስጥ በማለፍ የመሬትን የላይኛው ክፍል፣ ውቅያኖስና ከባቢ አየርን ያሞቃል። ይሁንና የከባቢ አየር የሀይል በጀት ሚዛን ሥርዓት ለማስተካከል ሲባል የሞቀው መሬት በኢንፍራሬድ ራዲዬሽን አማካኝነት የሙቀት ሀይልን ወደ ህዋ እንዲመለስ ታደርጋለች።

ይህ ሀይል ወደ ላይ በሚሄድበት ወቅት አብዛኛው በታችኛው ከባቢ አየር/lower atmosphere/ ውስጥ በደመና እና በግሪን ሀውስ ኃላፊ ሞሎክሎች ተመጣ ይቀራሉ። ይህ ደግሞ ሀይሉን በሁሉም አቅጣጫ አንደገና አንዲሰራጭ ሲያደርግ ከፊሉ ተመልሶ ወደ ታች ከፊሉ ወደ ላይ አንዲሁም በከፍታ ያሉ ሌሎች ሞሎክሊዎች አንደገና ሀይሉን መምጣቱ ይችላሉ።

ይህ ሀይልን የመምጣቱ መልሶ የመልቀቅ ሂደት ሀይሉ ከባቢ አየሩን ለቆ ወደ ህዋ እስኪመለስ ድረስ ይደጋገማል።

ይሁን እንጂ እጅግ ብዙ የሆነው ሀይል የሚመላለሰው ወደ ታች በመሆኑ የግሪን ሀውስ ኃላፊ በከባቢ አየር ውስጥ የማይኖሩ ከሆነ የመሬት የላይኛው አካል እጅግ በጣም ሞቃታማ ይሆናል። ይህ

የተፈጥሮ ሂደት የግሪን ሀውስ ኢፌክት በመባል ይታወቃል። ያለ ግሪን ሀውስ ኃላፊ የመሬታችን አማካይ ሙቀት መጠን +14°C ወይም 33°C ቀዝቃዛ ከመሆን ይልቅ -19°C ይሆናል።

ባለፉት 10 ሺህ ዓመታት በከባቢ አየራችን ያለው የግሪን ሀውስ ኃላፊ መጠን በተነፃፃሪ የተረጋጋ ነበር። ከዚያ ከጥቂት መቶዎች ዓመታት በኋላ የግሪን ሀውስ ኃላፊ የክምችት መጠን እየጨመረ መጥቷል። ለክምችቱ መጠን መጨመር ምክንያቶች በኢንዱስትሪ የበለፀጉ ሀገሮች ለኃይል ያላቸው ፍላጎት መጨመር፣ የህዝብ ቁጥር መጨመር፣ የመሬት አጠቃቀም መለወጥና የሰዎች የአሰራር ሥርዓት ናቸው።

4. የግሪን ሀውስ ኃላፊ ምንድናቸው?

የውሃ እንፋሎት በጣም የተለመደው የግሪን ሀውስ ኃላፊ ነው። ነገር ግን ሌሎችም እጅግ በጣም አስፈላጊ ናቸው። አንዳንዶቹ በተፈጥሮ የሚገኙ ሲሆኑ አንዳንዶቹ ከሰዎች አንቅስቃሴ የምመነጩ ናቸው።

- በሰዎች እንቅስቃሴ ከሚመነጩት እጅግ በጣም ወሳኝ የግሪን ሀውስ ኃላፊ የሆነው ካርቦን ዳይኦክሳይድ ነው። በአብዛኛው ሰዎች የቅሪት-አካል የሆነው ነዳጅን በማቀጣጠል ካርቦን ዳይኦክሳይድ እንዲመነጭ ያደርጋል። ካርቦን ዳይኦክሳይድ ለአየር ፀባይ መለወጥ ዋነኛ አስተዋጽኦ ከሚያደርጉት የግሪን ሀውስ ኃላፊ ቀዳሚውን ሥፍራ ይይዛል።
- ሚቴን /Methane/- ሚቴን የሚገኘው እጽዋትን በማቃጠል፣ በማዋሃድ ወይም ያለአክሲጅን በማበስበስ ነው። ከቆሻሻ ክምችት፣ ከሩዝ ማሣ፣ ለግጦሽ ከምስማሩ ከብቶችና ሌሎች

የቀንድ ከብቶች በአጠቃላይ ከፍተኛ መጠን ያለው ሚቱን ይለቀቃሉ፡፡

- ናይቲሬስ አክሳይድን በተፈጥሮ በአካባቢያችን ማግኘት የሚቻል ቢሆንም ነገር ግን በሰዎች እንቅስቃሴ መጠኑ እንዲጨምር ይደረጋል፡፡ የኬሚካል ማዳበሪያና ፍግ ለእርሻ አገልግሎት በሚውሉበት ወቅት ናይቲሬስ አክሳይድ ይለቀቃል፡፡
- ሀሎ ካርቦኖች የሚባሉት የኬሚካል ቤተሰብና ሲ ኤፍ ሲ /CFC/ የተባሉትን የሚያጠቃልል ሲሆን የአዞን ንጣፎችን የሚጐዱ ናቸው፡፡ እንዲሁም ሌሎች ሰው ሰራሽ ኬሚካሎች ከሆኑት ክሎሪንና ፍሎራዩንን የያዘ ነው፡፡

5. በከባቢ አየር ውስጥ ያሉ የግሪን ሀውስ ጋሶች መጠን ያን ያክል አነስተኛ ፐርሰንት ከሆኑ ለምንድነው የነሱ ክምችት ለውጥ በአየር ፀባይ ላይ ከፍተኛ ተጽእኖ የሚኖረው?

አብዛኛዎቹ የግሪን ሀውስ ጋሶች ከመሬት የሚለቀውን መቀት በመምጣትና አምቆ ይዞ በማስቀመጥ እጅግ በጣም ውጤታማ ናቸው፡፡ በሌላ አነጋገር ከነዚህ ጋሶች ጥቂት መጠን ብቻ በመውሰድ በከፍተኛ ሁኔታ የከባቢ አየር ባህርይ ይቀየራል፡፡

ዘጠና ዘጠኝ በመቶ ደረቁ የከባቢ አየር ናይትሮጂንና ኦክሲጂንን የያዘ ሲሆን በአንፃራዊነት የፀሐይ ብርሃንና የኢንፍራሬድ ሀይልን በውስጡ የሚያሳልፍና የፀሀይ ብርሃንና የመቀት ሀይል በአየር ውስጥ በሚያደርገው ፍሰት ላይ የሚያሳድረው ተጽእኖም አነስተኛ ነው፡፡ በተነፃፃሪ የመሬት የተፈጥሮ ግሪን ሀውስ ላይ ተጽእኖ በማሳረፍ ምክንያት

የሆነው የከባቢ አየር ግሪን ሀውስ ጋሶች ተጠቃለው ከአንድ ፐርሰንት በታች የሆነ ከባቢ አየር ነው፡፡ ነገር ግን ያን ያህል እምነት የሆነው መጠን የላይኛው የመሬትን አማካይ መቀትን ከኔፓቲቪ 19 ዲግሪ ወደ ፓዜቲቪ 14 ዲግሪ እንዲጨምር የሚያደርግ ሲሆን ልዩነቱም ወደ 33 ዲግሪ ሰንቲግራድ መሆኑ ነው፡፡ ይህም እጅግ በጣም አናግ የሆነቸው የግሪን ሀውስ ጋስ ረጅም ርቀት የምትጓዝ መሆኑን ያመለክታል፡፡

በከባቢ አየር ውስጥ ያሉት ግሪን ሀውስ ጋሶች ክምችት በጣም አነስተኛ በመሆኑ ምክንያት ከሰዎች የሚለቀቁት ከፍተኛ ተጽእኖ አላቸው፡፡ ለምሳሌ ከሰዎች በአሁኑ ወቅት በየዓመቱ የሚለቀቀው ካርቦንዳይኦክሳይድ መጠኑ በግርድፉ 28 ቢሊዮን ቶን ነው፡፡ በሚቀጥሉት መቶ ዓመታት ከሰው የሚለቀቀው ጋስ በከባቢ አየር ውስጥ ያለውን የካርቦንዳይኦክሳይድ ክምችት መጠን አሁን ካለው 0.03ፐርሰንት በእርግጠኝነት ወደ 0.06 ፐርሰንት በእጥፍ ብሎም በሶስት እጥፍ ወደ 0.09 ፐርሰንት እንደሚሳድገው ይገመታል፡፡

6 ለአየር ፀባይ ለውጥ ምክንያቶች ምንድናቸው?

በተፈጥሮ የመሬት አየር ፀባይ ይለወጣል፡፡ ወደ መሬት የሚደርሰው የፀሐይ ብርሀን ምጣኔ መለወጥ ለመቀትና ቅዝቃዜ ኡደቶች ምክንያት ሲሆን ይህም የተለመደ የመሬት አየር ፀባይ ታሪክ ገጽታ ነው፡፡ እነዚህ ጥቂት የሶሳር ኡደቶች ልክ እንዳለፉት አራት መቶ ሺህ ዓመታት አራቱ የበረዶና በበረዶ መካከል ዘመናት ምልልሱ እጅግ ለረጅም ጊዜ የተለጠጠና አምኖልትውዱ ከአምስት እስከ ስድስት ዲግሪ ሴንቲግራድ እንዲኖራቸው ያስቻለ ነው፡፡

ባለፉት 10 ሺህ ዓመታት መሬት በሞቃታማ ኢንቴር ግሌሻል በሚባለው ኡደት ውስጥ ነበረች። የሌሎች ሶላር ኡደቶች በጣም አጭር የሚባልና አጭሩም 11 ዓመት ሳንጸስጋት ነበር።

ሌሎች የተፈጥሮ የአየር ፀባይ ለውጥ ምክንያቶች የውቅያኖስ ሞገድ ፍሰት ተለዋዋጭነት /የሙቀትና የርጥበት ስርጭትን መለወጥ የምችል/ እና ጉዙፍ የእሳተ-ጎመራ ፍንዳታዎች /አልፎ አልፎ የከባቢ አየር ጥቃቂን ብናኝ ክምችትን በመጨመር ተጨማሪ የፀሐይ ብርሀን ማገድ የሚችሉትን /ያካተተ ነው።

እስካሁንም ለብዙ ሺህ ዓመታት የመሬት ከባቢ አየር የተለወጠው እጅግ በጣም በጥቂቱ ነው። ሙቀትና ሙቀትን አምቆ የማቆየት ሚዛንን የሚጠብቁ የግሪን ሀውስ ጋሶች ለሰው፣ ለእንስሳትና ለእጽዋት መኖር ተስማሚ ነበሩ። ነገር ግን ዛሬ ይህንን ሚዛን የማስጠበቅ ችግር አለብን።

ቤታችንን ለማሞቅ፣ መኪናችንን ለማሸከርከር፣ ኤሌክትሪክ ለማመንጨትና ሁሉን ዓይነት ምርቶችን ለማምረት የቅሪት-አካል ነዳጅን በማቀጣጠላችን ምክንያት ወደ ከባቢ አየር ተጨማሪ ግሪን ሀውስ ጋሶችን እንጨምራለን። የነዚህ ጋሶችን መጠን በመጨመር የተፈጥሮ ግሪን ሀውስ ኢፌክቶችን የመሞቅ አቅማቸውን ይበልጥ እናጎለብታለን። ለከባቢ አየር ስጋት መነሻው በሰዎች መንስዔነት የጎለበቱ የግሪን ሀውስ ኢፌክቶች ሲሆኑ ምክንያቱም ደግሞ በሰው ልጆች ታሪክ ቀድሞ ባልተለመደ መጠን ምድራችንን የማሞቅ እምቅ አቅም ያላቸው በመሆኑ ነው።

7. ታዲያ ይህ እውነት ነው?

አለም አቀፍ የሳይንቲስቶች ስምምነት ገለፃ የሚያመለክተው ዓለማችን እየሞቀች መሆኑን ነው። በርካታ መረጃዎች እንደሚያመለክቱት ባለፉት 150

ዓመታት የዓለም የአየር ፀባይ ሞቃት እንደነበረ ነው። የሙቀት ጭማሪው የማይመሳሰል ሆኖ ነገር ግን ከዚያ ይልቅ በየአሥርት ዓመታት ልዩነት የሞቃትና የቅዝቃዜ ኡደቶችን የያዘ ነው። ይሁን እንጂ የረጅም ጊዜ አዝማሚያ የሚያሳየው ዓለማችን ፍፁም ሞቃታማ እንደምትሆን ነው። ከሙቀቱ ጋር በተያያዘ የአልፍፎን ግግር በረዶዎች ሸሽተዋል፣ የባህር ጠለል ከፍታ ጨምሯል እንዲሁም የአየር ፀባይ ዞኖችም እየተለወጡ ናቸው። የ1980ዎቹና 1990ዎቹ አሥርተ ዓመታት እጅግ ሞቃታማ ተብሎ የተመዘገበ ናቸው። በአለም የሚተረፎቹ ታሪክ አስሩ እጅግ ሞቃታማ የሚባሉት ዓመታት የተከሰቱት ባለፉት 15 ዓመታት ውስጥ ሲሆን በ20ኛው ክፍለ ዘመን ውስጥ ያለፉት 600 ዓመታት በዓለም ደረጃ እጅግ ሞቃታማዎች ነበሩ።

8. የአየር ፀባይ ቢለወጥ ምን ሊከሰት ይችላል?

የአየር ፀባይ ለውጥ ከሙቀት ክስተት አዝማሚያም በላይ ነው። ለዚህም ነው "የዓለም ሙቀት" /Global warming / ተብሎ የተሰጠው ትርጉም የክስተቱ ትክክለኛ ገላጭ አይደለም የሚባለው። የአየሩ ሙቀት መጨመር በብዙ ጐኑ በእለታዊ የአየር ሁኔታ ላይ ለውጦች የሚያስከትል ሲሆን እነዚህም የንፍስ አነፋፊ ሁኔታ፣ የርጥበት ዓይነትና መጠን እንዲሁም በዓይነታቸውና በተደጋጋሚ በሚከሰቱ ክፉና ጐጂ የአየር ሁኔታዎች የመሣሰሉ ናቸው። እንደዚህ ያለ የአየር ለውጥ ከፍተኛ ተጽእኖ ያለውና ወይም ሊተነበይ የማይችል የአካባቢ፣የማህበራዊና የኢኮኖሚ ተጽእኖ የሚያስከትል ነው።

የዓለም የባህር ጠለል በበረዶና በግግር በረዶ መቅለጥን ጨምሮ በበርካታ ምክንያቶች ከፍታው ሊጨምር ይችላል።

የባህር ጠለል መጨመር በሚያስከትለው ጎርፍና የመሬት መሸርሸር ጠረፋማ ክልሎች ላይ ጉዳት ሊያደርስ ይችላል። የበርካታ እጽዋትና እንስሳት ዝሪያዎች ለመላመድ የብዙ ክልሎች አየር ፀባይ እጅግ በጣም ፈጥኖ ይለዋወጥባቸዋል። እጅግ አስከፊ የአየር ሁኔታዎች፣ የሙቀት ጥገድና ድርቅ የመሳሰሉት በተደጋጋሚና በአብዛኛው በጎጅነት ይከሰታሉ።

በተጨማሪ የአየር ፀባይ ለውጥ በጤንነትና ደህንነት ላይ ተጽእኖ ያደርጋል። በርካታ ትላልቅ ከተማዎች የሞቃታማ ቀኖች ቁጥር በከፍተኛ ደረጃ የመጨመር ሁኔታ ያጋጥማቸዋል። ህፃናትን፣ አረጋጂዎችንና በመተንፈሻ ችግር የሚሰቃዩ ሰዎችን ችግር ውስጥ በመክተት የጤንነት ሁኔታን ለአደጋ የሚያጋልጥ የአየር ብክለት ችግር ይጨምራል። በሞቃት የአየር ሁኔታ ምክንያት የሻጋታና የአበባ ዘር ብናኝ የሚጨምር ሲሆን ይህ ደግሞ ለመተንፈሻ አካል ችግር መንስኤ በመሆን አንዳንድ ሰዎች በአስም አንዲጠቁ ያደርጋል።

9. በዓለም ዙሪያ ምን ተደርጓል?

የአየር ፀባይ ለውጥ በመላው ዓለም ላይ ተጽእኖ ያግኛል። የለሙትና በመልማት ላይ ያሉ ሀገሮች ለአየር ፀባይ ለውጡ መፍትሔዎች ለማግኘት በጋራ በመስራት ላይ ናቸው።

- እኤአ በሰኔ 1992 የተባበሩት መንግስታት ፍሬም ዎርክ ኮንቬንሽን እን ክላይሜት ቸንጅ/UNFCCC / በ154 ሀገሮች ተፈርሞ የነበረ ሲሆን የግሪን ሀውስ ጋሶችን መጠን ለማረጋገጥና የከባቢ አየር ሊጎዳ በማይችልበት ደረጃ ለማቆም ተስማምተዋል።
- እኤአ በታህሳስ 1997 በኮዮቶ ጃፓን ካናዳና 160

በኢንዱስትሪ የበለፀጉ መንግስታት የራሳቸውን የግሪን ሀውስ ጋሶችን ሊቀት ለመቀነስ ቃል የገቡበት ሲሆን ይህም ዓለም አቀፍ የአየር ፀባይ ለውጥ ስምምነት ሲሆን የኮዮቶ ኘሮቶኮል በመባል ይታወቃል።

10. ስለ የአየር ፀባይ ለውጥ ምን ማድረግ እንችላለን?

ካናዳና ዓለም እንደሞቁ ይቀጥላሉ፤ ነገር ግን በለውጡ ፍጥነትና ስፋት ላይ ተጽእኖ የሚፈጥሩ በርካታ ተለዋዋጭ ሁኔታዎች አሉ። በሂደቱ እያንዳንዱ ሰው ማድረግ የሚችለው ነገር ስለአየር ፀባይ ለውጥ መረጃዎችን እያገኘና የለውጡን እድገት ለመቀነስ የሚደረጉትን ጥረቶች መደገፍ ነው።

በአየር ፀባይ ለውጥ ላይ እርምጃ መውሰድ ኢኮኖሚያችንን በበለጠ በዓለም አቀፍ ደረጃ ተወዳዳሪ እንዲሆን ከማድረጉም ባሻገር እድገትንና ሥራን የሚፈጥር ሆኖ በሌላ በኩል የቆሻሻ የብክለትና የግሪን ሀውስ ጋሶ ዝቅተኛ እንዲሆን ማስቻል ነው።

በከባቢ አየር ውስጥ ተከማችቶ ባሉት የግሪን ሀውስ ጋሶች ምክንያት የአየር ፀባያችን ቀድሞም እየተለወጠ በመሆኑ እኛ ከነዚያ ለውጦች ጋር ለመላመድ የግድ መዘጋጀት ይኖርብናል። በአሁኑ ወቅት የካርቦን ሊቀትን የመቀነስ ተግባር ወሳኝ ቢሆንም ተከማችቶ ያለው የግሪን ሀውስ ጋስ በመጨው አስርት ዓመታት ውስጥ የአየር ለውጡ የማይቀር መሆኑን የሚያመለክት ሲሆን ከነዚህ ለውጦች ጋር ኢኮኖሚያችንና ማህበረሰባችን እንዲላመድ ከአሁኑ ጀምሮ የግድ ማቀድ ይኖርብናል።

ማላመድ / adaptation /
የሚያካትተው በአየር ለውጥ የሚመጡ
ጎጆ ተጽእኖዎች የሚቀነሱ እርምጃዎችን
መውሰድና ምናልባትም በዚህ አጋጣሚ
የሚገኙ አዳዲስ እድሎችን መጠቀምን
ነው። የምናላምዳቸው የማላመጃ
መለኪያ ዓይነቶች የሚወሰኑት የአየር
ለውጥ በተወሰኑ ክልሎችና የኢኮኖሚ
ሴክተሮች ላይ በሚያሳድረው ተጽእኖ
ነው። የመላመድ አቅማችንን ማሳደግችን

በአየር ለውጥ ለሚመጡ ጉዳቶች
ተጋላጭነታችንን ይቀንሰዋል። ይሁን
እንጂ የግድ ከአሁኑኑ የመላመጃ ምላሽን
የሚሰጥ እቅድ ማዘጋጀት አለብን ።
ይህንን በማድረግ በአየር ፀባይ ለውጥ
ሣቢያ በተወሰነ የአካባቢ፣የኢኮኖሚና
ማህበራዊ ሁኔታ ላይ የሚያስከትለውን
ዋጋ መቀነስ ያስችላል።

በካፋ ውስጥ የሚገኙ የቱሪስት መዳረሻዎች

መግቢያ

ቱሪዝም ጭስ አልባ ኢንዱስትሪ ሲሆን በዓለም የቅርብ ጊዜና ፈጣን እንቅስቃሴ እያሳየ የሚገኝ ነው።ይህ ኢንዱስትሪ በካፋ ዞን በተለያዩ ቦታዎች ይገኛል። ከእነዚህም ዋና ዋናዎቹ ፏፏቴዎች፣ የእምነት ተቋማት፣ ጥቅጥቅ ያሉ የተፈጥሮ ደኖች፣ የተለያዩ የዱር እንስሳትና አዕዋፍ እንዲሁም በአካባቢው እንደ መድሐኒትነት የሚያገለግሉ ዕፀዋቶች ይገኛሉ። እነዚህን የተለያዩ የሀገር ውስጥና የውጭ ሀገር ዜጎች ይጎበኛሉ። ጉብኚታቸውም ለመዝናኛና ለተለያዩ ጥናትና ምርምር ነው። ከዚህ በሻገር ዞኑ ብዙ ብርቅዬና ድንቅዬ የሆኑ የእፀዋትና የእንስሳት ዝሪያዎች መገኛ ነው።

1. ፏፏቴዎች

በዞኑ ውስጥ ከ16 በላይ የሚሆኑ አስደናቂና ማራኪ ፏፏቴዎች ይገኛሉ። እነዚህም ጎብኚዎችን ባለቸው የተፈጥሮ ውበታቸው አዝናኝና አስደሳች ናቸው። ከእነዚህም ውስጥ ጥቂቶቹ እንደሚከተለው በሠንጠረዥ ተገልፀዋል፦

ተ.ቁ	የፏፏቴው ስም	የሚገኝበት ወረዳ
1	ባርታ ፏፏቴ	ጊምቦ ወረዳ
2	ኤሌሎ ፏፏቴ	ጌሻ ወረዳ
3	ወሽ. ፏፏቴ	ጨና ወረዳ
4	አዲዮ ፏፏቴ	አዲዮ ወረዳ
5	ጉማ ፏፏቴ	ዴቻ ወረዳ
6	ሻኪ ፏፏቴ	ገዋታ ወረዳ
7	ቶታ ፏፏቴ	ዴቻ ወረዳ



የባርታ ፏፏቴ



የኤሌሎ ፏፏቴ

2. ፍል ውሃዎች

በዞኑ ውስጥ አምስት የሚሆኑ ፍል ውሃዎች ይገኛሉ። እነዚህ ፍል ውሃዎች እንደ መድሃኒት የሚያገለግሉ ሲሆን ጉብኚዎች በመጠጣትና በመታጠብ አፋጣኝ ፈውስን ያገኛሉ።



ዳዲበን ፍል ውሃ

በመሆኑም የብዙ ጎበኚዎችን ቀልብ የሚስቡ ናቸው። ለምሳሌ የዳዲቤን ፍል ውሃ አንዱ ሲሆን ይህ ፍል ውሃ በጊምቦ ወረዳ በጡላ ቀበሌ ከቦንጋ 35 ኪ.ሜ. ላይ ይገኛል።

3. ዋሻዎች

ዋሻ በታሪክ እንደሚታወቀው በቅድሜ አያቶቻችን ለመጠለያነትና ራሳቸውን ከተለያዩ አደጋዎች ለመከላከል ስገለገሉበት እንደቆዩ ይወሳል። በመሆኑም በካፋ በርካታ ዋሻዎች ለተለያዩ አገልግሎቶች ሲወሉ የነበሩ ይገኛሉ። በተፈጥሮ እነዚህ ዋሻዎች በጣም ማራኪና አስደሳች ናቸው። በዞኑ ከ14 በላይ የሚሆኑ ዋሻዎች ይገኛሉ። ከእነዚህ መካከል ለአብነት ያህል በሚከተሉት ሠንጠረዥ ላይ ሰፍረው ይገኛሉ።

ተ.ቁ	የዋሻው ስም	የሚገኝበት ወረዳ
1	ሃዊት ዋሻ	ጨታ ወረዳ
2	ቦርቲ ዋሻ	ጠሎ ወረዳ
3	ዶሺ ቱጋ	ጨና ወረዳ
4	ኤኬሮ ዋሻ	ጊምቦ ወረዳ
5	ኮታ ዋሻ	ገምቦ ወረዳ
6	ጣቀ ኬጦ ዋሻ	ጌሻ ወረዳ



ዶሺ ቱጋ

4. የተፈጥሮ ድልድይ

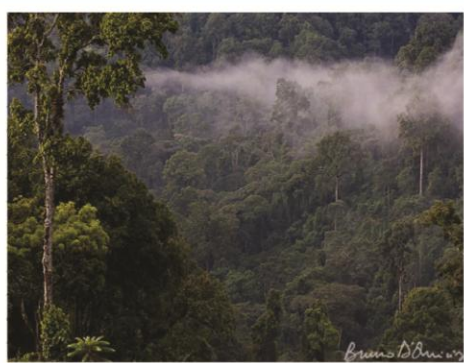
ስልጣኔና ቴክኖሎጂ ከመምጣቱ በፊት ተፈጥሮ በራሱ ጊዜ የሰራው የተፈጥሮ ድልድይ በተለምዶ የእግዚአብሔር ድልድይ በመባል የሚጠራው ከዚህ ቀደም እና በአሁኑ ሰዓትም ሁለት የተራራቁ መንደሮችን የሚያገናኝ ነው። በዞኑ የሚገኙ በርካታ የተፈጥሮ ድልድዮች ውስጥ ጉርጉቶ የተፈጥሮ ድልድይ/የእግዚአብሔር ድልድይ/ አንዱ ነው። ይህ የተፈጥሮ ድልድይ በዴቻ ወረዳ ገዳም ቀበሌ ከቦንጋ 10 ኪ/ሜ ላይ ይገኛል። ይህ መስህብ ከዋናው መንገድ 30 ደቂቃ ያህል የሚያስከድ የእግር መንገድ አለው። ቦታውን ለየት ከሚያደርጉት ምክንያቶች አንዱ ጥቅጥቅ ያለ ደን አካባቢ በመሆኑና እንዲሁም ማኪራ የቡና መገኛ አጠገብ በመሆኑ ጭምር ነው።



የጉርጉቶ የተፈጥሮ ድልድይ

5. የተፈጥሮ ደን

ደቡብ ምዕራብ ኢትዮጵያ ጥቅጥቅ ያለ የደን ሽፋን ከያዙ ጥቂት የሀገሪቷ ክፍሎች አንዱና ዋነኛው ነው። ከእነዚህም ስፍራዎች ደግሞ ካፋ ሰፊና ጥቅጥቅ ባለው የደን ክምችት እንዲሁም የጫካ ቡና ተክል ባለቤት በመሆኗ ትታወቃለች። የደን አጠባበቅ ባህል በካፋ ማህበረሰብ ትልቅ ትኩረት የተሰጠበት ነው።



ስለሆነም "ይህ ባህል ካፋ ያለ ደን ህይወት የለውም/መኖር አይችልም"/ "No life for Kafa without forest " የሚለውን ሥነ-ቃል ይጋራዋል። ይህ የተፈጥሮ ደን በባህሉ ስብጥር የአለም ኢኮሎጂን ሚዛን በመጠበቅ ረገድ ከፍተኛ አስተዋጽኦ እያደረገ ይገኛል። ደኑ እምቅ የተፈጥሮ ሀብቶችን በውስጡ ይዞ ይገኛል። በመሆኑም በUNESCO 761,000 ሄ/ር የሚሆን የደን ክልል ተከልሎ ተመዝግቧል።



የተፈጥሮ ደን

6. የሐይማኖት ተቋማት

በካፋ ዞን በርካታ ዕድሜ ጠጉብ አብያተ ክርስቲያናት፣ መስግዶች እና ሌሎችም የባህል ዕምነት ተቋማት ይገኛሉ። የአብያተ ክርስቲያናትም ሆነ የመስግዶች አመሰራረትና አጠቃላይ የሃይማኖት አመጣጥ የራሱ የሆነ ታሪክ አለው። ለምሳሌ፦ የክርስትና እምነት አመጣጥ ታሪክን ስንመለከት በ16ኛ ክፍለ ዘመን በክርስቲያን ነገስታትና የሙስሊም ሱልጣኔት መካከል በተፈጠረው ግጭትና ፉክክር ከፍተኛ ደረጃ ላይ ስደርስ የክርስቲያን እምነት አባቶች ታቦታትን በመያዝ ወደ ካፋ ዞን ሸሽተው በማድረግ ከሚደርሰው ጥቃት ታቦታትን ለመታደግ ሲሉ ወደ ካፋ ዞን ሸሽገዋል። በዚሁ ሁኔታ የእምነት መስፋፋት እንደመጣ ታሪክ ያወሳል። በዚሁ የታሪክ ሂደት የሚከተሉት አብያተ ክርስቲያናት ለአብነት ይጠቀሳሉ፦

- ጭሪ ቅዱስ ሚካኤል በ1529 ዓ/ም
- ኩቲ ቅዱስ ሚካኤል በ1529 ዓ/ም
- አውራዳ ቅዱስ ሚካኤል በ1529 ዓ/ም
- ሻፓ ቅዱስ ጌብርኤል በ1532 ዓ/ም
- ጊድ ቅዱስ ጊዮርጊስ በ1532 ዓ/ም
- በሃ ቅዱስ ጊዮርጊስ በ1532 ዓ/ም
- ዋሻ ቅዱስ ሚካኤል በ1532 ዓ/ም



በሃ ቅዱስ ጊዮርጊስ ቤተ-ክርስቲያን

እንደ ክርስትና ዕምነት በካፋ የእስልምና ሃይማኖት አመጣጥም በ16ኛው ክፍለ ዘመን ነው። ለእነኚህ ተከታዮችም ልዩ የሆነ የአካባቢ ስያሜ አላቸው። ይህንንም ስንመለከት ሀይማኖቱን ይዘው የመጡት የሀይማኖቱ መስፋፋትን ከንግድ ጋር የተቆራኝ ስለሆነ ነው። በታርክ እንደምንረዳው በአፍሪካ ቀንድ የእስልምና ሀይማኖት መስፋፋት በሰላማዊ መንገድ ነው። ይህም በንግድ ነው። እንደ ቀሪ የሀገራችን አካባቢዎች የዕምነቱ መስፋፋት በንግድ መስመር ነው። የሙስሊሙ ሕብረተሰብ በንግድ እንቅስቃሴ የታወቀ በመሆኑ በዚህም ምክንያት በካፋ የዕምነቱ ተከታዮች ነጋዴ በመባል ይጠራሉ። ትርጓሜውም ነጋዴ ማለት ነው። የዚህ ሐይማኖት የመጀመርያው የዕምነት ቦታው /መስጂዱ በ16ኛው ክፍለ ዘመን እንደተመሠረተ ይወሳል። ለአብነትም የቶንጎላ ቁባ መስጂድን መጥቀስ ይቻላል። ይህ ዕድሜ ጠገብና ታሪካዊ መስጂድ ከቦንጋ ከተማ በ7 ኪ.ሜ. ርቀት ላይ ይገኛል።



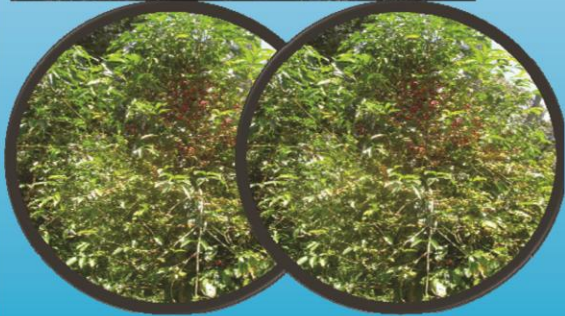
የቶንጎላ መስጂድ

በመጨረሻም እጅግ በጣም አስደናቂና ሊታመን የማይችል የዕምነት ሥርዓት የበሃ ጊዮርጊስና የግድ ጊዮርጊስ ታቦታትን አመጣጥ አስመልክቶ የሚካሄድ ነው። ከጥቂት ቆይታ በኋላ እነኚህ ዕላቶች አሁን ወደ ሚገኙበት ቦታ ተወስደዋል። በተለምዶ ይህ ዕላት ያረፈበት ቦታ ጎፓ ጊርጊሽ /ቱንጌ ሚቺ/ በመባል ይጠራል። በዚህ ሥፍራ የበዓል አከባቢ ሥርዓት

በአረቱ ሥርዓት መሰረት ነው። ይህን ሥፍራ / ቤተ እምነት ለየት የሚያደርገው ታቦት አልባ በመሆኑ ነው። ሥርዓቱ የሚካሄደው በየዓመቱ ሚያዝያ 23 የበግ፣ የፍየል፣ የዶሮና የከብት መስዋዕት በማቅረብ በደመቀ ሁኔታ ይከበራል። ይህ ታሪካዊ ሥፍራ ከዞኑ የቱሪስት መዳረሻዎች አንዱ በመሆኑ በመጎብኘት ላይ ይገኛል።

የማኪራ ጫካ ቡና

ይህ ታሪካዊ ቦታ የእናት ቡና መገኛ ሥፍራ ነው። ይህ ሥፍራ በብዙ አጥኚዎችና ድርጅቶች / መያድ/ የተለያዩ የቡና ዝሪያዎች መገኛ መሆኑን አረጋግጠዋል። ከዚህ በተጨማሪ ቦታው የተፈጥሮ ሀብትና ፀጋ ያለው ሥፍራ በመሆኑ እውቅናን አትርፏል። በመሆኑም ቦታው ሀገራችን የቡና መገኛ መሆኗን በተለያዩ ተመራማሪዎች ተረጋግጧል።



ጥንታዊ የካፋ ነገሥታት መከላከያ ዘዴ/ሂርድ/

የቻይናዊያን የመከላከያ ስልት ከመሬት ወደ ላይ ሲሆን ጥንታዊ የካፋ ነገሥታት መከላከያ ዘዴ ደግሞ ከመሬት በታች ነው። ይህ ጠመዝማዛ ጉርጓድ የካፋን ግዛትን ከ2502 300 ኪ/ሜ የሚሸፍን ነው። ይህ ጉድጓድ እስከ አሁን ድረስ ተጠብቆ ያለ እና ጎብኚዎችን ለማስተናገድ በቅርብ አካባቢ ለናሙናነት ተጠርጎ ይገኛል።

በዚህ የመከላከያ ዘዴ ነው የኢትዮጵያ ማዕከላዊ መንግሥት በአፄ ሚካኤል ዘመነ መንግሥት እ.አ.አ. በ1897 ዓ/ም ብርቱና ጽኑ የሆነ የማዕከላዊ መንግሥት ኃይልን/ጦርን/ ለተከታታይ ዘጠኝ ወራት ለመቋቋም/ለመከላከል/ የቻለው። ይህን ጥንታዊ የመከላከያ ዘዴ አስመልክቶ የተለያዩ የኢትዮጵያ ታርክ ፀሐፊዎች

በመጽሐፋቸው ከትበዋል። በመሆኑም እነዚህ የታሪክ ምሁራን ብቸኛው የካፋ መከላከያ ዘዴ መሆኑን አረጋግጠዋል። ይህ ጥንታዊ የመከላከያ ዘዴ በቀየው/አካባቢው አጠራር ሂርድ ተብሎ ይጠራል።ጉድጓዱም 4 ሜትር ያህል ጥልቀት ያለው ስሆን በጉርጓዱ ውስጥ ጦር፣ቀስት፣ጉንዳንና የንብ ቀፎ በቅርብ ተሰቅሎ ይገኛል። እነዚህ ተሰባጥረው ጠላትን ባሉበት ድል ይነሳሉ።



TABLE OF CONTENTS

Topics	Pages
➤ Message from the Editorial-----	27
➤ Editorial -----	28
➤ Message from the Chief Administrator of Kafa Zone-----	29
➤ Message from Culture, Tourism and Government Affairs Department Head of Kafa Zone-----	31
➤ Historical and Cultural Background of Coffee in Kafa-----	32
➤ Traditional forest management systems -----	38
➤ Kafa Coffee Biosphere Reserve - State-of-the-Art-----	44
➤ “Climate Protection and Preservation of Primary Forests”- NABU Project Profile-----	48
➤ Tourist Destinations in Kafa-----	54



047-331-0403

047-331-0150

047-331-0788

Fax-

047-331-0842

P.O.Box 77

KAFI BUNOO

Message from The Editorial

This Bunoo magazine has been published for the ninth times by Department of Culture, Tourism and Government Communication Affairs. In the previous editions, it has disseminated valuable information for our esteemed readers.

Now, this special edition has been prepared in two languages (i.e. Amharic and English) mainly focusing on launching of Kafa Coffee Biosphere Reserve and related topics.

The text for the most part contains the messages of the chief administrator of Kafa, and the head of culture, tourism and government communication affairs department, the historical and cultural background of Coffee in Kafa, Climate Protection and Preservation of Primary Forests"- NABU project profile, Traditional forest management systems, Kafa Coffee Biosphere Reserve- the Process and Progress and finally a bird eye view on Kafa tourist destinations are presented.

Hence, we expect that, you will go through and get valuable information from the magazine under each topic. We wish joyful reading.

Editorial

The destruction of forest the associated wetland resources is one of the main sources of green gas emission that induces climate change effects. The destruction is mainly associated with population increase and unwise use of the natural resources.

The unevenness of the climate creates chaos both in human as well as to plants and animals life. For instance, erratic rainfall, warming, water shortage, ablaze, health crisis, soaring price are among the crisis that can be mentioned. As a result, instability, environmental, humanitarian, social and economical problems are swelling their impact across the globe.

To relieve this crisis, delineating, conserving and protecting forests and its biodiversity and reforesting degraded lands is a responsibility of all stakeholders to save life of the coming generation while serving the present generation.

In order to maintain natural forests and rehabilitate the depilated forest and wetland resources so also transferring it for the next generation could only be possible through capacitating the community to have proper skill that enable them administer and wisely use the natural resources. Hence, building the capacity of community to dispose their responsibility indeed needs continuous training, financial and material support at all levels.

To create the capacity of community is not left to a given entity, rather the government, NGOs' individuals and all in all the community itself should be mobilized. Specially, the UNESCO, which is contributing a lot towards the preservation and protection of heritage across the world, and other stakeholders have to play a leading role as to save our country's remaining forests and biodiversity through uninterrupted financial and material support.

The livelihood of the local community is related with existence of this natural forest. Therefore, taking into consideration this fact, the communities have to know and discharge their responsibility in a great deal, in conserving the remnant forests and rehabilitating degraded lands.

The state bodies at all levels should play indispensable role in creating awareness and mobilizing the community for the conservation and development of natural resources as stipulated in the five year growth and transformation plan.



Ato Kifle Gebremariam-Message of Kafa Zone chief Administrator

Quite evidently, as the world history stands, Ethiopia appears with glory for its homage for precious cultural and historical artifacts and heritages. Among these, the Obelisk of Aksum, the Lalibela Rock Hewn Church, the Palace of Fasiledes' and Jegol Wall are commendable. As valuable they are they have been registered in the list of world heritage by UNESCO.

Perhaps, Ethiopia being the cradle of human being convinced many scientists and people of the world that the eastern part constituting races of human being like Lucy, Selam and Ardi. Ethiopia again being among the world's biodiversity richness and endemism of many plant and animal species is the land of gift of Arabica Coffee, which is the second world commodity. Because coffee is an Ethiopian to owe this it picked an Ethiopian name. Coffee, sipped by billions every day calls the people who offered it- Kafa. The world is wise if not wise enough in paying wisely for the resource it acclaimed the association between Kafa and Coffee. The precious gift is the factor of existence to the cloud forests of Kafa- one of the biodiversity hotspots of the world. Once again, as Arabica coffee originates in Ethiopia I believe worth informing the people the specific place called Makira in Decha woreda wherefrom coffee started its journey to the world couple of centuries ago.

Currently the planet we are living is unprecedentedly trembling. Across the globe debate over climate change has become critical and a challenge as well. As it was subsequently described deforestation is among the prime inducing causes that even surpass the effect from motor combustions. Having noted this reality from the outset, our zone has taken remarkable steps. We internalized the sense of urgency and acted up on delineating, conserving and establishing sustainable system of wise utilization for the remnants natural forest at our disposal in light of transferring it to the coming generation as our duty and responsibility.

Indeed the people of Kafa have long standing tradition that served positively for the conservation and maintenance of the forest resources to the present generation. On the other hand, distinguished scholars have undertaken different researches across the zone. Among others is the effort made by Public Private Partners towards establishing biosphere reserve is worth mentioning. Action researches and studies together with planning process helped the designation of Kafa Coffee Biosphere Reserve and its nomination by UNESCO. In a great deal of rapture, to see this imperative day of Kafa Coffee Biosphere Reserve inauguration, on the behalf of Kafa people and myself, I would like to congratulate all. Most importantly the local communities deserve gratification, who through their rich tradition, contributed to the knowledge generation and conservation of the natural forest.

I would say that, it is the responsibility and duty of the larger community and interest groups to implement the conservation and sustainable development of the natural forests and associated resources through blend of approaches that integrates scientific input with traditional skills sustainably to assure the continuity of life of the coming generation.

Today, the population of the community who has conserved this natural forest is in augmentation. The population increase means an inevitable demand for more land for the sustenance of livelihood. This has an ultimate effect on the extent and diversity of natural resources of the area, mainly to forest and wetland resources. Therefore, besides conserving the remnant natural forests and associated wetlands it is imperative to rehabilitate degraded lands through reforestation and proper management as well.

The possibility of ensuring sustainability of progressive agricultural growth, effective land conservation and scaling up of productivity is already demonstrated by our model farmers. The communication and extension of this great achievement and best practice of model farmers' has been underway. With especial attention this experience exchange to reach across all farmers will be strengthened and continued until wider adaptation is ensured. Based on the context of our zone, the attempt to expand coffee development will be integrated with environmental protection actions too, particularly through setting up agro forestry system by capitalizing on the existing cultural practices.

Apart appreciating the community that preserved the forest, I strongly believe that all concerned stakeholders are expected to contribute technically, materially and financially to pursue long term conservation and biosphere reserve management for the benefit of wider mankind.

Furthermore, I urge all to create common understanding that the existence of this natural forest does have global, national, regional and local benefit. Therefore it would not be the responsibility for the people of Kafa only and hence I remind you all that, we should make our common responsibility and include it as an integral part of our five year development and transformation plan.

Lastly, I would like to call for you that, all the concerned bodies have to engage themselves in building the capacity of the local community and the counterparts towards ensuring conservation and wise use the natural forest.

I thank.



Ato Mitiku Asfaw Yeyoch

Message of Culture, Tourism and Government Communication Affairs' Department Head

Ethiopia is among the few states known for its biodiversity rich resources and especially for its homage and abundance in plant endemism.

Currently Ethiopia hosts two of the 34 biodiversity hotspots of the world. Among these, the southwest Afromontane forest is one where Kafa zone constitutes the larger share. Our zone represents one of the southwest areas of the country that consists of the lion share of one of the two last remnant forest resources of the country.

The nomination of Kafa Coffee Biosphere by UNESCO that has been conserved by the cultural, spiritual and indigenous knowledge of our community, abiding in the southwest part of the country, is amenable. In order to perpetuate this respectful culture, belief and indigenous knowledge of forest conservation in scientifically valid ways in light of local, national and global interest it demands the support of governments, NGOs and other partners.

In this respect one of the prime focuses of the EFDR state five year growth and transformation plan is implementation of natural resource conservation and development with community active participation. Indeed we are in action and in order to maintain this positive natural resource conservation culture of our community fine twined with scientific approaches I urge the cooperation and support of all concerned stakeholders.

Finally the nomination of Kafa coffee biosphere by UNESCO together with the National Coffee Museum under construction, will implicate for both good image building and socio-economic development of the zone and the nation. While announcing congratulation to all active participants of the initiative of biosphere reserve establishment, I call up on all to hang together to make Kafa not only the origin of Coffee but also center of excellence for trade, science and marketing as well.

Historical and Cultural Background of Coffee in Kafa / Asefa G/Mariam & Tsegaye G/Mariam/

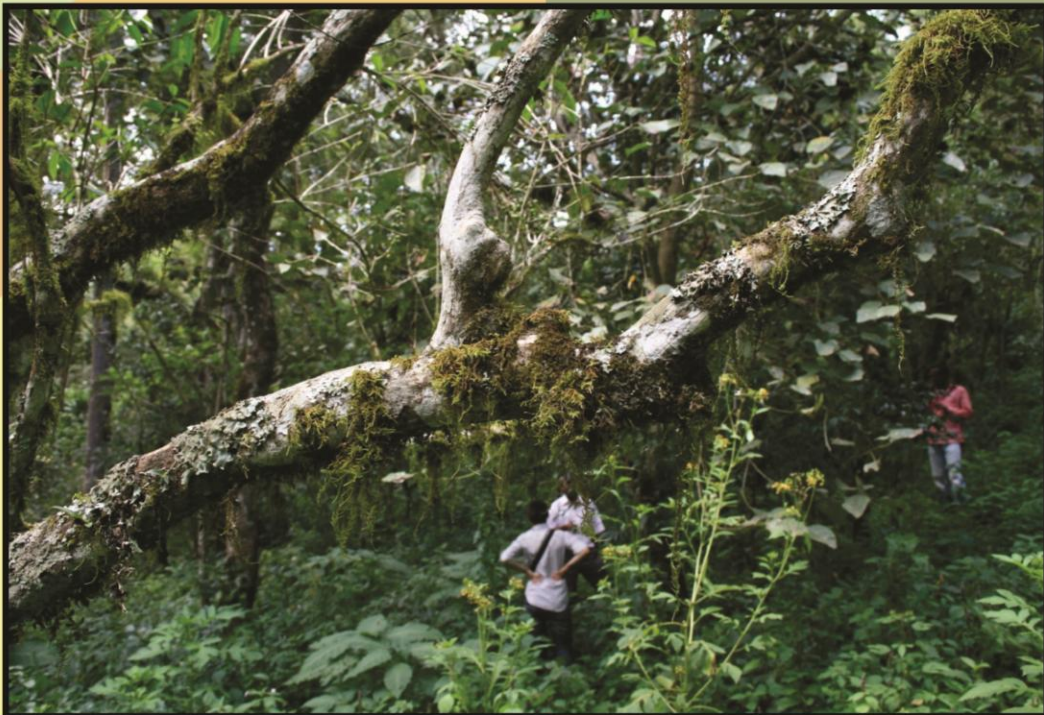


Introduction

Around the world Ethiopia is known through its unique cultural art facts and historical heritages. Among these, the most celebrated & recognized by UNECO are Axumit Obelisks which is an ancient civilization symbol of monuments, rock-hewn churches of Lalibela, Palace's of King Fasiledes, and Jegol Building of Harar. On top these, the archaeological findings such as Lucy, Selam and Arid wittiness that Ethiopia is the cradle of human being.

On the other hand, next to the petroleum highly demanded and expensive commodity in world is coffee. This coffee is first identified and tested in southwest of Ethiopia: Kafa zone in a special place named as Makira in Decha district. It is one of the reasons that make the area to be recognized and registered by UNESCO as "Kafa Coffee Biosphere Reserve".

The objective of this article is beyond promoting the exact coffee cradle land and its history it also give a bird eye view on cultural, psychological & economical attachment of Kafa people towards coffee.



Legends about coffee.



"Traditionally in Kafa some domestic animals, particularly sheep and goats are kept in houses to protect them from biting flies and from wild animals. During the day these animals are herded by shepherds. "It was sometimes about second century A.D, a shepherd of goats and later his family noticed the special smell of coffee from the breath of goats. The shepherd was called Kali or Kalliti. Kali followed route of the goats and noticed the type of plant leaves which the goats anxiously ate. Kalliti then picked some of these leaves, took them home and told the story of how he had discovered them. The family of kalliti curiously and eagerly put the leaves of the later to be known as Coffee in the boiled water. When they tasted the water they found it to have a pleasant and unique taste. The discovery of this taste soon spread throughout Kafa. The leaves of coffee plant when ground boiled for drinking purposes for uncertain period of time i.e. before the beans of the coffee were discovered. Many years later the elderly people of Kafa, noticed the red and green beans of coffee. They also noticed that birds were eating these coffee beans. So, they picked the beans and put them in earthen-ware pan. The

aroma from the roasted beans gave of stronger, and a more attractive and sensitive smell than the former leaves. After eaten the community started roasting, grounding and boiling coffee bean for drinking purposes. It became the duty of males to pick and bring coffee beans to the homes and the duty of females at home to prepare it for drinking. They also discovered that roasted ground and boiled coffee taste had a more stimulating power and more flavor than the ground and boiled leaves. The discovery of this news also spread from village to village and from province to province of the Kafa Highlands. In the traditional way, the people of Kafa who had coffee plants at their disposal sent a parcel of berries or coffee beans to their friends and families in the distant areas by saying, Buno-Kafa, which means the coffee of Kafa.

Coffee was also said to have been spread by long distance caravan merchants. These traders spread coffee throughout the Ethiopians highlands. The traders were generally thought to be the wollos traders. The traders were said to have been invited to drink coffee in a ruling class member's house. The wife of this ruling class, who prepared coffee to the caravan traders, was called Genne-Bunno or Genne Bunne. Genne means madam. These caravan

traders took the beans of coffee and named it "Buna" of Course. Coffee is known in Kafa as "Buno") in the memory of Bunne, the woman who prepared and invited them to drink this new hot beverage. In fact, coffee is called as buna, Bunne, Bun and the like in most of Ethiopian languages and in some of the Arab countries too. Today, coffee takes the name of its birth place, Kafa and thus called by millions of people daily throughout the world.

"A young herdsman called first observed the stimulating properties of wild coffee. When his goats became hyperactive after eating the leaves and berries, swallowed some of the berries himself, found that he too became abnormally excited, and ran to a nearby monastery to share his discovery. Initially, the monks did not share the young goatherd's enthusiasm, but instead him for bringing evil stimulants to their monastery and threw the offending berries into the fire. But then, seduced by the aromatic smell of the roasting berries, the monks decided to give a try and found that they were unusually alert during their nocturnal prayers. Soon, it became accepted practice throughout Christian Ethiopia to chew coffee beans before lengthy prayer sessions, a custom that still persists today."

Real History of Coffee

The origin and center of the genetic diversity of coffee Arabica lays in the south western region of Ethiopia, Kafa kingdom, Makira kebele, Buni village, 1,000 years ago. The ancient kingdom of Kafa can be traced back to 14th century (Bibber 1920, Bahruzewde 2002). Coffee is described as buna in Amharic, native Ethiopian language, in which the name was droved from the name of Buni village in Decha district of Kafa zone, where coffee was originated.



Coffee and Kafa are two inseparable features. Coffee is a natural gift given to Kafa and in its turn; Kafa has presented it to the world. Before the creation of the present Ethiopian state, Kafa used to be the major coffee producer and exporter state in Africa, according to the book authored by Bruce in 1804. A history writer called Max Gruhe has also written the following statement about Kafa :- The name of this African country is never the less on the lips of many every day of the year; since a great part of the population of the world daily drink the juice extracted from the berry of plant which is originally grew in Kafa-coffee has been in Kafa since the dawn of history and it was from Kafa that in early time the use of the extract of the “Kafa bean” spread over the entire Ethiopian highland. In 9th century A-D its use came to be known to the persons.....(Max Gruel 1932;69).



Lange has also backed the testimony given by Biwce previously and stated that Kafa used to export 350,000 kg coffee annually before 200 years (Lange 1982:8). “Coffee is the main source of Ethiopian’s economy and the entire world is aware of the fact that source of coffee Kafa (Orient 1960p-37)

Coffee is locally known as (Bunoo in kaffigna language.) it is known by its name coffee in more than 75% of the Ethiopian languages including Arabic.

In a similar fashion, coffee widely known in Europe, America and Asia without leaving its original source Kafa such as **koffee, kafie, kehi, cafa, cofea**,.....(Selamta Air lines Magazine- July-September 2001)

It is a known fact that, the plant was distributed to different parts of the world through merchants and colonizing powers. Following this, coffee originated from Kafa and used to be drunk in Mecca Medina during the 10th century and in Europe during the year 1000 and it was in the Italian city of Venus at which the first coffee house was opened to provide café service. Prior to that, thousands of coffee house were operating in the city of Cairo and the rest of the world came to use coffee and these can be observed from the book authorized by Max Gruel 1982 on page 172 and the magazine of

Ethiopian airlines published in 1996,1999, and 2001 with volume 13,16, and 18.

According to the writers such as Lange, Orient, Bruce in 1804, Newman in 1902, Stral in 1963, Bekele W/Mariam, Beyene W/Mariam and others have confirmed that coffee originated from Kafa and it was among the major source of income confirmed that coffee was found and spread in forest part of Kafa./Ethiopian 2000 Reflections Addis Ababa Ethiopia 2000 (entrap printing press).

Among these types of vegetation, the special gift that Kafa presented to the world is “Coffee” “Buno”. Kafa is the birthplace of Coffee. Kafa is not only the birthplace of coffee but also the main coffee producing area in Africa before its conquest by Menelik II in 1897. Many researchers have confirmed Kafa as the origin of coffee.

Recent witness about the cradle land of coffee.

Very recently the B.B.C. World Service stated that:”... **not Brazil or Madagascar but Ethiopia, Kafa as the home and origin of coffee.** It further stated, Kafa in the south western part of Ethiopia is the origin of coffee. And in Kafa a place called Makira is

the –place where for the first time coffee is found and used by the people of this area. This place, Makira, is found south east of Bonga, the center of Kafa”(B.B.C. on food and on the birth place of coffee: August 29, 2005). Interested authorities of B.B.C have been to this area and have observed the” mother coffee” plants at Makira.



On the other hand, there are many countries and even some local areas, which claim their respective areas to be the origin of coffee. Nevertheless, the facts stated above seem to prove Kafa to be the birthplace of coffee. **Simply because there is no other place called Kafa elsewhere other than Kafa, south of Gojeb (Godefoo) River.**

Very recently the German scientists have discovered that the organic coffee of Kafa has the best taste in the world. Under this process, the taste of Kafa-coffee was

identified for the taste and flavor of the banana.

Social, cultural and psychological values of coffee for the Kafa people

Coffee not only has economic benefits, but, also cultural and psychological impacts on the people of Kafa. For example the roasted coffee is presented to the owner of a house, to smell it, so that, he may face good luck. When coffee boiled and ready for drink the traditional ceremony is the head the family pray and then the first poured cup of coffee poured on the ground for a guardian spirit. That is to create peace with the “God of the earth” that is known as “chorro”. Ground coffee is mixed with honey and taken as a medicine against diarrhea. The flour of coffee is also used as a medicine when sprayed on wounded part of the body. Ground coffee leaves mixed with honey and boiled believed to purify blood circulation. With respect to social norms coffee preparation skill is one of the main criteria of a girl’s suitability for marriage that usually rises by elders during marriage negotiation ceremony. Therefore, coffee has social, psychological and cultural or spiritual values for the people of Kafa.

References

1. Bekele W/mariam, History of Kafa people’s 2009. Addis Ababa Ethiopia.
2. Ethiopia 2000 Reflection 2000 Addis Ababa Ethiopia. Central printing press.
3. Bunoo annual prints magazine 2007. Kafa zone culture and public Relation department.
4. Makira special edition of Kafa development forum 2008.
5. Kafa Coffee Biosphere Reserve management system, unpublished.
6. <http://grandkafa.com/en/coffee/history>.
7. www.kafa-biosphere.com

Informants

1. Gawucherasha Keeto 107 years old
2. Awarasha Alemu Ato 80 years old
3. Gebremariam Gebre 85 years old
4. Emahoyi Zewiditu Wuddo 90 years old



Traditional forest management systems /By Mesfin Tekle/

Traditional forest management systems have come up with a wide variety of systems. Most importantly there are two distinct realities emerged from the assessment. The first reality is that there are differences on types of traditional management systems known and practiced. The second reality is that there are also multiplicities and dynamics of the systems in a given community. In a broader context communities implicitly categorize management systems into two notably that evolved within the socio-economic dynamics of the local people and sponsored by external forces. Both of the systems are also referred with temporal and spatial differences.

Indigenous forest management system

The term indigenous often is used to underline the internality of the situation privy to specific groups. It represents more pronouncedly to indicate the strong inheriting behavior of the practitioner of the system. The motive of forest management is somehow far beyond from simplified denotation of the extent of a land area

covered by trees towards the psychological and spiritual association that has been intrinsically bonded. Most importantly it often is portraying mutual respect across the society.

Indigenous forest management systems are referred from centuries of former historic and socio-political identity of the people of Kafa. As most elder respondents, in the Kafa Kingdom regime there was regular annual general assembly in the palace of the Kings. Representatives of different localities were always expected to present oral report. The first question is how is the forest? Is it calm? Does it provide honey, coffee and other services? As most respondents discussed the forest is the sign of surplus or curse condition. Because the forest is the first interest for the annual discussion all bastions of the king always look after the resource for this good reason. This sentiment still is reflected in the hearts of many elderly Kafa people. They consider as human ecology that is pride and symbolic for the society. This can be drawn from the regrets of many discussants that are very weak to exploit but unhappy on the deforestation and less attention prevailing in their locality.

These category discussants generally blame subsequently rulers after the demolishment of the Kingdom of Kafa by citing that there is worsening of rulers' attitude towards forests. With this regard there is a general comment that citizens are less disciplined in exerting their citizenship duties down the regimes the worst being the youngest generation.

Forest tenure systems

Forest tenure here is used as a bundle of rights that can be expressed as the right to access, use and make a decision over a forest resource (Mesfin 2005). From the discussion that forest tenure can be put into three major distinct arrangements. The first tenure was during the Kafa Kingdom – until 1898. In this regime forests were regarded as the gifts of the divine creator (God) that were taken care. They are assumed as constituting a range of secretes that vary from a simple wood products to sprits of the soul. Therefore by and large forests were regarded as gifts of God.

'God has created the Kafa Kingdom and put in Gedam for rule and Coffee in Makira forest. He then created a Natural Bridge (Gurguto) to connect His gifts with the Kingdom.' Gawerasha Shalo, Kafa farmer.

The second tenure was introduced during the regime of Menilik II, who invaded Kafa and totally demolished the Kafa Kingdom by force. In this regime land is divided as *lem* meaning fertile or productive and *tef* means non productive (Mesfin 2005). Forest resources were generally put under the non-productive category. This type of forest categorization continued until the 1972 revolution that overthrew feudal rule. During these periods forests are regarded as less important and assumed to be converted to productive assets. Since the decision making is in the rule of the invader kings and their bastions from north, the long standing belief of local Kafas' encountered problem. Particularly the deliberate attempts to despise the local traditional belief that partly believe on forests as a place where the cult of the sprit leader stays, there were clearing of forests as demonstration for the betterment of their religion. This has been the first new experience that opened a spontaneous and varied attitude towards forests and it started to be entrenched in the minds of the local 'like-minded society'.

The third regime on forest tenure began with the proclamation of land reform by the socialist military government. This regime introduced public ownership and close

dictation on specific forest related activities. The prime symbol of the regime was the introduction of decree that deny the freedom of local forest based community that has been maintained for long. It denounced the strong belief and association of the human and the ecology. The current ruling government also reconfirmed that reality except putting the people of Ethiopia as co-owners. This perhaps has shared assumption of a take away of the gift of God to Kafa by outsiders. Almost all encountered discussants present the case of allocation of forest lands that are under the traditional use of local people to coffee investors.

Customary usufruct arrangements of Kafa

As discussed above there are various forest management arrangements. Most of these arrangements have gone modifications and in some cases completely altered to other arrangement systems. Some of the customary usufruct arrangements are listed below.

Sacred places

In almost all forests of Kafa there are parts or all of the forest patches that people associates themselves spiritually. The association is demonstrated by periodic

thanks-giving as sacred sites to that particular community. Forests assigned for this purpose have two distinct characteristics. The first characteristic is they are dense and dominantly composed of big trees. The second characteristic is they are often located in the peak altitude compared to the surrounding that cover steep slopes. In this regards respondents identified three distinct sacred places.

The first sacred places are those forests set aside as the Kafa king's sacred places. These sites are very limited and are linked with the seat bases of the king. Perhaps before the last king of Kafa these places are numerous in number. Andracha-Gedam had been the seat of the Kafa Kings and hence most of these places are also located within the focus of this research site. In Kafa there has been and still exists traditional belief called Eko. There were two eras as far as traditional belief leadership is concerned. Before Gaki Sherecho (Chinito Galito), the last King of Kafa, there were separate spiritual leaders (*Alamo*) other than the Kings. During the last King the cult was believed to be abided on the King and by de facto the *Eko* leadership become part of the kingship. In both cases there was a general believe that the cult or spirit always stay in a particular

forest. Hence so as not to disappoint the spirit these particular sites are declared to be free from any entrance including the King. After the forceful captivity of the last King there are sites that still are not entered and local people are protecting others by telling some scary legends. However with the influx of outsiders especially Amharas these places are currently transgressed and most are converted to farmlands. However elderly and some young generations of Kafa origin do not enter to some of these areas.

The second sacred places are called *Dejo* literally meaning thanks-giving sites. These sites are still existent and are widely respected. They are often circular in shape and some sort of visible delimitation is put to defer people from entering mostly linking with some sort of legends that warn not to do so for the sake of one-self and others. No person is allowed to pass that limit at any cost, and if found that will be a serious dispute source. For example all the twelve kebeles assessed for this research have *Dejo* sites within their respective forest patches along Gumi river catchment. Until two years ago the ceremony of thanks-giving has been done with care and secrete. This was because it is regarded as backward and despised by the followers of the modern

religions (Christianity and Muslim). Since the last two years local people are encouraged by local governments to respect and to build self-pride on their culture, it seems reviving. *Dejo* places (*Deje Ta'o*) are always the central or deep corners of a particular dense forest.

Followers of this belief celebrate once a year by butchering a bull and preparing local drinks. The ceremony is lead by cultural thanks-giving leader locally known as *Dejecho*. In areas that have non-wood products collected seasonally like coffee, cardamom, honey and long pepper there are ceremonial harvesting arrangements. There are often taboos of harvesting such as eating cabbage, visiting recently delivered woman, having sexual intercourse for the last fifteen days before entering to the forest for harvest. It is believed that those who enter with these taboos may cause damn explained in terms of illness, death and loss of next harvest. Despite the disregard and negative connotations from religious leaders most respondents hold the belief and regularly attend the event.

The third type of sacred arrangement is family or kinship worship forest set aside within private compound. It is locally called *Guudo*. Here the believers are descendants

of traditional belief leaders that are locally called *Alamo* and it literally means a person with traditional sprit. These people differ from the above in that they regard themselves as fortune leaders. Despite smallness of the forest area that often is less than a hectare valuable forest species and their wilderness is maintained. Here the *Alamo* can enter into the forest. For the ordinary families or relatives that follow the belief they are not allowed so as to avoid annoyance of the sprit and the resulting punishment. This is a simplified or slim version of *Dejo*, where the number of followers and the area of forest have been lost for different reasons.

In the above three sacrosanct usufruct arrangements there is no extractive practice. They are for moral and spiritual satisfaction. These satisfactions are deep and construct of blessedness that is demonstrated by care. This conception is a strong hold by many respondents. It is substantiated by the argument that when this connectedness was strong and live there was abundance, love and morality. In the contrary when cracking of the system become more pronounced, extravagance, dissatisfaction, disrespect and scarcity prevailed without any meaningful contribution for the society. It is an overall

regret and disappointment. Most elders consider the situation as a force field of opposite direction pull between elders and youngsters. The elders want to maintain the custom while the new generation feels it is backward thinking and the land set aside for this purpose is wastage. Particularly at present the increased number of landlessness among the young generation seeking for farmland are cited as the coercive field to dismantle this system where so many exemplified sites were referred as conformation.

Utilization based customary usufruct arrangement

Forests are integral parts of the livelihood of Kafa people. This can be demonstrated by the existing farming system. There are four farming systems in Kafa zone including forest- based- farming system, forest-coffee-farming system, forest-enset-cereal farming systems and cereal farming system (Mesfin 2007). As can be understood from the name itself the first three farming systems have association with forest notably forest- based-farming system, forest-coffee-farming system and forest-enset-cereal farming systems. Cereal based farming system is mainly practiced by settlers from northern and central part of Ethiopia (ibid.). Local

people are dependent on forests for wide range of uses. Forests provide fuel wood, farm tools, construction materials, household utensils, serve as grazing area for domestic animals, provide medicinal herbals, produce fruits, mushrooms, spices, coffee and honey for house consumption and for sale. These uses are categorized by respondents as ranging from immediate and seasonal takeaway to safety-net at times of crisis.

During the era of the last King of Kafa there were specific locations wherefrom some special products like honey, drinking water, coffee, medicinal herbals and others are collected. These places are by de jury exclusive to the king. After Kafa was concurred by Minilik rule his bastions from north that were assigned as administrators claim the whole people and the resource as their property and exploited valuable products like ivory, musk, hide and skins, coffee and honey as tax in kind (Mesfin 2005). Until the end of feudal era, 1974, in the country similar arrangement had been persisted except the relaxation of proprietorship administration share with local royal families. Territorial ownership has been transferred from northern bastions to the hands of local royals after two years

fight and court appeal in front of king Hielessilassie (Bekele 2005). The use of these resources was open for all interested and capable to produce and pay. As far as forest resources are concerned, hunting, honey and coffee productions were strong holds for local royals. Forests are administered by the good will of the owners.

Since 1974 all natural resources notably land and forests are by de jury properties of the state. Despite the limitation in capacity to administer the ostensible power exercise and law reinforcement at times of arbitrary interventions become the new era for the adjustment of traditional forest management to begin from. Here the source of tenure, power imbalance, exposure and the emergence of new interest group like investors cracked the laterally similar management system to situation and location specificity. Currently blend of systems that have nesting effect to limited area and scope needs systematic study to come up with facts at disposal. Nevertheless these systems contribution to the overall resource management and livelihood support is uncontestably imminent.

Kafa Coffee Biosphere Reserve - State-of-the-Art (By Mesfin Tekle)

After forty years since international biosphere reserves networking had began, Ethiopia for the first time become entrant in the global biosphere reserve network by virtue of the nomination of Kafa and Yayu biosphere reserves in June 2010 by United Nations Science, Education and Culture Organization (UNESCO). By and large this has substantiated the government's initiative towards good picture building and renaissance of the country. Particularly it glorified the establishment of National Coffee Museum in Bonga as wise and thoughtful decision. Besides it serves to create model region for sustainable development.

Ethiopia being the center of origin of Arabica coffee and currently trying to secure fair benefit for its products, the nomination is a step ahead. Especially the clear indication why the two biospheres are nominated is of immense value. Most importantly the explanation by the nominating body as rationale for Kafa biosphere reserve nomination is pivotal. Clear and bold it described Kafa biosphere reserve is nominated because of two interlinked importance: Because it is the **center of origin and diversity of Coffee arabica** and because it harbors **various flora and fauna worth for conservation and development**.

1. Geneses of Kafa Biosphere Reserve

"As nature knows no boarder, neither are also conservation efforts nor benefits of nature." This is a motto picked from NABU International leaflet.

This is a founding anchor for the e geneses of Kafa coffee biosphere reserve. There are always reasons and dispositions for events like the birth and maturity of Kafa coffee biosphere reserve establishment. Like minded activists design their own strategies for hanging together. Global networking of German based organizations notably NABU, GEO, DSW,

Original Foods, GTZ, and Crafts Food in collaboration with Ethiopian counterparts is a means for the call-up and partnership for the initiative.

In 2003, the above partners initiated a "Public-Private-Partnership" (PPP) Project, aiming to establish marketing strategies for wild coffee from Kafa Zone in order to conserve the coffee forests and improve the livelihood of local people. In order to reinforce these goals, the project also started the promotion of the UNESCO Biosphere Reserve concept for Kafa. Since Biosphere Reserves serve a balanced relationship between humans and the biophysical environment, partners seized the opportunity to fine twin the indispensable desires of conservation and sustainable development.

2. State-of-the-Art

The establishment of Kafa coffee biosphere has not been simple. It has passed numerous daunting processes and multitude challenges. The principal processes include:

2.1 Advocacy and Promotion

In light of creating common understanding and mutual trust targeted promotional works have been done across key stakeholders: within PPP partner organizations, higher policy makers of Ethiopia, regional and zonal administrative bodies, experts, government institutions, community leaders and local communities at large.

Exchange visits to German biospheres, organization of national and regional platforms, regional and zonal workshops, and field-visit with higher delegates, individual consultations and assembly meetings with communities, distribution of printing materials like leaflets, posters and other articles were some of promotional modalities.

2.2 Capacity Building

After ensuring fair level of awareness creation the project conducted capacity building activities for different target groups. Training of government decision makers and experts in the concept, technical training for foresters and development workers, orientation to community representatives has been carried out. The project supported capacity building activity in terms of availing expertise through hiring international, national and local coordinators, consultants, and supply of technical equipments like computers, GPS, and other facilities. This has given equitable capacity for key actors of planning and decision makers. For better understanding the project supported standardized and validated research on floristic and biodiversity and socioeconomic studies, GIS information gathering and preparation of maps.

2.3 Planning exercise and Field work

The project had consultative missions at federal, regional and local levels. After rapport building and agreeing over the importance, local level planning workshops were organized for government and communities. Zonal planning workshop helped to get first information in the potential areas to be included in the biosphere by setting matrix of selection criteria. Particularly values like sacrament, species breeding (bee, hyena, birds etc) environmental sensitivity, services and products, development potentials have been used to select and also determine for which function (conservation, development or logistics) and which zone (core, buffer or transition) each fits. Having this information community planning at key informant level and at assembly has been carried out in 88 kebeles of six woredas (Adiyo, Bitu, Chena, Decha, Gewata and Gimbo). Monthly kebele council meetings, community conferences and regular assemblies were used for both the promotion and consultation of planning.

2.4 Participatory zoning and demarcation

In order to ensure fair representation relevant stakeholders have nominated representatives. Local government has assigned zonal and woreda biosphere planning focal persons and all development workers within the proposed sites. Communities nominated representatives that range from 10-20 people from a kebele. A total of 51 development workers, 11 experts and 893 community representatives directly involved in planning and field work.

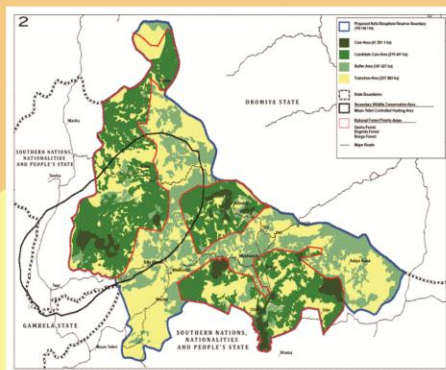
The zoning has first been done by participatory mapping exercise with development workers at training and with community representatives at local level consultative meetings. Except to backstopping and supervision the later is totally carried out by the facilitation of development workers. For efficiency reason zoning exercise targets potential core areas and the immediate buffer. After exhaustive rechecking of the zoning the actual demarcation work of the potential zones has been conducted from June 2009- August 2009. The demarcation was done by relay method where kebele level demarcation crew pursued the demarcation activity one after the other until closing the circumference of each site.

By doing so more than 189,000ha forest area is directly delineated including 43,100ha core area. The remaining part of the biosphere area is calculated by extrapolating the external and internal borders of kebeles falling in the biosphere by the support of international consultant. Combined efforts of local level demarcation and GIS specialist a total of 761,000ha biosphere reserve (transition zone 337885ha, buffer zone 161427, core zone 43100ha and candidate zone 219 441area) was identified for application.

The core areas are:

1. Boka –Buta bamboo, (Angiyo kola, Yecha, Alargeta, Boka, Buta, Rosha and Meduta kebles)

2. Garina-Woshero, (Woshero, Amesha machete, Hamani, Ganiti and Girecho gechiti)
3. Chomecha,(Chomecha)
4. Ufa-Mankira (Erimo, Awurada, Ufa, Yoka, Oggiya, Warena, Qeshi, Budi, Yahachecha, Mankira)
5. Gawa (Gawamecha)
6. Saja Boginda (Saja, Medabo, Duma, Imich Wodiyo)
7. Yeshana tura (Yesha and Kola kebeles in Gewata woreda)
8. Dadiban Tula and Kuti kebeles
9. Komba-Daga forest: Michiti, Bitu chega, Yeyebito kebeles in Gimbo woreda; Daga kebele in Decha woreda and Gopa kebele in Chena woreda.
10. Mera-Kalisha forest; Mera, Boka, Alargeta and Meduta
11. Kasha Tagera: Kasha Bera and Gawamocha
12. Mera-Kalisha forest; Mera, Boka, Alargeta and Meduta



Map of Kafa Coffee Biosphere Reserve

These areas are delineated and are put under legal protection by the SNNPR State.

2.5 Legal framework set-up

Legal protection especially for the core areas is one prerequisite for biosphere reserve nomination. Noting this repeated consultation at regional government, regional bureau of agriculture, zonal administration and zonal agriculture resulted to the formation of a team of 6 experts (from the project, bureau of agriculture and zonal agriculture) to formulate a regulation specific to this purpose. With technical, financial and logistics support from the project the team succeeded in designing and issuance of regional regulation in July 2009.

Besides national MAB committee establishment and endorsement is the other prerequisite. For this the project contributed in initiating the reform and operation of new MAB committee by involving key actors in the consultation.

2.6 Application document and management plan preparation

Since biosphere reserves are sovereign properties of countries, each country is responsible to apply for nomination. Nevertheless by virtue of the outstanding partnership and memorandum of understanding signed between NABU and Ministry of Science and Technology, the project facilitated the write-up of standardized application document and management plan by hiring high class reputation international consultant.

2.7 Formal application and follow up

Application started by presenting the plan to the National MAB committee, chaired by his highness Junedi Sado, Minister of Science and Technology (MoST). The next step was securing endorsement by those six woreda administrations and agricultural offices where legally protected core areas are situated and its approval by Kafa zone administration and department of agriculture through signing and putting their respective seals. Then the zonal

administration sent to the regional government with a copy to bureau of agriculture for endorsement and formal application to MoST. Finally MoST has sent the application document to UNESCO in September 2009. All cosignatories were enthusiastically followed until its official announcement in June 2010.

2.8 Important values of the area

Floristically it is the Origin and Genetic treasure of Arabica coffee. It harbors more than 300 plant species representing 77 families (26.6% trees, 27.9 % shrubs, 8.6 % climbers, 27.5% herbs, 2.9% epiphytes and 1.2% grasses). Out of this about 30 plant species are endemic (10 shrubs, 7 trees and 13 herbs)

Faunally it hosts more than 294 animal species (61 mammals). It also harbors 210 bird species including (9 endemic species & 6 migrant species representing 56% of Ethiopia's endemics.

In terms of forest ecosystem the area consists: Upland Rainforest Vegetations (1500-2200masl) including Coffee arabica; Prunus africana, Scheffeleria abyssinica, Olea wewitschii, Polyscias fluva etc; Upland Humid forest Vegetations (2450 -2800 masl) such as Hygenia abyssinica, Ilex mitis, Measa lanseolata etc and; Sindarindunaria/ Bamboo Thickets (2400-3050masl) including bamboo and Hygenia abyssinica.

In addition to major rivers there are the following three wetland -based ecosystems: Highland (2700masl) peat land and shrub dominated wetlands; mid highland (1700masl) permanent fresh water and seasonal wetlands and Lowland wetlands (<1500masl) are complex biological and hydrological systems and function as collection, reservoir/sink and as recharge and regulation. It has also very interesting cultural landscapes (Traditional farming system and agro-biodiversity), historic places and attractions like waterfalls, natural caves, hot-streams and sacred places (*Guudo and Dejo*).

2.9 Foreseen benefits of the establishment

The establishment of Kafa coffee biosphere supports the interest and benefits of stakeholders at international, national and at local levels. Generally it help safeguard origin and diversity of Arabic coffee, enhances sustainable development, create trade mark for local products, make use of sustainable natural attraction and protect the livelihood of local communities.



NABU kicked off a project called "Climate Protection and Preservation of Primary Forests" in Kafa zone – A Management Model using the Wild Coffee Forests in Ethiopia as an Example

By Mesfin Tekle, Project Coordinator

1. The organization, NABU

NABU (Naturschutzbund Deutschland e.V. / Nature and Biodiversity Conservation Union) is one of the biggest and oldest nature conservation organisations in Germany with more than 460,000 members and supporters, 2,000 local NABU-groups and more than 30,000 volunteers. It is the German partner of Birdlife International. Being founded as the *Federation for Bird Protection* in 1899 it is celebrating its 111th birthday this year. Today NABU is working nationally in Germany and internationally in all major fields of environmental policy such as natural resources, climate change, transport, energy, agriculture, forestry, waste and conservation.

For its international work NABU campaigns for the protection of species and habitats, promotes sustainable development and reduction of poverty, supports local conservation organisations, works closely together with governments, authorities, science institutions, development agencies and communities and promotes the implementation of international conventions.

2. Works of NABU in Ethiopia

NABU's work in Ethiopia in general and in Kafa zone in particular is dated back since 2003. It initiated a "Public-Private-Partnership" (PPP) Project, with German based partner organizations notably, GEO rainforest, Original Foods, DSW, GTZ and Crafts Food with the initial aim of establishing marketing strategies for wild coffee from Kafa Zone in order to conserve the coffee forests and improve the livelihood of local people. Later to reinforce these goals, the project also started the promotion of the UNESCO Biosphere Reserve concept for Kafa. Both the above initiatives have achieved their objectives to a satisfactory level.

3. Rationale of The project

Tropical deforestation is one of the main sources of human-origin greenhouse-gas emissions. Only 40 years ago, approximately 40% of the Ethiopian land surface was covered with natural forests; today, only 2.7% of that remains. Currently Kafa is among those areas that consists of the remnant forests of the country. The zone is one of the Eastern Afromontane biodiversity Hotspots. It is also considered to be the centre and origin of the genetic diversity of Arabica coffee (*Coffea arabica*).

Most importantly the forest harbors diverse flora and fauna; provides ecosystem services like storage of about 600,000 tone CO₂ per annum, catchment conservation, storage, screening and recharge of water systems and a stock of approximately 25 million tons of CO₂. The forest provides wide range of livelihood supporting products and services for the local community.

However, due to multiple factors and many actors, this diversity is being under critical jeopardy. According to FAO (2009) Kafa zone has lost 43% of its forest between 1988 and 2008. According to experts of Kafa zone department of agricultural development the main driving forces include population pressure, uncontrolled forestland occupation, farmland encroachment, local level unsystematic land allocation and illegal timber extraction.

Citrus paribus to other factors, land-use change of the afro-montane cloud forests to farmland and settlement poses damage on important ecosystem functions. The formula for the consequence is simple and direct. It increases the vulnerability of the zonal people, including the effects of climate change. Provided the irregular and undulating terrains of the zone, forest loss and its degradation have various negative effects, including increased surface run-off, soil erosion (which has negative consequences for soil fertility and water quality through sedimentation), reduced groundwater recharge, soil moisture, dew, humidity and negative changes in microclimate. The soil fertility in the mountain cloud forests is limited to the top organic layer, which is 20cm thick on average and maintained almost exclusively by a constant recycling process between the forest floor and forest vegetation. Clearing the forest interrupts this cycle and, as a rule, leads to a rapid decrease in soil fertility. The peoples' high dependence on subsistence agriculture (e.g. "enset" bananas, coffee, maize and teff) forces them to clear further areas of the forest.

Moreover, the nominated Biosphere Reserve area is part of the Omo-Gibe and

Baro-Akobo basin that supply significant proportion of water resources beyond Kafa to the bordering southern arid area. Deforestation, therefore, also threatens the long-term water supply of the local population. There are also rise in ground-surface temperature, altered precipitation patterns and more frequent droughts induced by global climate change, which, amongst other things, has a negative impact on agricultural yields.

Global circulation models (GFDL CM21, ECHAM 5, NCAR CCSM) show an average increase in mean monthly temperatures in the Kafa environ of up to 3°C by 2060, and a heavy increase in precipitation and surface run-off in certain months in the A1B Scenario. Some case-studies of Ethiopia and other sub-Saharan countries (partly considered in the IPCC 4th state of play report) have modeled the interaction of climate change, changes in land use, deforestation and surface run-off, as well as groundwater recharge in catchment areas. It became apparent that rising temperatures increase evapotranspiration that virtually reduce groundwater recharge, whilst the increase in heavy rainfalls markedly increases surface run-off, land slide incidences and groundwater recharge. In combination with deforestation and the degradation of pasture and agricultural areas, which also increase surface run-off, these factors further advance soil erosion and lead to flooding and reduced water quality downstream. The latter will have a serious impact on the hydroelectric dam downriver (which is of great importance for Ethiopia), and place further stress on the country's electricity supply.

The Southwest Ethiopia's wild coffee forests therefore, as an important store of

carbon, are of significant importance for the country's contribution to climate protection and in securing the natural and economic bases of existence for the regional population in progressing climate change.

4 Project goals

The project aims to maintain the afro-montane cloud forest in Kafa Zone, southwest Ethiopia, to preserve the remnant Wild Coffee Forests of Kafa, in order to avoid additional greenhouse gas emissions through deforestation, to maintain its significant carbon storage capacity, and to safeguard the provision of ecosystem services for the local people and reduce its vulnerability to climate change.

Further project goals include significant reduction of CO₂ emissions caused by deforestation using various measures, improve Carbon capture and storage by means of reforestation and rehabilitation of fragmented forests and degraded areas and by promoting natural regeneration and initiate and promote Regional Sustainable Development by a set of measures such as ecotourism

5. Funding

The Project fund is granted within the framework of the International Climate Initiative funded by the German Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU). The total budget for its implementation is about 3.19million euro for the duration of 3.5years until October 2013.

6 Target groups

Global community: The preservation of these unique forests will aid the global community to avoid further greenhouse gas emissions caused by deforestation. The area is also part of one of the world's hotspots of biodiversity and is therefore of global significance for conservation.

Ethiopian community: The forests in the southwest can be seen as the "green lung" of Ethiopia. Preserving these forests will secure the maintenance of a regionally important CO₂ store. Moreover, important regulatory functions of water supply and micro-climate are provided by the preserved rainforests. The project also contributes to conserving the unique coffee gene pool and helps the Ethiopian state to establish its first UNESCO Biosphere Reserve.

Local communities: The communities will directly benefit from the proposed scheme through the creation of alternative sources of income (like tourism) resulting from the establishment of the biosphere reserve. The halt of deforestation will enable people to rely on the forest as a long-term source of income and livelihood.

7 Achievement indicators

1. Emissions from deforestation and degradation over the period of the project will have been reduced, using adequate measures, by around 165,000 tons of CO₂ in comparison with the reference scenario ("business as usual"), and by 507,000 tons in the period 2009-2020.
2. 1,500 hectares (5,000,000 seedlings) of firewood

plantation intended as community forest will have been set up.

3. 10,000 ha of forest area will have been transferred to Participative Forest Management (PFM).
4. 500 ha of degraded natural forest will have been rehabilitated with native tree species (enrichment planting).
5. 200 ha of degraded area and cultivated space (agro forest system) will have been reforested with native species.
6. At least 10,000 wood-saving MIRT-stoves will have been introduced in selected communities.
7. Effective monitoring of CO₂ emissions and the condition of the forest will have been set up.
8. Tourist infrastructure will have been set up in at least 5 regions of the biosphere reserve (including wild-coffee experience trails, wild animal and bird observation towers with a network of hiking trails and access roads, an open air museum, further-education seminars, a model lodge, etc).
9. A core group of 30 rangers will be on duty.
10. At least 500 out of 1,000 people asked will know what a biosphere reserve is and know the importance of forest preservation for climate protection

8 Project components

8.1 Reforestation and rehabilitation

Through this component a total of 700 ha land will be reforested and/or rehabilitated by indigenous forest: 500ha restocking degraded forests and 200ha rehabilitation of degraded farmlands. The implementation of this component is believed to buttress the buffer zone so as to distance core zones from human action, connect detached natural forest patches by creating corridors along waterways and riversides, restock degraded forest under PFM with indigenous trees and rehabilitate farmlands through employing biological conservation measures and increasing farm tree-stocks.

Prior to implementation, for prioritization and as a reference-point for stocktaking purpose forest and community monitoring/analysis exercise will be carried out by a team of international consultants. The investigation will encompass an analysis of the forest (fragmentation as seen in satellite photographs and on field surveys, analysis of underlying reasons, and composition of species) and a corresponding identification of areas suitable for reforestation. Currently this activity is underway. Within the project period the diversity, area and ecosystem service continuation is presumed to improve. Kafa zone agriculture and rural development department will be the main implementing institution. This is believed to give an opportunity for the department to develop capacity and vision so as to peruse beyond the project period and connect all forests within the biosphere so that ecosystem service will be enhanced.

8.2. Forest management and household energy

This component has three subcomponents:

8.2.1 Community plantation

It is aimed to address consumptive use of the local community. The livelihood of local community is highly dependent on the forest resources that have been one sources of deforestation through extractive and land-use conversion actions. To curb this trap it's articulated to set up a total of 1500ha community plantation as alternative source of product and livelihood support. Mainly it is aimed to support the establishment of (private, communal and government) woodlots and set-up of agro-forestry. In addition to the direct productive benefit, these activities will be arranged to have conservation and rehabilitation function by targeting plots exposed to erosion, waterways, homesteads and educational function by targeting farmers training centres and school compounds.

8.2.2 Participatory Forest Management

The establishment of previous Participatory forest management systems evidenced the capacity and willingness of rural communities to conserve and manage forest resources. In order to capitalize on the cumulative effects additional 10,000ha of natural forests are expected to be put under PFM. Particular emphasis has been given for utilization coffee forests outside core zones for sustainable utilization and maintenance of wilderness of Arabica coffee. This component is commissioned to Kafa Forest Coffee Producers' and Marketing Cooperatives Union. It is believed to ensure sustainable marketing of

forest coffee from sustainably managed areas.

8.2.3 Distribution of Energy saving is target

In order to achieve the goal of reducing emission from deforestation the project intends to introduce 10,000 Mirt- Energy Saving Stove in collaboration with Kafa zone Water, Mines and Energy Department. To make sustainable and easy access for the assumed growing demand, the project has incorporated training and equipping of 200 producers spread across the zone at a reasonable locality.

8.3 Sustainable development in Kafa Biosphere Reserve

For both project implementation and multiplier effect creation within the biosphere reserve 30 rangers would be employed. Among others rangers keep informing as many residents as possible about forest and environmental conservation, the concept of biosphere reserves and concerns about climate protection. As has already achieved success in some biosphere reserves, efforts will be made here too to win over as many volunteers as supporters and promoters as possible, using the multiplier approach. Topics of promotion include ecological relationships, the importance of the forest and wetlands, give background information on biosphere reserves and existing constraints, give advice on adapting agricultural methods, forest use, and avoiding erosion.

The biosphere reserve is of huge untapped potential for ecotourism service that could serve as alternative and environmentally

sound livelihood support. Particularly wild-coffee experience trails, wild animal and bird observation towers, network of hiking trails, historic and cultural sites and events, and natural features like waterfalls, hot-streams, and other attractions are available. The project has commissioned the preparation of business and management plan by contracting competent international consultants. It has planned the construction of Kafa kingdom open air museum, a model lodge as exemplary to demonstrate possible facilities for the scheme.

The other subcomponents are Microcredit program and development of Fundraising and marketing concept to secure long-term financing of the biosphere reserve.

8.4 Communication and awareness raising

The project would pursue communication for local and international communities through local communication program on climate and forest (Training, workshops, seminars & information events) and information campaign (website, brochures, publications, conferences....)

9 Project Benefits

Forest conservation, Climate protection, Capacity building, Sustainable regional development and poverty reduction, Employment opportunities and direct benefits for about 700000 people living in the biosphere reserve are the main benefits that can be gained by implementing the project. The project aims to serve as a model for future projects in Ethiopia and internationally as well.

10 Implementation Modalities and Key partners

The prime implementation modality is commissioning, close cooperation and consultation with the following partners such as Local communities, Kafa Zone Administration & Woreda Administrations, SNNRP, DoRD, Bonga Agricultural Research Centre, MoST & UNESCO, Department of Culture, Tourism & Government Communication, MoARD, Kafa Farmers Union, Honey Union, EWNHS, GTZ – SDPASE, International and national/local experts, volunteers and other NGOs.



For People & Nature

Tourist Destinations in Kafa

Introduction

Tourism is a smokeless industry which is quite recent and rapidly growing across the world. This industry is found in Kafa zone different parts. Those industries are the gift of nature and human. Some of the tourist destinations are waterfalls, caves, religious sites, natural dense forests, a varieties of wild life birds and vegetations that serve as a medicine. A lot of visitors are usually visiting these fabulous tourist destinations for different purposes, for recreation and to conduct research on different aspects.



Barita waterfall



Eli Elo waterfall

1. WATERFALLS

Here, in the zone, there are fascinating waterfalls enjoyable for visitors. There are more than 16 attractive waterfalls in the Zone. Among these some are listed in the following table.

NO	Name of the waterfalls	Location/ locality
1	Barita waterfall	Gimbo District
2	Eli Elo waterfall	Gesha District
3	Woshi waterfall	Chena District
4	Adiyo waterfall	Adiyo District
5	Guma waterfall	Decha District
6	Shaaki Waterfall	Gewata District
7	Tota Waterfall	Decha District

2. HOT SPRINGS

There are around 5 hot springs found in the zone that are seriously serving as a medicine to cure from some diseases through immersion and drinking.



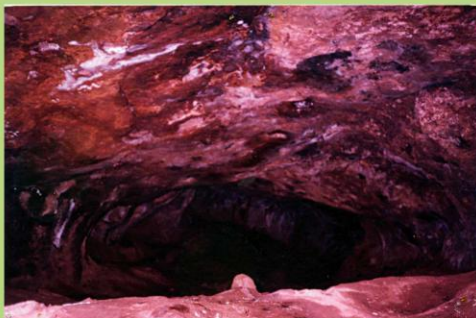
Dadiben hot spring

They give absolute and swift salivation for those who join it. Among these, the following picture is Dadiben Hot spring , which is found in Gimbo district locally named as Tula kebele that is situated 35 km from Bonga town. It is along Dir-Masha gravel road, at an hour walk through dense Afromontane forest

3. CAVES

As history says, cave is the first place that serve as a shelter to our ancestors by which they protect themselves from any sort of danger and serve as a host. Hence, Kafa is genuinely rich of caves, that served for many purposes. The caves are very delightful and have nature attraction. Here, the zone has more than 14 caves, of which some of them are listed in the following table.

No	The name of the caves	location
1	Hawiti cave	Cheta District
2	Borti cave	Telo District
4	Ekero cave	Gimbo District
5	Koota Cave	Gimbo District
6	Dosha Tuga Cave	Chena District
7	Xeqo Kexo Cave	Gesha District



4. NATURAL BRIDGES

Before technology and civilization started, natural bridge serves the then people and even now so as to connect the two villages far apart . Kafa is endowed with this natural gift.

Among these, the most known and attractive place is Gurguto/ or locally known as Egiziher Dildiy/literally meaning God's birdge. This natural bridge is located 10 K.M. away from Bonga, and from the main road it takes 30 minutes on foot. This natural bridge is found nearby Makira, where the mother coffee is found in Decha district, particularly Gedam kebele.



Gurguto
natural
bridge



5. NATURAL FORESTS

The south western part of Ethiopia is known for its dense forest coverage. Of this region, Kafa is well known and witness the presence of the natural virgin forest that preserved till now with no disaster of both nature and human activities.

The culture of protecting the forest is commensurate with the proverb of “*No life for Kafa without forest*”.



Therefore, such supportive and acceptable culture preserved the intact forest for many years to the present day. On its own part, the forest contributed a lot in keeping the ecology of the world. The current impression that is found in Kafa makes the forest to host a gigantic natural resources that earned the area to be recognized by the UNESCO with the total area coverage of 761,000 hectares.



natural forest

6. RELIGIOUS INSTITUTIONS

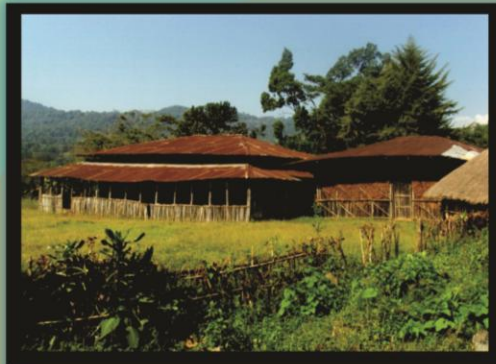
There are many Churches/Monasteries/, Mosques and other guardian spirits which are old aged. These institutions do have their own history of how they came and latter on serve as a center for the spread of their ideology. For instance, the following orthodox churches are entered to the region in the 16th century while the sultanate of Muslim and Christian highland kingdom was in the apex of the war and serious competition one another. Therefore, to save from such damage, the Christian high land kingdoms choose the area in charge of putting the arcs in the zone.

- Chiri St. Michael 1529 E.C
- Kuti St. Michael 1529 E.C
- Shapa St. Gabriel 1532 E.C
- Gidi St. Georgis 1532 E.C
- Baha St. Georgis 1532 E.C
- Washa St. Michael 1532 E.C



Baha St. Georgis

As of Christianity, the entry and spread of Islam in the area goes back to the 16th century. The local name given for the followers was related to the system of the activity that the religious leaders and forerunners engaged in the soil of Kafa. In the history of Islamization, unlike the counter parts of the world, in the horn of Africa, the religion was spread peacefully, that is through trade. This event was commonly practiced in Kafa zone. Locally, the name of the followers is known as *Negado*, means *trader*. Accordingly, the first and for most mosque which was alleged to be established in the 16th century was known as *Tongola Kuba Mosque*. This mosque is situated 7 km far away from Bonga town.



Tongola Kuba Mosque

Lastly, the most incredible and surprising religious practice that is exercising in relation to the coming of the two arcs that were *St. Gidi Georgis* and *St. Baha Georgis* that came to be firstly arrived. After a brief period, they were taken to the present places. This area is locally said to be *Gopha Gargish/ Kunge michi/*. Here, the practice is carried out in the rule and regulation of Old Testament. This “Church” is arc less.

The celebration is held on March first of each year in a sacrifice of many cattle, hens, sheep and goats in a warm situation. This joyful area is among the tourist destination that many tourists are visiting.

7. MAKIRA COFFEE FOREST

This historical area is the place where the mother coffee plant is found. The area is investigated by many scholars and organizations/NGO's that proved as it is endowed by varieties of coffee plant and other more. Indeed, the area rectifies our country as being the cradle of coffee that is assured by UNESCO and different researchers.

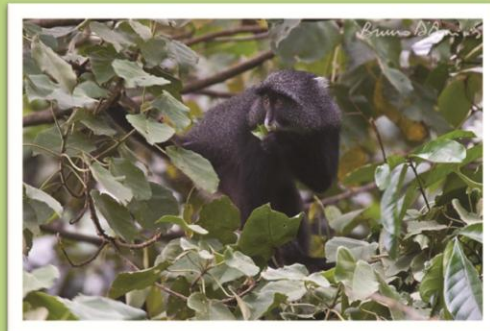
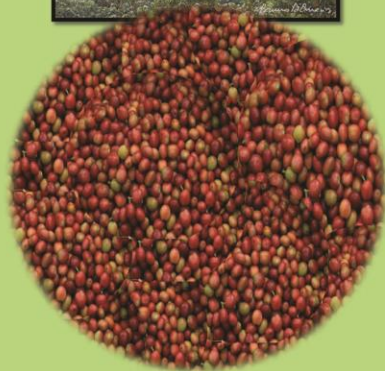


8. Ancient Kafa Kingdom Defense System /Hiriyo

Unlike the China's wall, which is above the ground, the ancient kingdom of Kafa's defense system is beneath the ground. It is a trench like system which is surrounding the Kingdom's boundary about 270-300 square km. The hole is still now found and managed to tourist attraction. It was this system that persistently enabled to resist the then central government of Ethiopia, in the regime of Menelik, in 1897. Concerning to

this system of defense, different Ethiopian historical writers have written in their books. This system of defense is locally known as Hiriyo. The hole deep four meter beneath the ground. This system of defense is found only in Kafa. In the hole, there are spears, javelins, ants and beehives hosted near by the trench which are standby to attack and invade the enemies in time of war, respectively.

SEEING IS BELIEVING
COME & VISIT KAFA!

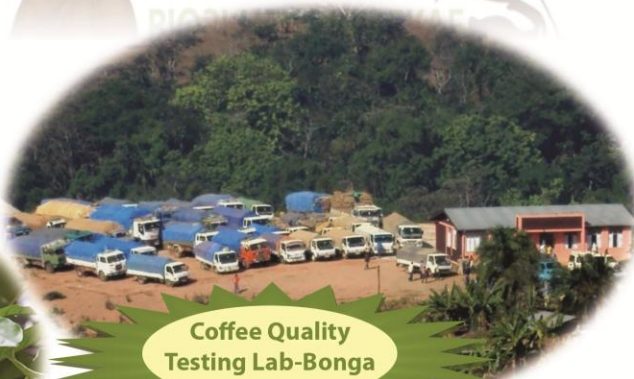


ካፋ. የቡና መገኛ ብቻ ሳትሆን የግብይት ማዕከል ትሆናለች



የካፋ. ቡና ባዮስፌር ቦተባበሩት መንግስታት የትምህርት፣ የሳይንስና
ባህል ድርጅት (ዩኔስኮ) ስለመመዝገቡ የተሰጠ ሰርተፊኬት

መላው የኢትዮጵያ ሕዝብ እንኳን ደስ አለን



Fabulous Tourist Destinations In Kafa

Plan Your Visit Now!